

**AMERICAN
RAILROAD JOURNAL**

NEW YORK [ETC.]

V. 27, 1854



LIBRARY
OF THE
UNIVERSITY
OF ILLINOIS

625.05

AE

v. 27

REMOTE STORAGE

Return this book on or before the
Latest Date stamped below.

Theft, mutilation, and underlining of books
are reasons for disciplinary action and may
result in dismissal from the University.

University of Illinois Library

JUL 25 1977

JUL 25 1977

JUN 25 1977

OCT 08 1992

MAR 29 1993

AMERICAN

G. A. Nichols

²⁰⁹
RAILROAD JOURNAL.

Steam Navigation, Commerce, Mining, Manufactures.

HENRY V. POOR, EDITOR.

ESTABLISHED IN 1831.

~~~~~  
Second Quarto Series, Volume X.,  
Or Volume XXVII.  
~~~~~

New-York:

J. H. SCHULTZ & CO., PUBLISHERS AND PROPRIETORS,
No. 9 Spruce Street.

1854.

INDEX.

A

Alabama and Tennessee Railroad	739, 695,
“	[622, 404, 101]
“ and Florida Railroad	829, 397
“ and Mississippi Railroad	491
“ Railroads in	764
“ State, Finances of	547
“ Machine Works in	121
Albany and Northern Railroad	533
“ Price of Wheat at	633
Arkansas, Finances of	773
“ Railroads in	349
Adaptation of Locomotives	327, 241, 225, 200,
“	[193, 151, 122]
“ of Power on Western Railroads	343
Analysis of Water	132
Anthracite Coal Burning Locomotives	795, 423,
“	[411, 347]
Atlantic and Pacific Railroad	541, 394
“ St. Lawrence Railroad	500
“ Mississippi	501
“ North Carolina	728
Atlanta and La Grange Railroad	795
American Securities	723, 266, 232
“ Geographical Society	46
“ and European Securities	691, 83
“ Debt abroad	262
“ Railroads, N. Y. Press on	371
“ Railroad Iron	498
“ Railroads, Schuyler Fraud	636
Americanism of Railroad Journal	97
Allegheny Valley Railroad	165
Axles, Railway	372, 317, 314, 292, 202, 105, 61
Alexandria, Loudoun and Hampshire Rail- road	554, 301
Agencies in New York, Western Railroads	451
Alexandria and Gordonsville Railroad	526
Accidents, Railroad and Steamboat	603, 237
“ on English Railroads	435
Air Lines of Railroad	138
Air Vessels of Locomotive Pumps	117
Akron Branch Railroad	329
Alton, Progress of	100
Androscooggin and Kennebec Railroad	744, 458
Albuquerque Route to the Pacific	341
Annual Register of Polytechnic Institute	614
Aurora Extension Railroad	450
Austrian Railroad Concessions	776

B

Baltimore and Ohio Railroad.	803, 774, 730, 728,
[700, 664, 600, 520, 476, 453, 383, 257, 226, 219,	170, 25,
Baltimore, Railroad Convention in.....	325
Bank Returns.....	520
" Comparative Condition of.....	39
Black River and Utica Railroad.....	615, 523, 141
Branch Roads and guarantees.....	446
Bellefontaine and Indiana Railroad.....	829, 453
	[428, 294, 46
Belleville and Illinois town Railroad.	529, 597, 78
" and Mumpheysboro' Railroad.....	298
Belders, De wapo Railroad.....	459
Benton's Attack on Emory.....	454
Breakage of Railroad Axes.....	202
Big'er's (Gov.) Doings at Erie.....	113
Bridges, Improvement in.....	84
" Railroad.....	50
" Iron.....	779
Bridge over St. Lawrence.....	572
British Railways, Rolling Stock of.....	283, 77
" Provinces, Treaty with the.....	507
Bonds of Harlem Railroad.....	279
Boston and Providence Railroad.....	267, 61
" and Lowell Railroad.....	728, 109
" and Worcester Railroad.....	466
" and New York Central Railroad.....	622, 527
" Concord, and Montreal Railroad.....	541
" and Maine Railroad.....	604
" and New York, Commerce of.....	138
" Finances of.....	828
Brooklyn City Railroad Company.....	429, 250
Buffalo and New York City Railroad.....	717, 378,
	[362, 317, 60

Buffalo, Corning, and N. Y. Railroad.....	203
" and Brantford Railroad.....	414, 360
" and Cincinnati Routes Difficulty.....	421
" Trade of.....	107
" and State Land Railroad.....	445
" value of Estate in.....	473, 461
" Car Co.....	512
Bullion, Deposits of.....	136
Blue Ridge Railroad.....	582, 483, 198, 75
Brunswick and Florida Railroad.....	420
Business of the Canals.....	565
Bytown and Prescott Railroad.....	542

C

Canals of New York	823, 764, 697, 590, 565, 396, 1251, 224, 187, 101, 23
California, State Finances of	53
" Gold Products of	742, 687
Canandaigua and Niagara Falls Railroad	[439, 89]
Carriage Building in Madison, Ia.	109
" Wheels, Washburne Patent	117
" Ventilation	365, 635, 516, 500, 470, [439, 413, 376]
Canada Railways, Freight on	231
Ca ro and Fulton Railroad	773, 37
Crawfordsville, Frankfort and Ft. Wayne Railroad	558, 428
Catawissa Railroad	455
Charleston and Savannah Railroad	550, 509, 458
Charlotte and South Carolina Railroad	365, 141
Cannelton and Jasper Railroad	460
Chattanooga and Cleveland Railroad	495
Carhart's Turntables	504
Charters Valley Railroad	603
Cast Iron, Effects of Successive Heating on	615
Charges, Increase of on New England Railroads	776
Cleveland and Medina Railroad	87
" Zanesville and Cincinnati Rail- road	373, 92
" and Pittsburg Railroad	779, 572, [600, 521, 382, 100]
" Railroad, Iron received at	126
" and New York City Railroad	158,
" and Toledo Railroad	583, 524, 393, [200]
" Columbus and Cincinnati Rail- road	813, 744, 714, 231
" Valuation of	246
" and St. Louis Railroad	550, 501, 265
" Philadelphia and Erie Railroad	323
" Mahoning Railroad	509
" Painesville and Ashtabula Rail- road	744, 507
" Locomotives	589
" Coal Trade of	604
Census of 1850, Facts of the	179
Central Route to the Pacific	341
" Military Traffic Railroad	780, 455
Chesapeake and Ohio Canal	373
" and Delaware Canal	430
Cement for Masonry	460
Chemung Railroad	591
Cincinnati, Wilmington and Zanesville Rail- road	493
" and Chicago Railroad	700, 683, [575, 46]
" and Aberdeen } do. 77	
" Logansport and Chicago Railroad	[827, 511, 333, 93]
" Union and Ft. Wayne Railroad	205, [106]
" Hamilton and Dayton do 760, [713, 534, 363, 141, 130]	
" and Marietta Railroad	781, 668, 553, [551, 169]
" Peru and Chicago Railroad	293
" Harrison and Indianapolis Rail- road	527
" Railroads in	541
Chicago, Growth of	461
" and Aurora Railroad	596, 533

" and Rock Island Railroad.....	828, 719
" " " " " "	[618, 696]
" Locomotive Works.....	777
" and St. Charles Railroad.....	690, 422
" and Union do	373
" and Mississippi do	664, 597
" [510, 497, 455, 205, 184, 41	
" and Milwaukee Railroad.....	698, 266
" Exports of.....	828
" Union Line Railroad.....	383, 527
" Rilled Slip Tyres.....	166, 118
" Boxes for Axles.....	167
" Commerce, Effects of European War on.....	23
" " of New York Canals.....	23
" " and Railroads of Cuba.....	603
" Commercial Policy of Pennsylvania.....	97, 17
" " Position of New York.....	314
" Convention, Southern Commercial.....	257
" " of Railroad Companies.....	758, 693
" [603, 654, 605, 534, 400	
" Coal Burning Locomotives.....	759
" " Fields of United States.....	604
" Trade of Cleveland.....	604
" Trade, the.....	148
" Trade of Schuykill.....	450
" " Fields of Kentucky.....	32
" " Railroads to N. York.....	618, 398, 361, 346
" Columbus and Xenia Railroad.....	718, 91, 77, 62
" " and Marietta Railroad.....	534
" " Piqua and Indiana Railroad.....	452
" " and Shelby Railroad.....	625
" Columbus and Hamburg Railroad.....	554, 510
" " Railroad.....	141
" Completion of Western Railroads.....	58
" Concentration of power on New England	
" Railroads.....	102
" List of Railroads.....	123
" Construction Act. of Railroads.....	226, 129
" Corrugated Boiler Iron.....	133
" College, Engineers' and Mechanics'.....	217
" Subscriptions to Railroads in Tenn.....	247
" Damage of United States.....	748, 505, 250, 231
" Consolidation of Railroads.....	318, 295, 266
" Connecticut, Railroad affairs in.....	29, 267
" Lexington and Lexington Railroad.....	647, 572
" " and Ohio Railroad.....	427, 379
" Upper from Lake Superior.....	247, 109
" " In S. W. Virginia.....	551
" Commission Agencies for Mach'y.....	394
" Contract, Working of Railroads by.....	630, 422
" Chocho Railroad.....	493
" Congressional Legislative Summary.....	510
" Connecticut and Passumpsic Railroad.....	763, 442
" Concord, (N. H.) Railroad.....	619, 653
" Cotton, Production of.....	564
" Empound Rail.....	576
" Loss tie, Improved.....	603
" Corn Crop of United States.....	632
" Car, Commerce of Railroads in.....	613
" Cumberland Coal and Iron Co.....	407, 278
" Caves on Railroad Tracks.....	418
" Crystal Palace.....	454, 204
" Slender proportions of.....	651

D

Dayton and Cincinnati Railroad	262
" and Michigan "	300
Dauphin and Susquehanna	759,482, 87
Draives for Railroads	258
Delaware and Hudson Canal Co.	200
" Lackawanna and Western Rail-	
road,	386
Detroit, Growth of	203
Debt of America Abroad	262
Deposits at U. S. Mint	426, 281
Debt of United States	461, 297
" of European Powers	827
Denny's Divided Axle	317
Deepening Rivers	606
Des Moines Navigation and Railroad Co.	0.28
Distribution of Railroad Capital	315
" of Wealth, Effects of Railroads	
oil	322

Dividends paid by Massachusetts Railroads	42
Dividends for Current half year	793
Disposition of Grades	452
Dilution of Cast Iron	615
Dorchester and Pittsburg Railroad	71
" " "	791
Domain, Extent of U. S.	295
Duties on Railroad Iron	481, 450, 353, 321, 249, [137, 121,
Dust in Railroad cars	423

1

East Tenn. and Virginia Railroad.....	138
" " and Georgia "	189
Evansville and Crawfordsville "	633, 628, 87
" Indianapolis and Cleveland Rail- road.....	414, 349, 174, 173, 152
" " and Illinois Railroad.....	776
England, National Debt of.....	27
Enlargement of Erie Canal.....	764, 299
Excavator, New.....	151
Eastern Railroad Co.....	749, 458
Earnings, why applied to Construction ? 2, 3 ..	[458]
Easton, Prospects of.....	581
Eaton and Hamilton Railroad.....	643
Edgefield and Kentucky "	268
Express Locomotives.....	340
Elevated Railroad for Streets.....	40*, 366, 343
Erie, Affairs at.....	138, 113, 94, 78, 4
" Canal.....	590, 396, 29
Equipment of Railroad.....	289
English Railways.....	665, 679, 435, 388, 210, 130
" Preferred Stocks.....	514
Emigration from Great Britain.....	205
Engineers' and Mechanics' College.....	217
" Field Book for.....	289
Engineering Yt Central Railroad.....	570
Engineering, Institutions for.....	583
" " and Mathematical Instruments, [648, 604]	
" Profession, the.....	524
" History of Erie Railroad.....	503
Economy of Railroads.....	241, 225, 209, 198
Exploring Party of Lieutenant Whipple.....	260
Employees, number of on British Railroads, [209]	
" " on Railroads.....	575
Exploration of Col. Fremont.....	402
Exports from New York, for 1853-4.....	426, 425
Europe, the War in.....	230
Excursion to Rock Island.....	398
Equation of Grades.....	557, 533, 509, 474, 398

F

Fall River Railroad.....	788,	62
Franklin Canal Railroad.....	295, 218, 110,	90
" " & Warren Railroad.....	501,	817
Free- on Virginia Railroads.....	399,	
Fast Railroad, A.....	477	
Fraud, Security from.....	574	
Franchise issue of Stock.....	769, 769	
French Railroads; Management of.....	23	
Freight Tariff of N. Y. & E. R. R. road.....	154	
" " of Balt. & O. R. Railroad.....	170	
" " on Canadian Railroads.....	201	
" " Engines on N. Y. & E. Railroad.....	349	
" " large load for a.....	582	
Fremont's (Col.) Expedition.....	402	
Flemington Railroad.....	489	
Finances of Pennsylvania.....	52	
" of Balt. & O. Railroad.....	216	
" of Philadelphia.....	455	
" of Texas.....	485	
" of Virgini.....	804, 780	
" of Ind and.....	793	
" of United States.....	780	
" of Louisville.....	358	
Fitchburg (Mass.) Railroad.....	619, 267, 89	
Fire Engine, Steam.....	554	
Friction of Steam Engines.....	74	
Field Book for Engineers.....	289	
Fictitious Capital in Railroads.....	697, 336	

O

Orange and Alexandria Railroad.....	727, 622,
	[429, 20]
Ontario, Simcoe and Huron Railroad	485
Oswego Trade of "	369
" and Syracuse Railroad	268
Opening of Cleveland, Zanesville and Cincinnati Railroad.....	373
Ogdensburg Railroad	669, 527, 426, 413
" Clayton and Rome Railroad	522,
	[138
Opelika and Girard Railroad.....	591

•

Over Issue of Stock.....	724, 715, 503, 450, 441,	(433, 429)
Ohio, General Railroad Law of.....	712, 709, 140,	
" Railroads in.....		131
" Public Works of.....		87
" City Property in.....		84
" Bridging of River.....		71
" Taxable Property in.....		26
" and Indiana Railroad.....	784, 620, 375, 83	
" and Pennsylvania do.....	712, 664, 606, 588,	
	(585, 520, 465, 70	
" and Mississippi do.....	660, 597, 505, 478,	
	(414, 373, 344, 225, 221, 167	
" Central Railroad.....	748, 699, 632, 501,	
	(583, 301	
" River, Tunnel under the.....		797
Old Colony and Fall River Railroad.....	788, 543	
P		
Paterson, Locomotive Building at.....		2
Panama Railroad.....		776
Patent Law.....		342, 282
Pacific Railroad.....	712, 451, 385, 337, 316, 272,	
	(214, 186, 179, 148, 106, 44, 23, 6	
" " of Missouri.....		553, 71
" " of Texas.....	828, 775, 743, 541	
" " Southern Convention on the.....	259	
" " Northern Route to.....	504	

P

Pennsylvania, Railroad Property unsafe in	1
Commercial Policy of 118, 97, 17	
State Finances	52
New Theory of Taxation in	66
Railroad	760, 698, 648, 585, 552
1521, 473, 375, 270, 218, 200, 107, 103, 25	
Railroad Legislation in	145
Public Works of 410, 267, 231, 150	
Coal Company	542
Press, (N.Y.) on Railroads	571
Precious Metals, Production of the	437
Penalty for over Issue of Stock	511
Pennsylvania and Hawaiian Railroad	506, 368
" and Oahuwa do.	445
" and Bureau Valley Co.	596
Philadelphia, Wilmington and Baltimore	
Railroad	700, 647, 69
Philadelphia, Finances of	465
" Germ. and Nor. Railroad	823
" and the Lakes	699

N

Prices to Engineers.....	742
Prices sunk by Pneumatic Pressure.....	276
Price of Locomotives.....	306
Pittsburg and St. Louis Railroad.....	439
" Iron Foundries in.....	521
Portland, Saco and Portsmouth Railroad.....	490
" Population of.....	563
Providence and Worcester Railroad.....	127, 41
Production of Iron.....	643
" of Precious Metals.....	437
Productiveness of American Railroads.....	637
Property, Rights of Individual.....	71
Progress of Liberal Ideas.....	130
Proportion of Locomotives.....	264, 154
Prospects of Locomotive Building.....	303
" of Grand Trunk Railroad.....	453, 332
Post Office Department, the.....	369
Postal System, the.....	463

M

Patchchartrain Railroad.....	371
Projects, Against new Railroad.....	371
Port Daulhousie and Thorold Railroad.....	439
Polytechnic Institute, Report of the.....	614
Poor's (H. V.) Railway History.....	657
Pumps, Air Vessels of Locomotive.....	117
Public Works of Virginia.....	592, 116
" " of Pennsylvania.....	410, 267, 231,
(180)	
" Lands of U. S.....	518, 247
Sale of.....	259
Physical Geography of New York.....	463
Q	
Quebec Railroad, Iron brought by.....	53
" and Richmond Railroad.....	591
Quickest Route from London to Shanghai.....	400
R	
Racine, Janesville and Mississippi Railroad.....	528,
(661)	

Black and Gaston Railroad 8 Roads in the United States 8 in Georgia..... 18 in the West..... 57, 119 in Ohio..... 181 in Virginia..... 133 in Missouri..... 349, 138 in Illinois..... 595, 130 in Indiana..... 521, 150 in Maine..... 235, 231, 220, 203 in Brooklyn..... 420, 250 in Massachusetts..... 717, 280 in Great Britain..... 710, 531, 209 in Arkansas..... 349 in Connecticut..... 389 in Nova Scotia..... 471 in New Brunswick..... 511 in Cincinnati..... 541 in North Carolina..... 571 in Iowa..... 559, 583 in Cuba..... 603 in Texas..... 665 in New Hampshire..... 669 in Vermont..... 033 in Alabama..... 704 Cost of 123 in New York, Report on..... 124 Entering New York City..... 519 Working of 808, 147 Grants of Land to..... 412, 404, 101, 94 Effects of, on New York City 313 of, in distributing Wealth..... 575, 322 Uses of 304 American Iron for..... 456 and the Times..... 573 Indebtedness of..... 602 Productiveness of American..... 637 vs the Erie Canal..... 607 Fictitious Stock in..... 097 How they Spend Money..... 765 Sunday Trains on..... 801 in Canada..... 809 Railroad Property unsafe in Pa. 1 Machinery at the South, Manu- facture of 178 Investments in New England..... 87 Construction Accounts..... 129 Working of 147 Signals..... 515, 148 to the Pacific..... 375, 282, 186 Accidents..... 237 Iron, Manufacture of in U. S..... 281 Equipment..... 289 Capital, Distribution of..... 315 Elevated Passenger..... 405, 368, 348 Iron, Duty on..... 481, 450, 353, 321, [240, 187, 121 Depreciation in Northern Cl- imates 398 Exhibits 407 Intelligence..... 408 Security, Value of..... 456 Mania, the..... 513 Convocation..... 810, 758, 693, 653, 534, 533 Bridges..... 550 Loans, Sinking Fund for..... 577 Management, Reform in..... 602, 615 History..... 617 Accounts..... 636 Iron, New Method of Rolling..... 716 Morals and Policy..... 763, 777, 761, [753, 745, 737 Couches 765 Laws of La. 786 Bonds, Interest on..... 792 Earnings..... 744, 712, 683, 664, 648, [585, 565, 541, 519, 511, 473, 453 Report of New York and Erie Railroad Company 34, 19, 3 Report on New York Railroads 331, 124 on New York Canals..... 251, 234, 187 on Lackawanna Coal Regions..... 213 of Pacific Railroad Company..... 214 on Pennsylvania Railroad..... 278 Rights and Liabilities of Stock and Bond- holders in Railroads 813 of Commerce and Navigation..... 829 of Susquehanna Railroad Company..... 305 of Del. Lackawanna and W. Railroad Company..... 386 of New York Central Railroad Com- pany 476 of Blue Ridge Railroad Company 483 Cleveland and Toledo Railroad Company 524 of Indianapolis and Cincinnati Rail- road Company 590 Responsibilities of French Railroad Conduc- tors 23 Reading Railroad 649, 99, 24 Representative Men 76 Red River, Improvements of the 103 Receipts of Railroad Iron at Cleveland 126 Relative Strength of Iron 415 Revenue of United States for 1851 428 Reciprocity with the British Provinces 507 Reform in Railroad Management 692, 615 Richmond and Petersburg Railroad 493 and Danville Railroad 714 Rolling Stock on British Railroads 263 Rock Island, Excursion to 395 " Bridge 615, 573 Rolling Iron, New Process of 716, 540	Rutland and Washington Railroad 124 " and Burlington do..... 707, 228 " Railroad..... 647 Ruttan's Ventilator 563, 277 Rumruts' on Railroads 405, 289 S Saugatuck Iron Works 27 Savannah and Mobile Railroad 29 " Valley Railroad..... 293 " Finances of..... 704 Safety Valve Fastenings 70 Serap Iron, Forgings from 77 San Francisco, Debt of 104 State, Can Private Property be seized by the " Finances 110, 52 " Stocks, Low Price of..... 764 Saratoga Railroad 477 " and Washington Railroad..... 437 St. Louis, Progress and Finances of 257, 100, 78 " Locomotive Building at..... 150 " and Western Railroad..... 163 " and Iron Mountain " 730, 174, 167 " Position and Prospects of..... 170 " Memphis and N. O. Railroad..... 501 State of Public Lands 259 Sandusky and Louisville Railroad 279 " Mansfield, and N. Y. Railroad..... 301 Stationary and Loco. Power on Grades 323, 290 Sault St. Marie Canal 531, 434, 379, 343 " Cotton Mfg. at..... 459 St. Lawrence, Bridge over the 372 Scale Works, Rochester 510 Sackett's Harbor and Saratoga Railroad 763 "..... 612 Sacramento Valley Railroad 681 Securities, European and American 690, 33 " American..... 268 " Value of Railroad..... 456 " Why so low..... 681 Securities from Fraud 574 Steam Carriages on Common Roads 571, 108 " Hammers, Improvement in..... 110 " Boilers, Fusible Plugs for..... 78 " Engines, Friction of..... 77 " Gauges, Testing of..... 167 " Fire Engines..... 554 " Boat Accidents..... 603, 237 Stouvenville and Indiana Railroad 26 Street Railroads in N. Y. 172 Steep Inclines, Locomotives for 174 Specie, Export from N. Y. of 420 Self-adjusting Railroad Signal 515 Speed on Railroads 561 Signals, Railroad 575, 148 Springfield, Mt. Vernon and Pittsburg Rail- road 263, 92 Strike on N. Y. and Erie Railroad 397 Striking Funds for Railroad Loans 765, 700, 629, [377 Smith's (G. D.) Car Wheel 724 Sinking Piles by Pneumatic Pressure 274 Slide Valves for Locomotives 108 Shipment of Gold from Cal. 637 Stock, Fraudulent Issues of 779 Stonington Railroad 609, 647 Southern Route to the Pacific 341 " Railroads..... 141 " Commercial Convention..... 259, 253 South Carolina Railroad 100 " Finances of..... 504 " N. Eastern Railroad of..... 261 " Western Railroad..... 553, 445, 315, 262, 87 " Side..... 301 " Shore (Mass.)..... 791 " Pass on Pacific Route..... 340 " West Br. to Pacific Railroad..... 526 Subscriptions to Railroads by Municipal Bodies 146 Survey of Pacific Railroad 148 Sugar Interest in La. 153 Schuylkill Coal Trade 140 Sunbury and Erie Railroad 822, 639, 621, 373, 269 Sunday Trains on Railroads 801 Susquehanna Railroad 305 Supply of Water to Engines 458 Sussex and Warren Railroad 786, 690 Syracuse and Binghamton Railroad 673, 649 575, 391, 198, 42	T Taxation, New Theory of in Pa. 65 Taunton and New Bedford Railroad 155 Transportation and Cost of Western Rail- roads 67 Traversing Screw Jack 132 Trade, New Channels of 106 " of Montreal, Effects of Railroads on the..... 247 Track, Mode of Laying 229 Tracks, Survey on Railroad 418 Tables Turned, the 373 Taunton Branch Railroad 412 Traffic on Western Railroads 647 Texas, Increase of Property in 28 " Finances of..... 54 " Debt of..... 485 " Railroads in..... 605 Tennessee, Finances of 53 " Internal Improvements in..... 173 " Subscriptions to Railroads in..... 247 Terre Haute and Richmond Railroad 807, 661, [100 " and Alton Railroad..... 823, 730, 597, [539, 139, 427, 201 Treaty with the British Provinces 507 Twin Creek Railroad 382 Trial of New Engines 716, 396 Times, the Present 680 Tonnage (Ship) of U. S. 413 " Railroad and Canal..... 121 Toledo and Indianapolis Railroad 141, 120 " and Illinois Railroad..... 162, 81 Troy and Boston 74 Topographical Drawing 696 Tunnel on Pennsylvania Railroad 290 " under Chicago River..... 553 " under Ohio River..... 797 U Uses of Railroads 394 Utica and Binghamton Railroad 533, 531, 392 Uniformity of Gauge 606 United States, Railroads in 8 " Funded Debt of..... 461, 297,
--	---	--

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTER SERIES, VOL. X., No. 1.]

SATURDAY, JANUARY 7, 1854.

[WHOLE No. 925, VOL. XXVII.

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERRAH COLBURN.

PRINCIPAL CONTENTS.

Railroad Property unsafe in Pennsylvania.....	1
Locomotive Building in Paterson.....	2
Fracture and Adhesion of Locomotives.....	2
New York, and Erie Railroad Report.....	3
Pacific Railroad.....	6
Engineering Instruments.....	8
Railroads in the United States, January 1, 1854.....	8
Kentucky Coal Fields.....	12
On the Waste Heat of Locomotive Boilers.....	13
Journal of Railroad Law.....	14

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, January 7, 1854.

Persons, wishing for back numbers of the *Railroad Journal* for 1853, must send for them immediately.

Railway Property unsafe in Pennsylvania.

The recent outrages committed by the citizens of Erie upon the property of the Erie and Northeast, and the Erie and Cleveland Railroads, have an importance far beyond the destruction, if such is to be the result, of the two roads. It is worth our while to inquire how far the spirit displayed is common to the State, and whether a similar disposition would not manifest itself, under similar circumstances, in every portion of it, which at Erie has broken out in acts of brutality and destruction.

In the first place the Erie outrages have been acquiesced in by every portion of the State. We have not been able to observe the least mark of disapprobation from any quarter. The Press has been silent, except in expressions of sympathy with the rioters. No public meetings have been held to denounce their conduct. The constituted authorities, who by their offices are the conservators of the property and peace of society, have remained entirely inactive. Such negatives certainly indicate a remarkable want of that high-toned moral sentiment upon which security of persons and property rests. We do not believe that the outrages complained of could have been committed

in any other State, without calling for such interference from the local authorities, and such a condemnation, as would have crushed in the bud every act of violence, as we may infer from the universal condemnation, out of Pennsylvania, which the outrages have called forth.

Such is the negative side of the case. There is a positive side vastly more significant and disgraceful. The Press of the State, as far as we have opportunities of observing, have invariably expressed sympathy with the rioters. The Governor has written a letter which could have no other effect than to encourage them in their work of destruction. The courts of the State have at length interfered, but the rioters, under the belief, undoubtedly, that as they must be tried, if tried at all, by a Jury of their neighbors, which would render conviction impossible, have, thus far, treated the orders of the legal tribunals with contempt. Such is a statement of the present condition of affairs. Let us see who are the real parties to the quarrel, and who, in the end, are to be the sufferers.

The Pennsylvanians tell us that it is a contest against the grasping ambition of New York, which would sacrifice the rights of individuals and communities in the accomplishment of her selfish aims. We showed in our last that this city has very little interest or feeling in the matter; that she is indifferent whether western trade and travel reaches her over the Lake Shore, or the Pennsylvania lines. She aids the construction of the latter with the same freedom that she has the most important roads within her own territory. New York distrusts no rival, simply for the reason that she believes she has none. The real contest, therefore, is between Pennsylvania and all parties in any way interested in the Lake Shore lines, which includes every person interested in all of the western roads, as well as New York and New England; as the value of their property will be directly affected by the destruction of the Lake Shore line. Every man who has a cent invested in such roads, is a direct party to the quarrel, and is watching with anxiety, the result. The interests of capitalists throughout the world, to a considerable extent, are at stake. They are one of the parties who are to suffer.

Whatever may be the issue of the present contest going on at Erie, as far as the two roads are

concerned, the great sufferer in the end will be the State of Pennsylvania, whose character and credit has been most seriously damaged. She has inflicted a stain upon herself which years cannot efface. The wrong that has been done will be aggravated by the defaults, from which she suffered so much, a few years since. To these is to be ascribed the fact that in enterprise, and in public works, the result of good credit, Pennsylvania is far behind New York, though possessing far greater resources in her soil. If the State could not borrow money in her collective capacity, much less could private companies. The consequence was that a paralysis rested upon all the enterprises of that State, while those of New York were pushed forward with extraordinary vigor and success. A comparison of the public works of the two States will show the extent to which Pennsylvania suffered from the causes referred to. But the resumption of payment had been attended by its natural results. It gave credit to private companies; and this State was just starting upon a new career, which promised the most brilliant results, and to compensate in some degree for the time that had been lost. In every portion of her extensive territory, railroads would have supplied just the facilities wanted for the development of her vast resources. But these bright prospects have been suddenly dashed to the ground, by the display of a sentiment, compared with which, default of the payment of just debts is a virtue. Instead of withholding, for which a partially satisfactory subterfuge can be framed, the people of this State have commenced a war of aggression upon the property of distant creditors. What will be the reply of these parties to the Railroad companies, when they apply to them for money, without which the numerous works now in progress in that State cannot proceed? Will not the following be the common, "Gentlemen, experience has shown that railroad property in your State is unsafe. What we already have has been attacked and destroyed, apparently by universal consent. Your Governor has, indirectly at least, encouraged the outrages we have suffered. The public Press of the State has done the same. Under such a state of things we are not giving place to any more of our money in a position where it is liable to be fallen upon and destroyed any day by an infuriated mob,

shielded from punishment by the general sympathy." This is the aspect which the quarrel has assumed and such will be the result. The credit of the railroad companies of the State has suffered a far more fatal blow than did the *State* credit for the defaults a few years since. The conveyances will be vastly more disastrous. There is no State in the Union which stands more in need of foreign capital than Pennsylvania and none in which it would accomplish more good.

To destroy this credit when most wanted, is a fatal mistake, and one which years cannot redeem. Upon the Railroad companies of the State will fall no small portion of the penalty for the Erie outrages.

While the City of New York is indifferent as to the channels through which the trade of the West is to reach her, we find that the western people are by no means disposed to submit their rights to Pennsylvania dictation. Meetings have already been held in many of the principal western cities, denouncing the Erie outrages, and declaring a determination to discontinue all business relations with Philadelphia, so long as these outrages are persisted in and tolerated. We know that the whole West is most thoroughly disgusted at the narrow and bigoted policy which has too often characterized the Legislation of Pennsylvania. This feeling cannot fail in exciting a decided influence in turning to other cities a large portion of western trade now going to Philadelphia. The Erie affair in the end, can have no other issue than the one exactly opposed to that sought to be gained, which in its general influence, must inflict a lasting and serious blow upon the railroad enterprises of the State.

Locomotive Building in Paterson.

Paterson, once the active competitor of Lowell in the cotton manufacture, has acquired a deserved celebrity for the production of railway machinery. The former city bears the same relation to locomotive building that the latter sustains to the cotton manufacture. And as Lowell has its market in Boston, so Paterson supplies orders which must naturally be attracted to New York.

At the present time there is a large amount of work in progress in the shops at Paterson. At Rogers', nine engines are building monthly. Additional room and power have been provided, and a portion of the works, heretofore devoted to cotton machine and tool making, have been occupied for locomotive work. The general features of the engines built at these works have not been materially changed since the commencement of the year, at which time *level cylinders* were adopted where admissible by spreading the trucks, and at which time also the engines were generally fitted with Hackworth's double exhaust ports. A sensible advantage is found to attend the working of this latter arrangement. The cylinder face has two exhaust ports, each having half the usual width, and separated by a bar of from 1½ to 1½ inches in width. The valve has two bars cast across its face in such manner as to close both the exhaust ports at mid-throw, giving a lap, generally of 3-16ths inch, on each side. At the same time an allowance of "inside clearance" of 3-32 inch is made by opening the cavity of the valve 3-16ths wider than the distance between the inner edges of the steam ports. At a moment just before the

exhaust at each stroke, the steam passes, through the valve, from one end of the cylinder to the other, giving much of the effects of *lead* without waste of steam. Although the exhaust is slightly delayed, it is effected through two ports instead of one; so that at the commencement of the stroke the whole lead on the exhaust is much more than that allowed with a single port.

The operation of this valve, with steam ports 1¼ inches wide and exhaust ports 1½ inches each; 11-16 inch outside lap, 3-32 inside clearance, and bars in the valve each 7-16 inch wider than the exhaust ports which they cover—is as follows.

Throw of Valve.	Lead on Steam Port.	Lead on Exhaust.	Steam cut off, in in's of 22 inches stroke.	Steam enters the valve in in. of 22 in. stroke.	Steam Exhausts do.	Pre-admission of Steam ditto.
In.	in.	in.	In.	In.	In.	In.
4 5-8	1-16	1 1-16	20	21¼	21¾	1-32
2 15-16	3-16	1 5-16	16	19¼	20¾	1-8
2 5-8	1-4	1 7-16	14	18¾	20¼	1-4
2 1-2	1-4	1 7-16	12½	17¾	19¾	3-8
2 1-4	1-4	1 7-16	11	16¾	19¼	1-2

Another evident advantage of Hackworth's valve is that it affords a better distribution of the wearing surface, being less likely to wear concavely. The great length of steam ports and breadth of valve, used for the link motion, make this an important point of superiority.

The New Jersey Locomotive and Machine Co., under the efficient superintendence of Mr. John Brandt, is turning out some of the best locomotive work ever made in this country. The materials are of the choicest kind, being mostly supplied under special contracts with manufacturers of the very best kinds of American stock. The cylinder fastenings, link motions, frames, pedestals and braces, and the trucks, are among the best specimens of heavy and thorough work. The pumps (wholly of brass), double domes, wrought iron rockers, &c., are also made in a style corresponding with the most elaborate description of engine work. This Company have lately been placing some excellent engines upon the New York Central, Hudson River, Philadelphia and Columbia, and other home roads.

William Swinburne is doing a large business for western roads, besides having filled some recent orders for the *Erie*. The manner in which Mr. Swinburne is fitting up his link motions is worthy of being copied. The suspended or stationary link is used, the valve arm or radius rod being forked to embrace the block on both sides. The arm on the lifting shaft is forked also at its end, and two lifting links with long hubs are applied one on each outside of the valve arm and lifting arm. The links are held by sustaining links on each side, whereby all tendency to twist the links is corrected.

Messrs. Danforth, Cooke & Co. have completed two of the heavy freight engines for the New York and Erie Road. These are *expansions* of the plan of the passenger broad gauge engines, built by Rogers in 1861, but are hardly "the thing" for a freight engine. They are of extreme size, being principally as follows:

18 inch cylinders; 20 inches stroke; Inside connection; four drivers, 5 feet 2 inches diameter and truck. Boiler 48 inches diameter and containing 197 tubes, 2 inches in diam. and 10 ft. 9 inches long. Furnace grate 57 by 48 inches. Steam ports 16 by 1 5-8 in. Weight of each cylinder in rough 1900 lbs.

Weight of engine in running order 31½ tons.

These engines are of excessive weight, without a proper distribution. The proportion of cylinders and wheels are not such as are best suited to the grades of the Eastern and Western divisions of the road. The tubes are too near together, although in the second engine we believe the number was reduced and the distance apart increased. The capacity of boiler does not appear to be large enough and it is perhaps a question if the extension of the furnace at the expense of the tubes will yield the best result. From the results obtained in the use of outside connected engines on the Erie road there is no doubt that *that* is the arrangement best adapted for the freight engines. The excess of weight and especially of disturbing weight, and the increased difficulty of balancing the latter, operate against the inside connection.

These remarks bear no reference to the manner in which Danforth, Cooke & Co. have filled their contract, as the designs of these engines were furnished to them in minute detail, while the mechanical execution is of the highest order.

Z. C.

Traction and Adhesion of a Locomotive.

An engine built by Messrs. Dodds and Son, of Rotherham, England, for a railroad in Spain, was tried on the "Lickey Incline" of the Birmingham and Gloucester Railway, for the purpose of testing its capacity for working trains upon grades. The particulars of the engine and load, grades, etc., were as follows:

Diameter of Cylinder..... 14½ inches.
Length of stroke..... 20 "
Diameter of Driving wheels..... 54 "

4 Drivers supporting ¾ the entire weight of the engine.

Weight of engine in working order... 42,560 lbs.
" " tender loaded..... 13,104 "
" " train, 6 carriages..... 102,228 "
Pitch of grade, (143 feet per mile,)... 1 in. 27
Length of grade..... 2½ miles.
Time of ascent..... 12 m., 12 s.

Train started at the foot of incline without assistance, and the speed steadily increased until the engine reached the summit. At the time there was a drizzling rain.

RESISTANCES.

Gravity of train on incline..... 2,763 lbs.
" " engine and tender..... 1,504 "
Ordinary friction of engine gear..... 114 "
Extra friction due to weight of train..... 451 "
Extra friction due to resistance on grades..... 533 "
Axle friction of engine and tender..... 223 "
Axle friction of train..... 364 "

Total..... 5,540½

Equal to a pressure of 78¾ lbs. throughout stroke of piston, over and above the resistances of the exhaust and blast, and equal to 10-51 the adhesive weight of the engine. Notwithstanding the state of the rails the engine did not slip at all. It is probable, considering the speed made, equal to 10¾ miles per hour at the moment of reaching the summit, that the resistances were at least 5,900

pounds, equal to 10-49 of the adhesive weight of the engine.

This engine has 137 tubes $1\frac{7}{8}$ inches in diameter, and 11 feet 3 inches long. Single blast pipe $3\frac{3}{4}$ inches in diameter. Z. C.

Report of the Directors of the New York and Erie Railroad Company to the Stockholders.

(Continued from Page 836.)

IV.—THE RESOURCES FOR BUSINESS LOCAL AND FOREIGN, AND THE SHARE OF THE WESTERN TRADE AND TRAVEL DUE TO THE NEW YORK AND ERIE RAILROAD, FROM ITS POSITION AND FACILITIES.

In a subsequent place, the local resources of this Road are stated; but the examination of this question would be incomplete, if it were limited to the territories, which are adjacent to its line, of nearly five hundred miles of main trunk, and twice that length of tributary roads and water ways, within this State.

The New York and Erie Railroad, like the Erie Canal, is so essentially national in its characteristics, that the vast territory of the West must be considered by those who would adequately comprehend the causes, which have already furnished a business, which has surpassed the warmest anticipations of its early friends. Some reflections of a desultory character, thrown together as generally illustrative of this branch of inquiry, will suggest to the reader many other considerations which it might seem tedious to particularise in this place.

The rapid settlement of those vast and fertile regions lying north of the Ohio and east of the Mississippi, is unparalleled in the annals of any other country, and every acre of the wilderness subdued by this mighty march of civilization, develops new resources of profitable business, for the railroads and waterways. These again facilitate the settlement of those regions and conduce directly and powerfully, to the welfare of the New York and Erie, and the other main trunk lines, between the Atlantic and the West.

This being the only Railroad, constructed and managed by a single Company, between the commercial metropolis and the inland seas, turning the northern bank of the Alleghany Mountains by easy grades and curves, forming a continuous gauge, the broadest in America, on one of the few routes by which a railroad is practicable between New York and the vast region drained by the Western Lakes and the Mississippi,—it could never be reasonably doubted, that it would share largely in the immense trade and travel from that region, which from the converging lines of the waterways and railroads, are thrown into the narrow throat lying between the northern extremity of the Alleghany Mountains and Lake Erie, from which this road starts.

More than three thousand miles of railroads are now in operation, west of the terminus of this road and north of the Ohio, and as many more miles are actually in progress, altogether omitting those built and in progress south of the Ohio.—From its western terminus, also, extends a continuous chain of more than one thousand miles of lake navigation, with five hundred miles of navigable rivers and twelve hundred miles of canals, uniting the waters of the lakes with those of the Ohio, Wabash and Illinois Rivers, and through them, with the Mississippi and its twenty thousand miles of connected navigation.

From its geographical position, the New York and Erie Railroad is the first line, which intercepts the immense flood of trade, which is thrown by these railroads and waterways, through this narrow throat, and it must, consequently, ever continue to receive the largest share thereof.

The progress of no other country furnishes adequate data, for determining the ratio of advancement in this; and even the wonderful results of the past progress of the West, will fall short of the future, when the full effect of those numerous

railroads and water courses is realised. The construction of each mile of new railroad in that region, is directly or indirectly, increasing the trade and travel, which must pass to the Atlantic over these roads; and in like manner, they are interested in every improvement in the manner, or reduction in the cost, of transportation on the lakes, rivers, canals and railroads, which contribute to the prosperity, and increase the ability of the Western multitudes, to sustain the traffic to the sea-board. These water lines are thus, in almost every case, auxiliaries, instead of rivals, to the great lines of railroads.

The trade between the Atlantic sea-board and that fertile region of the great West, which lies north of the Ohio, is already taxing the existing channels of commerce, to their utmost capacity.

The annual agricultural and animal productions of this region, exceed twenty millions of tons; and its surplus products, requiring transport to an Atlantic market, together with the return freight, is believed to be over five millions of tons. The New York and Pennsylvania Canals and Railroads, now convey about three millions of tons of this trade annually.

Enlarged channels, for this vast internal commerce, have become indispensable. The State of New York has already taken steps to complete the enlargement of the main artery; but before this is accomplished, the State and private works already constructed, will be found inadequate.

When the Erie Canal is enlarged, the increased facilities and diminished cost of transport, which it will afford, will vastly increase the trade through this State, and will by these means, also correspondingly increase the travel which must pass over the main lines of railroads. Those articles of freight which require, or will bear the expense of railroad transport, will also be increased to an extent that will tax to their full capacity, all the railroads now built between the Atlantic and the West.

The high northern latitude closes the water lines between the East and the West, for one-third of the year. The interchange of commodities, and the trade between those districts have undergone a sensible change within the last dozen years; and, though the water-lines have lost none of their importance, so far as regards the conveyance of the heavy commodities, yet the demands of a concentrated population at the East, require the means of a speedy conveyance, of the more perishable articles of use and consumption, as well as of a rapid communication for the moving multitudes, whom the relations of business or pleasure, require to pass between the East and West.

West of the Mississippi there are not now one hundred miles of railroad in operation. The well informed men of that region confidently assert, that within ten years, they will construct more than five thousand miles. It is difficult to bring the mind to appreciate the effect on the New York and Erie, of the completion of those roads only, which the least sanguine concede will be built west of its Erie terminus, as well as from the increase of traffic on those already constructed.

The social and business habits of the people of the West must be considered, in estimating the resources of the railroads connecting them with the East. No equal amount of population in the world, possess means for travel like those of the Western people; and their intimate business and social relations with the East, (from whence so many of them have emigrated) lead to frequent interchanges of visits with friends in that region.

No other country presents a parallel to the wide distribution of the members of families, nor does any other present similar facilities, for frequent re-unions at each others homesteads, whether they be hundreds or thousands of miles apart.

This interchange of sociality, is one of the main elements of the prosperity of our railroads; and what railroad is, or ever can be, better situated than the New York and Erie, for reaping a golden harvest from this immense and increasing cause?

The States of Ohio, Indiana, Illinois and Wis-

consin, each extend from the Lakes to the Ohio or Mississippi, and are connected with both, by four great lines of canal. Michigan and the peninsula of Upper Canada, are nearly surrounded by the great chain of navigable Lakes.

This same territory is intersected, as has been mentioned before, by a network of railroads, which, with the water lines, converge towards the Eastern end of Lake Erie, and concentrate in that narrow gorge, an amount of trade and travel which is not to be found elsewhere on this continent.

The New York and Erie Railroad, taps this trade in four places: first, intercepting it at Dunkirk with its main trunk, and subsequently by its tributaries at Buffalo, Tonawanda, Niagara Falls and Youngstown, and delivers it at the greatest commercial point on the continent, to which the chief part of it is directed.

It should be borne in mind, that the Erie is still a new route, without that complete organization of itself and its tributaries which its competing rival possesses, from the greater length of time which its business has been established.

Railroads are rapidly taking the place of the common highways of the country, and especially through the Western States, where the soil, so admirably adapted for agricultural purposes, for that reason, is generally unfitted for the construction of even passable turnpikes.

The high value of the time of the traveler in this country, and the circumstances before stated, have rendered the railroad an element of necessity. The passenger by Railroad, travels six times the distance per day that he does by stage coach. The average value of the daily time of railroad travellers, is not less than two dollars per day. The saving is therefore ten dollars a day on each, which applied to the whole railroad travel of the United States, would be sufficient to pay the interest on the cost of all the Railroads that have been built in the Union.

Railroads have penetrated regions which were inaccessible to canals, and by cheapening the cost of transport, have increased the value of the adjacent property, equal to their cost. The difference in the cost of transport of agricultural products, saved by rail, over the common highway, is equivalent to adding to the adjacent farms, ten cents per acre for every mile of distance, that such commodities are moved on rail, instead of the common road. If the farmer, before a railroad was built, had been obliged to convey his products one hundred miles over a common road, the building of a railroad, for this distance, would be equivalent to increasing the value of his farm ten dollars an acre.

These railroads have already produced an important effect, in equalizing to a certain extent, the summer and winter prices of agricultural products on the Atlantic, and of merchandise and manufactured articles in the interior.

The crops of the country are harvested so late, that a large portion of them, cannot be sent to market until the following season, in consequence of the water lines being then, either thronged with business, or closed by ice. The railroads afford a constant communication for the whole year, and by means of their rapid transport, enable the producer to avail himself of the advanced prices, which frequently take place, after the water lines are closed.

These are additional reasons for believing that the main trunk lines will be hereafter occupied to their full capacity, and at remunerative prices.

The facilities which the New York and Erie Railroad has given for quick and cheap transport to the best market in the country, has been an incentive to a large production for export along the route, and has caused a rapid increase in the settlement and cultivation of the contiguous lands. The establishment of every new branch of industry, the cultivation of each additional acre, and the settlement of every family along the line, forms an additional source of permanent revenue to the road.

The lumber cleared from the land, is followed immediately by its settlement; and though the transportation of lumber is the least profitable branch of business done, it is a subject worthy of careful attention, whether provision should not be made for carrying it, at remunerative prices, at least to the nearest shipping place by water, for the advantage which will ultimately be received, in the permanent revenue arising from the conveyance of the agricultural products of the land thus cleared, and that of other freights and passengers incident to its settlement. The population of the district through which the road passes, or from which it draws its trade and travel, was about seven hundred and fifty thousand in 1850, and had increased nineteen per cent. in ten years. The present population exceeds eighteen hundred thousand. The valuation of the real estate in 1852, of those portions of the above mentioned district within the State of New York, was one hundred and fifty millions of dollars, and of the assessed personal estate, twenty-two millions.—The number of acres of Improved Lands in 1845, was nearly three millions, it now exceeds five millions of acres, including those in New Jersey and Pennsylvania. The value of the manufactured articles in mills and tanneries, was more than ten millions of dollars in 1845. The value of the annual products of the dairies, lumber, coal and cereal products, amounted to over twenty millions of dollars in 1840, and including the manufactured articles, now probably exceed sixty millions of dollars annually.

In the older countries of Europe, the business of their railroads arrives nearly at a maximum, a few years after they are opened; and to a certain extent, the same result takes place on some of the railroads in New England, where rival lines are certain to be established, whenever the business of one proves very productive.

This is not the case however on the railroads of the West, or those built on the great lines between it and the Atlantic, and particularly on the New York and Erie Railroad.

The rapid increase in the settlement of the country, the continued opening of new, and the extension of old lines of railroads, as well as that of lakes, rivers and canals, pour into the main channels an annual increase of trade, which none of them have hitherto anticipated, or have made sufficient provision to perform.

The New York Central, (as the combined lines between Albany and Buffalo are now termed) ten years ago, occupied the same position in reference to its prospective revenues, that the Erie Railroad does now. Few persons at that period would have hazarded a prediction of an increase in its business equal to that which has annually taken place since the period, when it was commonly regarded as having attained its maximum.

The country adjacent to the line of the Erie and its contributing roads and water ways, is as yet only partially developed; and the same causes which have hitherto so wonderfully increased its local receipts, must continue to operate to the same, or to a greater extent, for many successive years.

The terminus of the Road being at the largest city in the Union, will, as is the case with other roads leading therefrom, ultimately render much of the first seventy miles of the adjacent country, a series of villages and gardens, which will furnish the Road with a very large amount of travel and freight, in proportion to its area, over the three lines from Chester to Newburg, Piermont and Jersey City—an aggregate length of nearly one hundred miles of road.

The system of commuting for short distances, has been followed by the best results, on many of the Roads leading from New York, Boston, and other places, but has not yet been introduced to any extent on this Road.

The charge for commuting passengers, on the Boston roads, is from thirty dollars per annum for five miles, to ninety dollars for twenty-five miles, which is estimated to be about one cent per pas-

senger per mile. On the Harlem, the charge for the class of passengers is from twenty-five dollars per annum for six miles, to forty dollars for eighteen to thirty miles; and for another class, thirty-five and forty-five dollars, for the distances mentioned; which is estimated to be about half-a-cent a mile, for the first class named, and two-thirds of a cent for the other. The number of annual commuters on the Boston roads is about four thousand, and on the Harlem, over thirteen hundred.

These rates would be considered very low, if it was not remembered that commuting passengers afford a regular, uniform business, for the doing of which, precise provision can be made, and that the additional business, which is always done by the same trains, is attended with a very slight addition to the expenses. The commutation is confined to the head of the family—the other members, friends, visitors, and the incidental trade, furnish a large and profitable addition to the business.

It must also be considered, that the commutation system establishes a population along the line, which will furnish a permanent source of revenue, for which there is no danger of competition, diversion, or diminution.

A.—THE CHARACTER OF THE ROAD AS CONSTRUCTED, AND ITS COST.

The aggregate amount of curvature is twenty-two thousand two hundred and fifty-two degrees, in four hundred and forty-five miles of the main track, making an average of fifty degrees per mile. Sixty-four per cent. of the whole distance is straight lines.

The annexed tables (C) show the amount of curvature and tangents, as well as the grades, arranged in classes.

The whole amount of ascents and descents is eight thousand and fifty-six feet in four hundred and forty-five miles, making an average of eighteen feet per mile.

From Almond Summit to Delaware, a distance of two hundred and fifty-six miles, the heaviest grade in the direction of the greatest trade (eastward) is only five feet per mile, except for a distance of six miles.

From Dunkirk to the summit between Lake Erie and the Allegany River, the maximum opposing grade going east is forty feet per mile, and west is thirty-five feet. Thence to Great Valley, east is forty feet, and west is thirty feet. Thence to Olean, east is fifteen feet, and west is twenty-five feet. Thence to the summit between the Allegany and Genesee Rivers, the maximum grade east is thirty-nine feet and west is thirty-five feet. Thence to Belvidere, east it is level or descending, and west is forty-nine feet. Thence to Phillipsville, east it is descending, and west is twenty-three feet. Thence to Andover, east is forty feet, and west it is level, or descending.

From Andover, to the summit between the Genesee and Canisteo, the maximum grade east is forty feet, and west it is level or descending.—Thence to Hornellsville, it is level or descending east, and west is fifty feet. From Hornellsville to Corning, the maximum grade east is level or descending, and west, is ten feet. From Corning to Susquehanna, the maximum grade east is five feet, and west it is ten feet; thence to the summit between the Susquehanna, and Delaware rivers, the grade for six miles, is ascending east sixty feet per mile, and thence to Deposit, seven miles, it descends uniformly east fifty-eight feet.

From Deposit to Delaware, the grade is level or descending east, and the maximum west is fifteen feet. From Delaware to Otisville is a uniform grade, ascending east of forty-five feet. Thence to Chester, the maximum east is fifty-six feet, and west, is sixty feet. Thence to Sufferns, the maximum east, is fifty-eight feet, and west is fifty feet.

From Sufferns to Blaauveltville, the maximum grade east is fifty-nine feet, and west it is sixty feet. From Blaauveltville to Pier, the grade is

level or descending east, and the maximum west is fifty feet.

From Otisville to Chester, and thence by the way of the Newburg Branch, to the Hudson River, the grades east are level or descending, except nine and a half miles, and from the Almond Summit to this terminus of the road, a distance of three hundred and nine miles, the grades east are mostly level or descending, the opposing grades east, with the exception of twenty-eight miles, not exceeding a maximum of five feet to the mile.

The annexed tables (D) furnish the number and span of the Bridges and Culverts, the dimensions of the cuttings and embankments, the quantity of ballasting done, the number and dimensions of the cross-ties, chairs and spikes, and the quantity of iron rails in the main tracks and sidings.

The whole length of the main track, from the Pier to Dunkirk, is four hundred and forty-five miles, and (including the Newburg Branch of nineteen miles, and the Union Railroad to Jersey City of thirty-one and a half miles,) is four hundred and ninety-five miles.

The whole length of the second track completed and in use, is one hundred and thirty-seven and one third miles, viz:—From the Pier to Clarks-town, eight and three-fourth miles, from Sufferns to Otisville, forty-three and one-half miles, and from Susquehanna to the Junction near Elmira, eighty-five miles. It is also in progress, and will be completed in January next, from Bergen to Paterson, fourteen and one-fourth miles, from Otisville to Delaware, twelve and two-third miles, and from Deposit to Susquehanna, fifteen and a half miles, making together one hundred and eighty miles of second track, besides eighty miles of the turnouts and sidings.

Considering the several lines to the Hudson River, as equivalent to a double track, a second track will soon be in use from New York to Corning a distance of two hundred and ninety-one miles except ninety miles along the Delaware, and fourteen miles along the Chemung, the construction of which will not be required until the business of the road is largely increased.

The Cuttings for the first track, were made twenty feet wide, and for the second track, twenty-three feet.

The Embankments for the first track, were made fourteen feet, and for the second, thirteen feet wide.

The slopes in earth were made, from one and one-half to one, to two to one, and in rock, from one-fifth to one, to one-half to one.

The Ballasting has been well done, on three hundred and thirty-eight miles of the first, and one hundred and thirty-nine miles of the second track. The material used for the embankments, on the remainder of the distance, being chiefly on the Susquehanna Division was deemed sufficient without the use of ballasting. It may be advisable at some future period however, to ballast one hundred miles of this division, and about fifty miles in other places.

The Cross Ties are generally nine feet long, six inches thick, with six to eight inches face.

The number of ties laid in the track is two thousand nine hundred and thirty-four per mile. The number originally laid, was two thousand two hundred.

The longitudinal sills, which were used on the Eastern and Delaware Divisions, have generally been removed, and substantial ties and full ballast substituted.

The Chairs weigh twenty-five pounds each. Those on the old track weighed seventeen pounds. About four tons of spikes have been used to the mile.

The quantity of Iron Rails laid in the tracks, is nearly seventy thousand tons, making seven hundred and fifteen miles of road, including nearly eighty miles of turn-outs. The weight of the rails in the main tracks, are generally from fifty-eight to seventy pounds per lineal yard; and those in the sidings are from fifty-six to sixty pounds.

All defective and worn-out rails, have been re-

placed with new iron, so that hereafter, the annual replacement of the rails, will only be that, which is necessary to meet the usual wear. The light rails used in the old track, have generally been replaced by new and heavier ones.

The chief part of the rails which are taken out of the main track, are suitable and are required, for extending and increasing the number of the side tracks at the stations, to accommodate the annually increasing business.

The number of lineal feet of Bridging built, is twenty-five thousand three hundred and thirty-seven, of which five thousand four hundred and seventy-eight feet, are for the second track. One-half of the length, is in spans of one hundred and fifty feet and over.

The bridges have all been constructed in the most permanent manner, either originally, or by the substitution of new ones, where those first built were found to be weak or defective.

During the last year there was expended \$161,970 60 in building new bridges.

There are one hundred and fifty eight Arch, six hundred and three Box, two hundred and fifty three open stone Culverts, and three stone Viaducts, of from fifteen to thirty feet span, and one of seventeen arches of fifty-one feet span.

A number of stone culverts have been built, in place of wooden bridges during the last two years.

There are three large Machine Shops: viz: at Piermont, Susquehanna and Dunkirk, fitted up with the most complete set of tools and conveniences, for repairing and fitting up locomotives, &c., and extensive shops and buildings similarly equipped, for repairing and manufacturing cars.

There are also five smaller Machine Shops, and thirty-five Engine houses, containing in the aggregate over one hundred stalls, together with fifteen Turn-tables.

There are fourteen passenger houses and refreshment saloons, twenty-nine freight houses and forty-six station houses, used for both purposes; twelve buildings used for dwelling, offices, &c., and fifty-five smaller buildings used for various other purposes. This statement does not include the block of buildings, owned by the Company in the City of New York.

There are also twelve thousand six hundred and forty-eight lineal feet of wood houses, and a large number of water stations.

The road has been in use a sufficient length of time, to show what slopes of cuttings and fillings were required, what side ditches and other protections were necessary, to allow the embankments to become well settled, to determine the strength and stability of the bridges, and to test the strength of the iron and the quality of all the materials used.

The imperfections of original construction, have been corrected, wherever it was necessary, by the enlargement of the excavations and embankments, by the construction of bank walls, by the raising of embankments and the substitution of new structures, iron and materials, wherever those originally put in were defective or have decayed.

The road is therefore at this time, in a more perfect condition, than it has been at any previous period, and the future expenditures for these purposes, will be materially diminished.

The number of Locomotives owned by this Company, is one hundred and fifty, of which three are worn out; three are in the shops, undergoing general repairs, and twelve others, slight repairs, leaving one hundred and thirty-two in use. Of those in use, thirty-one require slight repairs, and one hundred and one are in complete order. Eight of the engines were run on the narrow gauge, between Paterson and Jersey City, and are thrown out of use by the completion of the broad gauge track, over that portion of the road.

Contracts have been made for sixty new engines which will be delivered during the ensuing six months.

The annexed tables (E) exhibit the number of engines, employed on each division of the road, the condition, the cost of the ordinary and extra-

ordinary repairs on each engine, and the number of miles run, and the cost per mile run by each, for the last year.

The cost of ordinary repairs was \$148,744 85
 " " extraord. " " 139,899 96
 " number of miles run " " 2,790,509
 " cost of ordinary repairs per mile run was 5 1/2 cents.
 " " of extraordinary repairs per mile run was 5 cents.

A line of Magnetic Telegraph extends over the whole length of the main road and the Union and Newburg Branches, and also over several of the connecting roads.

The length of Telegraph line operated by this Company, is four hundred and ninety-seven miles; the number of offices is fifty-seven, and the number of Telegraph operators employed is sixty-five.

The expenditure for its construction has been \$50,000, and the annual cost of maintaining and operating it is \$3,000.

The cost of the road and equipment to the present date, and the expenditures thereon during the past year, are as follows:—

ON WHAT ACCOUNT.	PRESENT COST.	ENDING SEPT. 30, 1853.
For gradation, masonry, and bridges, as follows:—		
Grading, transportation of laborers and materials, and gravel and hand-cars....	\$12,959,619 97	\$2,261,889 43
Superstructure.....	2,374,186 08	451,219 07
Iron.....	3,764,216 03	896,860 58
Stations, buildings, and fixtures, viz:		
Freight and Passenger Depots.	513,362 87	57,887 98
Water Stations and Wood Sheds.....	254,941 21	66,324 91
Machine and Workshops...	233,778 97	33,547 84
Machinery in Shops.....	161,604 78	28,241 58
Depot and Stores in N.York.	92,974 01	4,029 50
Land, land damages and fences.....	1,150,515 16	82,149 49
Locomotives and fixtures.....	1,862,971 45	12,284 16
Passenger and Baggage Cars.....	392,659 62	59,780 84
Freight and other Cars.....	1,470,402 45	820,048 40
Telegraph.....	50,081 69	5,885 57
Duane street Pier...	12,878 86	.....
Dunkirk Harbor Improvement.....	12,066 74	1,505 84
Steamboats and Barges on Hudson River.....	205,586 90	24,675 00
Office Expenses....	195,996 63	24,576 24
Engineering.....	476,878 57	30,733 40
Agencies.....	148,068 00	80,381 45
Contingencies.....	172,825 71	93,625 50
Interest on Stock, according to terms of subscription, &c., &c.....	1,651,694 13	115,254 66
Interest on first Mortgage Bonds paid to State Comptroller.....	499,944 17	.....
Discount on sale of Bonds.....	1,765,464 08	.....
Construction previous to 1845.....	1,361,616 18	.....
Totals.....	\$31,222,834 21	\$4,651,101 44

The old account of expenditures prior to the subscriptions received in 1845, is as follows:

State Loan released.....	\$3,000,000 00
Forfeited Stock.....	65,571 29
Six per cent. Certificates.....	265,515 42
Seven ".....	163,146 44
Drafts at pleasure.....	54 03
Stock surrendered.....	742,100 00
Bills payable.....	2,899 81
New Stock given for old surrendered, cash paid, and outstanding liabilities.....	917,600 43
Old Stock not surrendered.....	12,400 00

Total.....\$5,169,284 42

This is now represented by:

New Stock.....	742,100 00
Seven per cent. Certificates.....	603,868 90
Old outstanding liabilities.....	14,214 51
Cash paid on old account.....	101,432 72

Total.....\$1,361,616 13

The expenditures which have been made during the past year, have been incurred for the following purposes:—

Advances to the Union Railroad Company, for laying down a wide track from Jersey City to Suffern, thirty-one and a half miles, and a second track to Paterson, including turn-tables, station houses, side tracks; two extensive bridges, for a double track across the Hackensack and Passaic Rivers, with large and substantial draws; several smaller bridges and culverts; the widening of the Boiling Spring quicksand and other cuts; several other excavations; raising and widening the embankments; ballasting a considerable portion of the distance; extending and re-building the culverts, cattle guards and passes; fencing; and the purchase of additional grounds and facilities, for conducting the operations of this part of the road.

On the Eastern Division, thirty-four miles of the second track, have been completed and brought into use, ten miles more are nearly completed, and the grading and ballasting on twelve miles more, almost finished and ready for the superstructure.

On this Division there have been built and brought into use, eleven double track bridges, each of from twenty-one to one hundred and sixty-three feet span, besides six bridges, the masonry of which has been completed, and the superstructure nearly finished; and the Neversink Bridge, the masonry of which is nearly completed. There have also been built, nine arch culverts, of from six to twenty-five feet span, and a number of cattle guards, passes and road crossings.

In nearly every case, it has been necessary to build the above mentioned bridges, culvert, &c. for both tracks, as the old structures were of a temporary character.

The grading for the second track, from Otisville to Delaware, was very heavy and expensive, a considerable portion of it being heavy rock excavation.

On the Delaware Division, east of Deposit, several side tracks have been put in, and others extended, to accommodate the increased number and length of the freight trains. The excavations and embankments have been widened. The masonry for the bridge across the Delaware River, at Delaware, (required to be built as one of the conditions of the Pennsylvania charter) has been about one-third finished, and the timber for the superstructure furnished.

Between Deposit and Susquehanna, (fourteen and one-half miles) the grading for the second track has been nearly completed, the cross ties and iron delivered, and the ballasting for four miles done, ready for the superstructure.

This work has been very expensive, in consequence of the large amount of rock required to be excavated.

On the Susquehanna Division, eighty-six and three-fourth consecutive miles of the second track, have been completed and brought into use, extending to the junction with the railroad to Canan-

The lumber cleared from the land, is followed immediately by its settlement; and though the transportation of lumber is the least profitable branch of business done, it is a subject worthy of careful attention, whether provision should not be made for carrying it, at remunerative prices, at least to the nearest shipping place by water, for the advantage which will ultimately be received, in the permanent revenue arising from the conveyance of the agricultural products of the land thus cleared, and that of other freights and passengers incident to its settlement. The population of the district through which the road passes, or from which it draws its trade and travel, was about seven hundred and fifty thousand in 1850, and had increased nineteen per cent. in ten years. The present population exceeds eighteen hundred thousand. The valuation of the real estate in 1852, of those portions of the above mentioned district within the State of New York, was one hundred and fifty millions of dollars, and of the assessed personal estate, twenty-two millions.—The number of acres of Improved Lands in 1845, was nearly three millions, it now exceeds five millions of acres, including those in New Jersey and Pennsylvania. The value of the manufactured articles in mills and tanneries, was more than ten millions of dollars in 1845. The value of the annual products of the dairies, lumber, coal and cereal products, amounted to over twenty millions of dollars in 1840, and including the manufactured articles, now probably exceed sixty millions of dollars annually.

In the older countries of Europe, the business of their railroads arrives nearly at a maximum, a few years after they are opened; and to a certain extent, the same result takes place on some of the railroads in New England, where rival lines are certain to be established, whenever the business of one proves very productive.

This is not the case however on the railroads of the West, or those built on the great lines between it and the Atlantic, and particularly on the New York and Erie Railroad.

The rapid increase in the settlement of the country, the continued opening of new, and the extension of old lines of railroads, as well as that of lakes, rivers and canals, pour into the main channels an annual increase of trade, which none of them have hitherto anticipated, or have made sufficient provision to perform.

The New York Central, (as the combined lines between Albany and Buffalo are now termed) ten years ago, occupied the same position in reference to its prospective revenues, that the Erie Railroad does now. Few persons at that period would have hazarded a prediction of an increase in its business equal to that which has annually taken place since the period, when it was commonly regarded as having attained its maximum.

The country adjacent to the line of the Erie and its contributing roads and water ways, is as yet only partially developed; and the same causes which have hitherto so wonderfully increased its local receipts, must continue to operate to the same, or to a greater extent, for many successive years.

The terminus of the Road being at the largest city in the Union, will, as is the case with other roads leading therefrom, ultimately render much of the first seventy miles of the adjacent country, a series of villages and gardens, which will furnish the Road with a very large amount of travel and freight, in proportion to its area, over the three lines from Chester to Newburg, Piermont and Jersey City—an aggregate length of nearly one hundred miles of road.

The system of commuting for short distances, has been followed by the best results, on many of the Roads leading from New York, Boston, and other places, but has not yet been introduced to any extent on this Road.

The charge for commuting passengers, on the Boston roads, is from thirty dollars per annum for five miles, to ninety dollars for twenty-five miles, which is estimated to be about one cent per pas-

senger per mile. On the Harlem, the charge for one class of passengers is from twenty-five dollars per annum for six miles, to forty dollars for eighteen to thirty miles; and for another class, thirty-five and forty-five dollars, for the distances mentioned; which is estimated to be about half-a-cent a mile, for the first class named, and two-thirds of a cent for the other. The number of annual commuters on the Boston roads is about four thousand, and on the Harlem, over thirteen hundred.

These rates would be considered very low, if it was not remembered that commuting passengers afford a regular, uniform business, for the doing of which, precise provision can be made, and that the additional business, which is always done by the same trains, is attended with a very slight addition to the expenses. The commutation is confined to the head of the family—the other members, friends, visitors, and the incidental trade, furnish a large and profitable addition to the business.

It must also be considered, that the commutation system establishes a population along the line, which will furnish a permanent source of revenue, for which there is no danger of competition, diversion, or diminution.

A.—THE CHARACTER OF THE ROAD AS CONSTRUCTED, AND ITS COST.

The aggregate amount of curvature is twenty-two thousand two hundred and fifty-two degrees, in four hundred and forty-five miles of the main track, making an average of fifty degrees per mile. Sixty-four per cent. of the whole distance is straight lines.

The annexed tables (C) show the amount of curvature and tangents, as well as the grades, arranged in classes.

The whole amount of ascents and descents is eight thousand and fifty-six feet in four hundred and forty-five miles, making an average of eighteen feet per mile.

From Almond Summit to Delaware, a distance of two hundred and fifty-six miles, the heaviest grade in the direction of the greatest trade (eastward) is only five feet per mile, except for a distance of six miles.

From Dunkirk to the summit between Lake Erie and the Alleghany River, the maximum opposing grade going east is forty feet per mile, and west is thirty-five feet. Thence to Great Valley, east is forty feet, and west is thirty feet. Thence to Olean, east is fifteen feet, and west is twenty-five feet. Thence to the summit between the Alleghany and Genesee Rivers, the maximum grade east is thirty-nine feet and west is thirty-five feet. Thence to Belvidere, east it is level or descending, and west is forty-nine feet. Thence to Phillipsville, east it is descending, and west is twenty-three feet. Thence to Andover, east is forty feet, and west it is level, or descending.

From Andover, to the summit between the Genesee and Canisteo, the maximum grade east is forty feet, and west it is level or descending.—Thence to Hornellsville, it is level or descending east, and west is fifty feet. From Hornellsville to Corning, the maximum grade east is level or descending, and west, is ten feet. From Corning to Susquehanna, the maximum grade east is five feet, and west it is ten feet; thence to the summit between the Susquehanna, and Delaware rivers, the grade for six miles, is ascending east sixty feet per mile, and thence to Deposit, seven miles, it descends uniformly east fifty-eight feet.

From Deposit to Delaware, the grade is level or descending east, and the maximum west is fifteen feet. From Delaware to Otisville is a uniform grade, ascending east of forty-five feet. Thence to Chester, the maximum east is fifty-six feet, and west, is sixty feet. Thence to Sufferns, the maximum east, is fifty-eight feet, and west is fifty feet.

From Sufferns to Blaueveltville, the maximum grade east is fifty-nine feet, and west it is sixty feet. From Blaueveltville to Pier, the grade is

level or descending east, and the maximum west is fifty feet.

From Otisville to Chester, and thence by the way of the Newburg Branch, to the Hudson River, the grades east are level or descending, except nine and a half miles, and from the Almond Summit to this terminus of the road, a distance of three hundred and nine miles, the grades east are mostly level or descending, the opposing grades east, with the exception of twenty-eight miles, not exceeding a maximum of five feet to the mile.

The annexed tables (D) furnish the number and span of the Bridges and Culverts, the dimensions of the cuttings and embankments, the quantity of ballasting done, the number and dimensions of the cross-ties, chairs and spikes, and the quantity of iron rails in the main tracks and sidings.

The whole length of the main track, from the Pier to Dunkirk, is four hundred and forty-five miles, and (including the Newburg Branch of nineteen miles, and the Union Railroad to Jersey City of thirty-one and a half miles,) is four hundred and ninety-five miles.

The whole length of the second track completed and in use, is one hundred and thirty-seven and one third miles, viz:—From the Pier to Clarks-town, eight and three-fourth miles, from Sufferns to Otisville, forty-three and one-half miles, and from Susquehanna to the Junction near Elmira, eighty-five miles. It is also in progress, and will be completed in January next, from Bergen to Paterson, fourteen and one-fourth miles, from Otisville to Delaware, twelve and two-third miles, and from Deposit to Susquehanna, fifteen and a half miles, making together one hundred and eighty miles of second track, besides eighty miles of the turnouts and sidings.

Considering the several lines to the Hudson River, as equivalent to a double track, a second track will soon be in use from New York to Corning a distance of two hundred and ninety-one miles except ninety miles along the Delaware, and fourteen miles along the Chemung, the construction of which will not be required until the business of the road is largely increased.

The Cuttings for the first track, were made twenty feet wide, and for the second track, twenty-three feet.

The Embankments for the first track, were made fourteen feet, and for the second, thirteen feet wide.

The slopes in earth were made, from one and one-half to one, to two to one, and in rock, from one-fifth to one, to one-half to one.

The Ballasting has been well done, on three hundred and thirty-eight miles of the first, and one hundred and thirty-nine miles of the second track. The material used for the embankments, on the remainder of the distance, being chiefly on the Susquehanna Division was deemed sufficient without the use of ballasting. It may be advisable at some future period however, to ballast one hundred miles of this division, and about fifty miles in other places.

The Cross Ties are generally nine feet long, six inches thick, with six to eight inches face.

The number of ties laid in the track is two thousand nine hundred and thirty-four per mile. The number originally laid, was two thousand two hundred.

The longitudinal sills, which were used on the Eastern and Delaware Divisions, have generally been removed, and substantial ties and full ballasting substituted.

The Chairs weigh twenty-five pounds each. Those on the old track weighed seventeen pounds. About four tons of spikes have been used to the mile.

The quantity of Iron Rails laid in the tracks, is nearly seventy thousand tons, making seven hundred and fifteen miles of road, including nearly eighty miles of turn-outs. The weight of the rails in the main tracks, are generally from fifty-eight to seventy pounds per lineal yard, and those in the sidings are from fifty-six to sixty pounds.

All defective and worn-out rails, have been re-

placed with new iron, so that hereafter, the annual replacement of the rails, will only be that, which is necessary to meet the usual wear. The light rails used in the old track, have generally been replaced by new and heavier ones.

The chief part of the rails which are taken out of the main track, are suitable and are required, for extending and increasing the number of the side tracks at the stations, to accommodate the annually increasing business.

The number of lineal feet of Bridging built, is twenty-five thousand three hundred and thirty-seven, of which five thousand four hundred and seventy-eight feet, are for the second track. One-half of the length, is in spans of one hundred and fifty feet and over.

The bridges have all been constructed in the most permanent manner, either originally, or by the substitution of new ones, where those first built were found to be weak or defective.

During the last year there was expended \$161,970 60 in building new bridges.

There are one hundred and fifty eight Arch, six hundred and three Box, two hundred and fifty three open stone Culverts, and three stone Viaducts, of from fifteen to thirty feet span, and one of seventeen arches of fifty-one feet span.

A number of stone culverts have been built, in place of wooden bridges during the last two years.

There are three large Machine Shops: viz: at Piermont, Susquehanna and Dunkirk, fitted up with the most complete set of tools and conveniences, for repairing and fitting up locomotives, &c., and extensive shops and buildings similarly equipped, for repairing and manufacturing cars.

There are also five smaller Machine Shops, and thirty-five Engine houses, containing in the aggregate over one hundred stalls, together with fifteen Turn-tables.

There are fourteen passenger houses and refreshment saloons, twenty-nine freight houses and forty-six station houses, used for both purposes; twelve buildings used for dwelling, offices, &c., and fifty-five smaller buildings used for various other purposes. This statement does not include the block of buildings, owned by the Company in the City of New York.

There are also twelve thousand six hundred and forty-eight lineal feet of wood houses, and a large number of water stations.

The road has been in use a sufficient length of time, to show what slopes of cuttings and fillings were required, what side ditches and other protections were necessary, to allow the embankments to become well settled, to determine the strength and stability of the bridges, and to test the strength of the iron and the quality of all the materials used.

The imperfections of original construction, have been corrected, wherever it was necessary, by the enlargement of the excavations and embankments, by the construction of bank walls, by the raising of embankments and the substitution of new structures, iron and materials, wherever those originally put in were defective or have decayed.

The road is therefore at this time, in a more perfect condition, than it has been at any previous period, and the future expenditures for these purposes, will be materially diminished.

The number of Locomotives owned by this Company, is one hundred and fifty, of which three are worn out; three are in the shops, undergoing general repairs, and twelve others, slight repairs, leaving one hundred and thirty-two in use. Of those in use, thirty-one require slight repairs, and one hundred and one are in complete order. Eight of the engines were run on the narrow gauge, between Paterson and Jersey City, and are thrown out of use by the completion of the broad gauge track, over that portion of the road.

Contracts have been made for sixty new engines which will be delivered during the ensuing six months.

The annexed tables (E) exhibit the number of engines, employed on each division of the road, the condition, the cost of the ordinary and extra-

ordinary repairs on each engine, and the number of miles run, and the cost per mile run by each, for the last year.

The cost of ordinary repairs was.	\$148,744 35
" " " " " " " " " " " "	139,899 96
" number of miles run " " " " " "	2,790,509
" cost of ordinary repairs per mile run was	5 1/2 cents.
" " " " " " " " " " " "	of extraordinary repairs per mile run was 5 cents.

A line of Magnetic Telegraph extends over the whole length of the main road and the Union and Newburg Branches, and also over several of the connecting roads.

The length of Telegraph line operated by this Company, is four hundred and ninety-seven miles; the number of offices is fifty-seven, and the number of Telegraph operators employed is sixty-five.

The expenditure for its construction has been \$50,000, and the annual cost of maintaining and operating it is \$3,000.

The cost of the road and equipment to the present date, and the expenditures thereon during the past year, are as follows:—

ON WHAT ACCOUNT.	PRESENT COST.	ending Sept. 30, 1853.
------------------	---------------	------------------------

For graduation, masonry, and bridges, as follows:—		
Grading, transportation of laborers and materials, and gravel and hand-cars....	\$12,959,619 97	\$2,261,889 43
Superstructure.....	2,374,186 08	451,219 07
Iron.....	3,764,216 03	896,860 58
Stations, buildings, and fixtures, viz: Freight and Passenger Depots.	513,362 87	57,887 98
Water Stations and Wood Sheds.....	254,941 21	66,324 91
Machine and Workshops...	233,778 97	83,547 84
Machinery in Shops.....	161,604 78	28,241 58
Depot and Stores in N. York.	92,974 01	4,029 50
Land, land damages and fences.....	1,159,515 16	82,149 49
Locomotives and fixtures.....	1,862,971 45	12,284 16
Passenger and Baggage Cars.....	392,659 62	59,780 84
Freight and other Cars.....	1,470,402 45	820,048 40
Telegraph.....	50,081 69	5,885 57
Duane street Pier...	12,878 86	.....
Dunkirk Harbor Improvement.....	12,066 74	1,505 84
Steamboats and Barges on Hudson River.....	205,586 90	24,675 00
Office Expenses....	195,996 63	24,576 21
Engineering.....	476,878 57	80,733 40
Agencies.....	148,068 00	80,381 45
Contingencies.....	172,325 71	93,625 50
Interest on Stock, according to terms of subscription, &c., &c.	1,651,694 18	115,254 66
Interest on first Mortgage Bonds paid to State Comptroller.....	499,944 17	.....
Discount on sale of Bonds.....	1,765,464 08	.....
Construction previous to 1845.....	1,361,616 13	.....
Totals.....	\$31,222,884 21	\$4,651,101 44

The old account of expenditures prior to the subscriptions received in 1845, is as follows:

State Loan released.....	\$3,000,000 00
Forfeited Stock.....	65,571 29
Six per cent. Certificates.....	265,515 42
Seven " " " " " " " " " " " "	163,146 44
Drafts at pleasure.....	54 03
Stock surrendered.....	742,100 00
Bills payable.....	2,899 81
New Stock given for old surrendered, cash paid, and outstanding liabilities.....	917,000 43
Old Stock not surrendered.....	12,400 00

Total.....\$5,168,284 42

This is now represented by:

New Stock.....	742,100 00
Seven per cent. Certificates.....	503,868 90
Old outstanding liabilities.....	14,214 51
Cash paid on old account.....	101,432 72

Total.....\$1,361,616 13

The expenditures which have been made during the past year, have been incurred for the following purposes:—

Advances to the Union Railroad Company, for laying down a wide track from Jersey City to Sufferns, thirty-one and a half miles, and a second track to Paterson, including turn-tables, station houses, side tracks; two extensive bridges, for a double track across the Hackensack and Passaic Rivers, with large and substantial draws; several smaller bridges and culverts; the widening of the Boiling Spring quicksand and other cuts; several other excavations; raising and widening the embankments; ballasting a considerable portion of the distance; extending and re-building the culverts, cattle guards and passes; fencing; and the purchase of additional grounds and facilities, for conducting the operations of this part of the road.

On the Eastern Division, thirty-four miles of the second track, have been completed and brought into use, ten miles more are nearly completed, and the grading and ballasting on twelve miles more, almost finished and ready for the superstructure.

On this Division there have been built and brought into use, eleven double track bridges, each of from twenty-one to one hundred and sixty-three feet span, besides six bridges, the masonry of which has been completed, and the superstructure nearly finished; and the Neversink Bridge, the masonry of which is nearly completed. There have also been built, nine arch culverts, of from six to twenty-five feet span, and a number of cattle guards, passes and road crossings.

In nearly every case, it has been necessary to build the above mentioned bridges, culvert, &c. for both tracks, as the old structures were of a temporary character.

The grading for the second track, from Otterville to Delaware, was very heavy and expensive, a considerable portion of it being heavy rock excavation.

On the Delaware Division, east of Deposit, several side tracks have been put in, and others extended, to accommodate the increased number and length of the freight trains. The excavations and embankments have been widened. The masonry for the bridge across the Delaware River, at Delaware, (required to be built as one of the conditions of the Pennsylvania charter) has been about one-third finished, and the timber for the superstructure furnished.

Between Deposit and Susquehanna, (fourteen and one-half miles) the grading for the second track has been nearly completed, the cross ties and iron delivered, and the ballasting for four miles done, ready for the superstructure.

This work has been very expensive, in consequence of the large amount of rock required to be excavated.

On the Susquehanna Division, eighty-six and three-fourth consecutive miles of the second track, have been completed and brought into use, extending to the junction with the railroad to Canan-

purpose to have well determined facts, and not vague impressions.

The expedition of Lewis and Clarke showed the probability of a considerable indentation in the crest of the water shed of the continent, near the forty-seventh parallel of north latitude, and indicated the probability of a railway route in this region, from the head waters of the tributaries of the Missouri, across to those of Clarke's river.

The party first organized under the act of Congress was the one to explore this line, which claimed the earliest attention from the known severity and length of the winter, and the necessity of commencing operations early in the year. It was placed in charge of Governor Stevens, of Washington territory, who was directed to operate from St. Paul's or some eligible point on the Upper Mississippi, towards the great bend of the Missouri river, and thence on the table land between the tributaries of the Missouri and those of the Laskatchewan to some eligible pass in the Rocky Mountains. A second party, commanded by Captain McClellan, under the direction of Governor Stevens, was directed to proceed at once to Puget Sound, and explore the passes of the Cascade range, meeting the eastern party between that range and the Rocky Mountains.

Taken in geographical order, the next survey ordered to be made was that entrusted to Capt. Gunnison, corps of Topographical Engineers. He was instructed to explore the route near the 38th parallel of latitude, by the Huerfano river and Cocho-to-da, or some other eligible pass, into the mountainous region of the Grand and Green rivers, and westwardly to the Vegas of Santa Clara and Nicollet's river of the Great Basin, and thence northward to the vicinity of Lake Utah. Reliable information furnished by persons who had been extensively connected with the western explorations of the government, gave such assurance that no railway pass could be found north of Kern river into either the Sacramento or San Joaquin valley, that it was not deemed proper to expend any part of the limited means appropriated in such a search; and having learned that the Mormons of the Great Salt Lake were making a survey for a railroad from their settlement to Walker's Pass, Capt. Gunnison, whose former intercourse with their engineer would enable him to obtain whatever information he possessed, was directed to procure a report of that survey, thus connecting his line with the survey to be ordered near the 35th parallel.

Postponing for future operations, if further surveys shall be ordered, the exploration of a route from the Salt Lake across the Sierra Nevada to the valley of the Sacramento, Capt. Gunnison was directed to return from the Great Basin through the Timpanajo Canon or other passes, and across the Weber and Bear rivers by the coal basin, to such point of disbandment as his discretion might direct.

The next line is that near the thirty-fifth parallel, which is in charge of Lieut. Whipple, of the corps of topographical engineers. He was directed to ascend the valley of the Canadian river, to pass around the mountains of east Rio del Norte, and enter the valley of that river at some point near Albuquerque, thence to extend his explorations west through Sierra Madre and the mountains west of Zuñi and Moqui countries to the Colorado of the West, and proceeding in the direction of Walker's Pass, to continue his survey by the most direct and practicable line to the Pacific ocean. Much testimony in favor of the practicability of this line indicated it as a proper route for exploration.

Another line further South is that suggested by the surveys of Major Emory in 1846, and those of the boundary line of the 32d parallel. It passes around the extremity of the Gaudalupe mountains of Texas in about latitude 31 deg., and crosses the Rio Grande near Dona Ana, or Frontera, in about latitude 32 deg., and thence follows the table lands west of the San Pedro river, and thence along the Gila river to its mouth. A portion of this line passes through the territory of

Mexico, and another portion is north of the line of operations of the boundary commission, and, consequently, these were not included in the boundary survey. The gaps thus existing in this line are to be filled up by the survey of Captain Pope, and that under the direction of Lieutenant Parke, both of the corps of Topographical Engineers. The instructions to the latter were not given until recently, because the survey with which he is charged requires a part of the line to be run within the limits of Mexico. The Mexican government, have, however, removed the difficulty by granting authority to the United States to make explorations necessary to determine the practicability of a railway route in this region.

Several partial routes on the Pacific side, to connect as before described with those from the east, were directed to be surveyed by Lieut. Williamson, of the corps of Topographical Engineers. He was instructed to examine all the passes eastward from the valley of San Joaquin and the Tulare lakes, and subsequently to explore Walker's and other passes which exist in the high range of mountains apparently the southern continuation of the Sierra Nevada.

The experience of almost every party which has crossed the continent shows the necessity of fitting out a separate party on the shores of the Pacific to explore the Sierra Nevada and other elevated ranges near that coast. Parties reaching these great barriers from the Atlantic side are too much fatigued and exhausted to make elaborate surveys. It is also necessary that these parties should commence operations early in the spring, in order to complete the field work before the heavy snows interrupt progress.

Copies of the instructions given to all the parties are hereto appended. From these it will appear that the officers of the different expeditions have been directed to observe and note all the objects and phenomena which have an immediate or a remote bearing upon the railway, or which may serve to develop the resources, peculiarities and climate of the country. For this purpose they have been supplied with full sets of instruments for determining the latitude and longitude of places, the courses and distances of the routes, and of the topography of the country on either side within accessible distances; with the means of ascertaining the variation of atmospheric pressure and other meteorological phenomena; and two of the parties with instruments to determine the direction and intensity of the magnetic force. They have been directed to observe the prevailing direction of the wind, the amount of rain, the degree of temperature and humidity of the atmosphere; they are also required to report on the geology of the country, to gather specimens of the different rocks and soils, to make collections of the plants and animals, and to collect statistics of the Indian tribes which are found in the regions traversed.

The information which may be derived from this series of observations will be of much value in establishing the capacity of the country to sustain population and furnish articles of commerce. The astronomical observations are indispensable in fixing the geographical position of the principal points of the route, and for improving the map of our Western possessions. The magnetic observations are of importance in accurately tracing the line between the points determined by astronomical observation. It is well known that the magnetic needle has an irregular and sometimes fitful variation, amounting to a difference of eighteen degrees between Washington city and the Western coast of Oregon, and the law by which this variation is increased or diminished has not been ascertained.

The meteorology of the country has a direct bearing on the question of the construction of a railway. The amount of snow which will probably be found along the route should be ascertained, and this will depend on the temperature and humidity of the place. As we advance to the north the amount of vapor diminishes, and hence the

quantity of snow which falls will be less; but, on the other hand, it will lie longer, on account of the diminution of temperature. It was, therefore, deemed proper that the hygrometrical state of the atmosphere should be measured by suitable instruments, and the mean temperature ascertained by thermometrical observations of the soil at a few feet below the surface.

A knowledge of the geology of the country is important, as affording essential data relative to the construction and use of the railway. It teaches, in advance of our expensive experience, the obstacles which will be presented by rocks to be excavated, and their fitness for use in masonry, and discloses the presence of sand, which may drift over the track or damage the rubbing parts of the machinery. From the character of the geological formation is to be inferred the probability of the existence of coal, and from the dip and strata of the rock, the feasibility of procuring water by Artesian wells, for the use of the engines—and whether or not the supply may be extended beyond this want, and happily serve for irrigation of the land. Should this last result be obtained, it would furnish the means to convert a sterile waste into a fertile region, and add to the power and wealth of the United States, by extending their settlements in a continuous chain from sea to sea.

There is but little doubt, that the best line which can be chosen will present a combination of nearly all the obstacles which have, up to this time, been successfully encountered by the art of the engineer, and that any haste or negligence which should cause an improper location of the road to be made, must lead to consequences which would endanger the success of the whole enterprise.

A striking illustration of the value of opinion not based on instrumental survey is presented in the developments made by Lieutenant Williamson's exploration of Walker's Pass. It will be remembered that this famous gap was considered a fixed point, and the various expectations on routes differing in everything else, generally concurred in tending to Walker's Pass. Recent information from Lieutenant Williamson establishes the fact that this pass is impracticable for a railway.

The necessity for more rapid sources of communication has been referred to in the other parts of this report, when treating of the defence of our southern boundary, the western territory and the Pacific coast. Duties and interests of vital importance, other than these, arise in the consideration of the railroad to the Pacific; but as they do not fall under the charge of this department, I have not attempted to present claims, nor have I deemed it proper in this communication to offer my views as to the means or the mode by which the general government may constitutionally aid in the attainment of the contemplated object.

Mr. Bartlett of the Mexican Boundary Commission has written a letter, addressed to the Pacific Railroad Company of this State, we believe, in which he gives a description of the country to be traversed by the proposed road, similar to that of the Secretary of War. He inclines to the opinion that the topography of the country presents no insurmountable obstacle to a railroad, but states that the great belt of table lands of some five or six hundred miles in extent, is without wood or water, and much of it without grass. He might have also added, without coal. We shall give Mr. Bartlett's letter as soon as we can find room. It certainly becomes an important question, whether a road can be built and operated for such a distance without an abundant supply to the two prime elements in locomotion, fuel and water. While all the world are talking, will not some practical man undertake to solve this problem, which we confess, is beyond our capacity.

Engineering Instruments.

We have been shown some very superior Engineering Instruments, manufactured by H. Shlarbaum, Mathematical Instrument maker, 298 Broadway. Mr. Shlarbaum was formerly a railroad Engineer, and knows exactly what members of the profession want, as well as how to make it. Letters addressed as above will receive attention.

American Railroad Journal.

Saturday, January 7, 1854.

The length of several of the articles in the present issue excludes a number of articles of a statistical character, appropriate to the commencement of the year, which will appear in our next number.

Railroads in the United States Jan. 1--1854.

We give below our usual tabular statement, by which it will be seen that the whole number of miles of railroad in the United States, in operation, upon the first day of the current year, was 15,511 miles; an increase of 2194 miles since January 1, 1853.

The condition of the money market for the first part of the year favored the progress of new enterprises. Later in the season it has been decidedly unfavorable. Money is not readily had for the most promising of our new lines, while those of the second class have had great difficulty in raising sufficient sums to carry forward their works.

The unfavorable change alluded to has not grown so much out of distrust felt toward railway investments, as out of causes which have operated throughout the commercial world, and which have everywhere exerted a tendency to limit operations of all kinds to the ordinary demands of business. Our roads in operation have been eminently successful, and have earned a larger percentage upon their cost than for any previous year. Their success in this respect has exerted a strong influence in sustaining confidence in this kind of property, notwithstanding the general indisposition to embark in new schemes.

We have, from its commencement, regarded the present stringency in the money market, and its natural results, as most fortunate. Our people, within the last five years, have opened more than 10,000 miles of railroad. The success which has attended their construction, and their influence in promoting the social comfort, and in advancing the material good of our people, were so marked as to create an ardent desire for their construction in many parts of the country quite unable to furnish the necessary amount of business for their support. With such a feeling, a state of things which should create a pause, and postpone the commencement of new works, no matter how caused, could not fail to be most beneficial. While railroads are peculiarly adapted to the wants of this country, and while their success is the necessary result of such adaptation, there can be no doubt that we may be in great danger of over-doing their construction. It must be remembered that our experience in these works is in its infancy, that we have not yet sufficiently ascertained the relation which the cost of their construction and operation bears to the business of a given area of territory, or number of people.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	80
Androscoggin and Kennebec.. "	55	809,378	1,016,500	2,064,458	140,561	80,053	none	30
Kennebec and Portland... "	72	952,621	291,80	2,511,067	168,114	100,562	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	97
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,277	150,538	79,659	none	35
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	103
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	38
Northern	82	3,016,634	.....	.....	328,782	163,075	5	51
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	89
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	106
Portsmouth and Concord... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	21
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	83
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	20
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	13
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	98
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7	93
Boston and Maine..... "	83	4,076,974	150,000	4,092,927	659,001	338,215	7	102
Boston and Providence..... "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	85
Boston and Worcester..... "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	100
Cape Cod branch..... "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River..... "	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern..... "	75	2,850,000	500,000	3,120,391	488,793	241,017	7	88
Fall River..... "	42	1,050,000	none.	1,050,000	229,445	99,589	8	100
Fitchburg..... "	66	3,540,000	112,305	3,623,073	574,574	232,787	6	93
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County..... "	26	547,015	819,743	1,245,927	67,251	23,415	none	60
Old Colony..... "	45	1,964,070	282,300	2,293,534	322,213	101,510	none	91
Taunton Branch..... "	12	250,000	none.	307,136	137,406	24,399	8	.....
Vermont and Massachusetts.. "	77	2,140,536	1,001,500	3,203,333	128,679	18,648	none	131
Worcester and Nashua..... "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	58
Western	155	5,150,000	5,319,520	9,963,759	1,339,873	683,194	6	97
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	66
Providence and Worcester... "	40	1,457,500	300,000	1,731,498	253,600	139,514	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	123
Housatonic..... "	110	.....	.....	2,500,000	829,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	101
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	none	.....	52
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	58
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	none	.....	85
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,860	none	68
Cayuga and Susquehanna..... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	3,537,766	1,691,623	7	79
Hudson River..... "	144	8,740,515	7,046,395	10,527,654	1,063,659	338,783	none	68
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	5	56
Long Island..... "	96	1,875,148	516,246	2,446,391	205,068	44,070	none	30
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	114
Ogdensburgh (Northern)..... "	118	1,579,969	2,969,760	6,133,834	480,137	195,847	none	80
Oswego and Syracuse..... "	35	350,000	201,500	607,803	90,616	43,609	4	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	none	.....	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	178,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	38
Troy and Boston..... "	89	430,936	700,000	1,043,357	Recently opened.	none	.....	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,827,492	1,388,385	478,418	10	145
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	36	880,100	713,227	1,702,523	265,327	106,320	8	52
Philadelphia and Reading.... "	95	6,656,332	10,427,300	17,141,987	2,480,626	1,251,987	7	79
Philad., Wilmington and Balt. "	98	8,860,000	2,403,276	6,812,322	667,765	333,501	5	80

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	94
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	102 1/2
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	57 1/2
Baltimore and Ohio..... Md.	381	9,188,800	9,827,123	19,542,307	1,325,563	615,384	7	57 1/2
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,400,100	446,036	In prog.	176,485	74,002	none	61
Virginia and Tennessee..... "	60	3,000,000	1,500,000	In prog.	.....	.....	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,896	6	.....
Charlotte and South Carolina..... S. C.	110	.....	.....	In prog.	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,100,000	306,187	3,378,132	945,508	508,625	8	115
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7 1/2	.....
Macon and Western..... "	101	1,214,283	168,000	1,596,283	296,584	153,697	9	100
Muscogee..... "	71	.....	.....	In prog.	.....	.....	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River..... Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..... "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..... Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	70
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Cleveland and Pittsburgh..... Ohio.	100	1,239,450	1,371,000	2,963,756	194,429	123,306	6	93
Cleveland and Toledo..... "	147	552,000	800,000	1,317,140	.....	.....	.....	92 1/2
Cleveland and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	124
Columbus, Piqua and Indiana..... "	46	.....	.....	2,000,000	.....	.....	.....	80
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton..... "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	106
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	72
Dayton and Western..... "	40	310,000	550,000	925,000	.....	.....	.....	80
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	60
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,370,784	.....	2,634,157	526,746	314,670	10	113
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	95
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	90
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	87
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	.....	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	.....	.....	.....	.....	.....	.....	.....	.....
Xenia and Columbus..... "	54	1,092,137	119,500	1,257,714	.....	135,263	15	116
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	90
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	115
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	166
Indianapolis and Bellefontaine..... "	83	.....	.....	.....	.....	.....	.....	77
Lawrenceburg and Ind..... "	90	.....	.....	In prog.	.....	.....	.....	82
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	.....	.....	70
Madison and Indianapolis..... "	88	1,650,000	750,000	2,400,000	516,414	268,075	10	65
Peru and Indianapolis..... "	40	.....	.....	In prog.	.....	.....	.....	108
Terre Haute and Indianapolis..... "	72	632,387	663,100	1,353,019	105,944	71,446	4	136
Rock Island and Chicago..... Ill.	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	122
Chicago and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	126
Illinois Central..... "	92	1,932,361	500,000	In prog.	473,548	286,152	.....	101
Galena and Chicago..... "	315	2,800,000	2,829,000	6,480,246	592,187	293,046	.....	.....
Michigan Southern..... Mich.	282	4,000,000	4,067,398	8,614,193	.....	.....	8	.....
Michigan Central..... "	88	1,000,000	none	In progress	.....	.....	.....	.....
Pacific..... Mo.	.....	.....	.....	.....	.....	.....	.....	.....

to be able to decide with certainty in all cases, where they are warranted. It is therefore the dictate of prudence, after having pushed their construction for several years uninterruptedly, without reference to any general system, and probably without any considerable degree of forecast, to pause and see how the end will justify expectation, or what has been already effected.

The experience of every day is showing that railroads, even in this country, cost much more than has been supposed. A first class eastern road, with a double track, cannot be built for less than \$50,000 per mile, while the cost of a majority of such, exceeds this sum.

The business of a particular district may justify the construction of a road costing \$20,000 per mile, while it would not one costing \$40,000 per mile. In many cases it may be well to wait to see what is to be the ultimate cost of our roads in particular districts, before rushing wildly into their construction. We regard it a great misfortune that any railroad should be built that does not promise to pay a fair return upon its cost. The supposed incidental advantages should exert only a limited influence upon the question. The probability that a proposed road will not pay, should be taken as a conclusive reason against the scheme.

A state of things therefore which has a tendency to postpone the construction of new works, till we see what is to be the result with those already constructed, and give us the benefit of our own experience as guides to the future. We, of course, refer particularly to works of a rival character; works which must divide a business already accommodated to a greater or less extent by roads in operation. There is, however, a vast unoccupied field to which the above remarks will not apply. But to the New England States, to New York, Ohio, Indiana and Northern Illinois, they are practically applicable. In portions of all these States the construction of railroads, either has been, or is threatened to be, carried to excess, and the present tightness in the money market is probably the only thing that could have saved us from some disastrous consequences.

We do not mean to be understood that even in the States named, new roads are not called for, and whose construction would contribute largely to the general good. The field for enterprise in these may not by any means be exhausted. It should, however, be cultivated with the utmost care. In other portions of the country, the reasons for caution which we have enumerated, do not exist. If 4000 miles of railroad already constructed in New York and Ohio, find profitable employment, there is no reason why 2000 miles should not in Kentucky and Tennessee, in which there are only 3 or 400 now in operation. The same remarks may have a much more extended application. Large portions of the country capable to supply a lucrative traffic to a railroad are entirely without such works. For the purpose of illustrating this portion of our remarks, we have added a statement which will show the proportion of the number of miles of railroad in each State, to its area and population. This statement will show the field to which new effort should be directed, as well as that in which the construction of these works may be carried to the greatest extent.

The number of miles of railroad, however, ne-

cessary for the accommodation of a particular district cannot be determined from its area. Certain portions of the country, the State of Ohio for instance necessarily becomes the thoroughfare for all the territory lying to the East and West. This State would consequently very probably sustain twice as many miles of railroad as Kentucky, though the latter State has an equal area. We throw in this remark by way of showing the necessity, on the part of persons purchasing, or negotiating railroad securities, of a thorough knowledge of the resources of the country, the tendencies of commerce and travel, and the relations that particular lines sustain to the general railway system of the country.

In this connection we again take occasion to insist that communities immediately interested in a road should furnish a considerable portion of the means required for construction. The laboring oar, and the risks, should in all instances be thrown upon such communities. There is a greater necessity for a strict adherence to this rule, than at any former period. Experience has rendered us skillful in substituting *shams* for substance, and of making a tolerably good looking *basis* out of fictions; stock taken by contractors, &c., &c., all of which matters should be thoroughly scrutinized. Where contracts for construction are made in *gross*, the terms of the contract should always be looked after by the parties purchasing securities. So long as one-half the cost of our roads are furnished by local cash stock subscriptions, we shall be in no danger of over-doing the construction of railroads for a long time to come. This fact is *better* evidence that the road is wanted, that it will pay well, and be managed well, than all the fine spun arguments of interested parties.

The result so far shows that railroads may be ranked as among our most profitable enterprises. For foreigners we cannot conceive a more inviting security than a first class 7 per cent. mortgage railroad bond. Where a road cost \$40,000 per mile, there can be no risk in taking a mortgage upon it to one half that amount. The security of the holders of first mortgage bonds is being constantly increased by the increased cost of our roads. The aggregate earnings upon the entire railroad investment in the United States, in *completed* lines, will we think equal 7 per cent. This fact of itself establishes a *rule* in favor of the safety of railroad investments, and that losses, so far as the holders of the obligations of the companies are concerned, are *exceptions* to the rule, as are losses attendant upon every legitimate business. The fault may not be in the principle, but in its *misapplication*.

So long as we felt that the public did not fully appreciate the importance of railroads to the general interests of the country, or their value as investments of capital, our Journal was chiefly devoted to the elucidation of these points. The public sentiment has now overtaken our own convictions, and while our confidence in railroads continues unabated, we feel that duties of a different character are imposed upon us; that of suggesting caution, of preventing mistake, and checking excesses that would impair the usefulness and value of our roads. We desire to see a healthy relation established between their progress and the wants of the country, and their management reduced to a system that shall pro-

duce the greatest results, with the least possible expenditure.

While our people have been doing so much, it is a most fortunate circumstance that very little money has been expended upon lines that should be abandoned. Such as have received a large expenditure, will be completed without great sacrifices. In no time, in the previous history of our railroads, could we practice a lesson of caution, so well as at the present. It will involve no sacrifice, while it may save us from a great many.

Statement showing the number of miles of railroad in operation in the United States, January 1, 1854.

MAINE.	
Name of Roads,	miles open.
Androscoggin.....	20
Androscoggin and Kennebec.....	55
Atlantic and St. Lawrence.....	82
Bangor and Piscataquis.....	12
Ruckfield Branch.....	13
Calais and Baring.....	6
Franklin.....	9
Kennebec and Portland.....	69
Portland, Saco, & Portsmouth.....	51
York and Cumberland.....	18
Total.....	335

NEW HAMPSHIRE.	
Atlantic and St. Lawrence.....	52
Ashuelot.....	23
Boston and Maine.....	37½
Bost., Concord, and Montreal.....	92½
Cheshire.....	54
Cochecho.....	28½
Concord.....	34½
Concord and Claremont.....	29½
Contocook Valley.....	14½
Eastern.....	16½
Great Falls and Conway.....	12½
Manchester and Lawrence.....	26
New Hampshire Central.....	25½
Northern.....	81½
Peterboro' and Shirley.....	10½
Portsmouth and Concord.....	47
Sullivan.....	24½
White Mountains.....	20
Wilton.....	15½
Total.....	646½

VERMONT.	
Atlantic and St. Lawrence.....	31
Connecticut & Passumpsic River.....	61
Rutland and Burlington.....	119
Rutland and Washington.....	18½
Rutland and Whitehall.....	17
St. Lawrence and Atlantic.....	16
Vermont and Canada.....	47
Vermont Central.....	117
Vermont Valley.....	24
Western Vermont.....	53
Total.....	503½

MASSACHUSETTS.	
Amherst and Belchertown.....	20
Berkshire.....	21
Boston and Lowell.....	27½
Boston and Maine.....	83
Boston and Providence.....	53½
Boston and Worcester.....	68
Cape Cod Branch.....	28½
Charles River Branch.....	12
Connecticut River.....	50
Dorchester and Milton Branch.....	8
Eastern.....	58
Essex.....	21½
Fall River.....	42½
Fitchburg.....	67
Fitchburg and Worcester.....	18

Grand Junction.....	6½
Harvard Branch.....	1
Lexington and West Cambridge.....	6½
Lowell and Lawrence.....	12½
Medford Branch.....	8½
Nashua and Lowell.....	14
New Bedford and Taunton.....	21½
Newburyport.....	14½
Norfolk County.....	20
Old Colony.....	45½
Peterboro' and Shirley.....	23½
Pittsfield and North Adams.....	20
Providence and Worcester.....	44
Salem and Lowell.....	17½
Saugus Branch.....	8
South Reading Branch.....	8½
South Shore.....	11
Stockbridge and Pittsfield.....	22
Stony Brook.....	18½
Stoughton Branch.....	4
Taunton Branch.....	11½
Vermont and Massachusetts.....	77
Western.....	117
West Stockbridge.....	2½
Worcester and Nashua.....	45½
Total.....	1091½

RHODE ISLAND.	
Providence and Stonington.....	50
Total.....	50

CONNECTICUT.	
Collinsville Branch.....	11
Danbury and Norwalk.....	24
Hartford, Providence and Fishkill.....	50
Housatonic.....	74
Middletown Branch.....	10½
Naugatuck.....	62
New Haven, Hartford and Springfield.....	62
New Haven and Northampton.....	45
New Haven and New London.....	50
New London, Willimantic, and Palmer.....	66
New York and New Haven.....	63
Norwich and Worcester.....	66
Total.....	583

NEW YORK.	
Albany and West Stockbridge.....	38½
Albany Northern.....	32
Buffalo, Corning, and New York.....	100
Buffalo and New York City.....	91
Buffalo and Niagara Falls.....	22
Buffalo and State Line.....	69
Canandaigua and Elmira.....	49
Canandaigua and Niagara Falls.....	97
Cayuga and Susquehanna.....	35
Chemung.....	17½
Eighth Avenue (New York city).....	4½
First and Second Avenue.....	3½
Hudson River.....	144
Hudson and Berkshire.....	31½
Long Island.....	98
New York and Erie.....	464½
New York and Harlem.....	130½
New York Central.....	518
Corning and Blossburgh.....	15
Northern (Ogdensburg).....	118
Oswego and Syracuse.....	36½
Plattsburg and Montreal.....	28½
Rensselaer and Saratoga.....	32
Rochester and Lake Ontario.....	13
Saratoga and Schenectady.....	28
Saratoga and Washington.....	54½
Sackett's Harbor and Ellisburg.....	18
Sixth Avenue (New York city).....	3½
Skaneateles and Jordan.....	8
Third Avenue (New York city).....	4½
Troy and Greenbush.....	6½
Troy and Bennington.....	5½
Troy and Boston.....	261
Troy and Rutland.....	82
Watertown and Rome.....	96
Total.....	2,355½

NEW JERSEY.	
Belvidere Delaware	41
Burlington and Mount Holly	6
Camden and Amboy	65
Morris and Essex	45
New Brunswick and Trenton	28
New Jersey	31
New Jersey Central	64
Trenton Branch	6
Union	38
Woodbury Branch	9

Total.....328

PENNSYLVANIA.	
Alleghany Portage	36
Beaver Meadow	38
Blairsville Branch	3
Carbondale and Honesdale	24
Catawissa, Williamsport, and Erie	25
Chestnut Hill and Doylestown	15
Chester Valley	21
Columbia Branch	18
Cumberland Valley	52
Dauphin and Susquehanna	16
Delaware, Lackawanna, and West	50
Erie and North-East	19
Franklin Canal	26
Franklin	22
Germantown Branch	6
Harrisburg and Lancaster	38
Hazleton and Lehigh	10
Lehigh and Susquehanna	20
Little Schuylkill	20
Little Schuylkill and Susquehanna	28
Lykens Valley	16
Mahonoy and Wisconsin	17
Mauch Chunk and Summit Hill	8
Mill Creek	9
Mine Hill	12
Mount Carbon	7
Nesquehoning	5
Pennsylvania	256
Pennsylvania Coal Company's	47
Philadelphia and Columbia	80
Philadelphia and Reading	93
Philadelphia, Germantown, and Norristown	17
Philadelphia and Trenton	29
Philadelphia and Westchester	9
Philadelphia, Wilmington, and Baltimore	98
Pine Grove	4
Room Run	6
Schuylkill	13
Schuylkill Valley, incl. branches	25
Strasburg	7
Sunbury and Erie	20
Tioga	26
Trevorton and Mahonoy	15
Whiteland and Wilkesbarre	20
Williamsport and Elmira	25
York and Cumberland	25
York and Wrightsville	13

Total.....1,375

VIRGINIA.	
Appomattox	9
Chesterfield	12
Chesterfield and James River	4
Clover Hill	11
Greenville and Roanoke	21
Deep Run	4
Manassas Gap	38
Orange and Alexandria	62
Port Waltham Branch	3
Petersburg	63
Richmond and Danville	84
Richmond, Fred., and Potomac	76
Richmond and Petersburg	22
Sea-board and Roanoke	80
South Side	62
Tuckahoe and James River Branch	5
Virginia Central	107
Virginia and Tennessee	73
Warrenton Branch	9
Winchester and Potomac	82

Total.....778

OHIO.	
Bellefontaine and Indiana	118
Central Ohio	59
Cincinnati, Hamilton, and Dayton	60
Cleveland, Columbus and Cincinnati	135
Cincinnati, Hillsboro, and Parkersburg	37
Cincinnati, Wilmington, and Zanesville	41
Cleveland, Painesville, and Ashta	71
Cleveland, Zanesville, and Cincinnati	14
Cleveland and Pittsburgh	100
Cleveland and Toledo, S. Division	87
" " " " N. " "	60
Columbus and Xenia	55
Columbus, Piqua and Indiana	46
Dayton and Michigan	20
Dayton and Western	36
Dayton and Springfield	24
Findlay Branch	16
Greenville and Miami	27
Hamilton, Eaton, and Richmond	45
Carrollton Branch	20
Iron	13
Little Miami	84
Mad River and Lake Erie	134
Mansfield and Sandusky	56
Newark and Mansfield	61
Ohio and Pennsylvania	187
Ohio and Mississippi	20
Ohio and Indiana	32
Scioto and Hocking Valley	44
Springfield and Xenia	19

Total.....1718

NORTH CAROLINA.	
Gaston and Raleigh	87
Greenville and Roadoke	21
Wilmington and Raleigh	162

Total.....270

SOUTH CAROLINA.	
Abbeville Branch	12
Anderson Branch	10
Camden Branch	37
Charlotte and South Carolina	109
Columbia Branch	67
Greenville and Columbia	143
King's Mountain	22
Laurens	15
South Carolina	137
Wilmington and Manchester	161

Total.....713

GEORGIA.	
Athens Branch	40
Waynesboro	51
Central	191
Eatonton	20
Georgia	171
La Grange	81
Macon and Western	101
Milledgeville and Eatonton	35
Muscogee	50
Rome	20
South-Western	50
Warrenton Branch	4
Western and Atlantic	140
Waynesboro	51

Total.....944

ILLINOIS.	
Aurora Branch	13
Aurora Extension	86
Chicago and Mississippi	181
Chicago and Rock Island	140
Galena and Chicago Union	120
Great Western Illinois	81
Illinois Central, sixth division	60
" " Chicago branch	56
St. Charles Branch	7
O'Fallon's Coal Road	8
Illinois and Wisconsin	25
Terra Haute and Alton	30
Peoria and Oquawka	20

Total.....777

INDIANA.	
Columbus and Shelbyville	21
Evansville and Crawfordsville	34
Indiana Central	72
Indianapolis and Bellefontaine	84
Jeffersonville	77
Lafayette and Indianapolis	64
Madison and Indianapolis	88
Martinsville	27
New Albany and Salem	191
Newcastle and Richmond	27
Northern Indiana	113
Peru and Indianapolis	50
Shelbyville and Knightstown	27
Shelbyville Lateral	16
Shelbyville and Rushville	20
Terre Haute and Richmond	73

Total.....982

MARYLAND.	
Annapolis and Elkridge	21
Baltimore and Ohio	379
Baltimore and Susquehanna	57
Frederick Branch	3
Hanover Branch	13
Washington Branch	31
Westminster Branch	17

Total.....521

MISSOURI	
Pacific	57

Total.....37

KENTUCKY	
Covington and Lexington	47
Lexington and Frankfort	29
Louisville and Frankfort	65
Maysville and Lexington	25

Total.....166

TENNESSEE.	
East Tennessee and Georgia	82
Memphis and Charleston	50
Nashville and Chattanooga	158

Total.....290

ALABAMA.	
Alabama and Tennessee River	50
Memphis and Charleston	48
Mobile and Ohio	33
Montgomery and West Point	88

Total.....214

MISSISSIPPI.	
Raymond Branch	7
St. Francis and Woodville	28
Vicksburg and Jackson	60

Total.....95

LOUISIANA.	
Clinton and Port Hudson	24
Mexican Gulf	27
Milneburg	6
New Orleans and Carolina	6
West Feliciana	25

Total.....89

WISCONSIN.	
Milwaukee and Mississippi	110
Rock River and Union Valley	290

Total.....180

MICHIGAN.	
Michigan Central	268
Michigan Southern	204
Pontiac	25

Total.....497

DELAWARE.	
Newcastle and Frenchtown	16
Wilmington Branch	11

Total.....27

AGGREGATE STATEMENT.

STATES.	Miles open.	Area in Sqr. miles.	Population in 1805:
Maine.....	335	30,000	583,188
New Hampshire..	646	9,280	317,964
Vermont.....	504	9,056	314,120
Massachusetts..	1,091	7,800	994,499
Rhode Island....	50	1,306	147,544
Connecticut.....	583	4,674	370,791
New York.....	2,355	46,000	3,097,393
New Jersey.....	328	8,320	489,565
Pennsylvania....	1,375	46,000	2,311,786
Delaware.....	27	2,120	91,535
Maryland.....	521	9,356	583,035
Virginia.....	779	61,352	1,421,661
North Carolina..	270	45,000	868,903
South Carolina..	713	24,500	668,507
Georgia.....	944	58,000	905,999
Florida.....	.....	59,269	87,401
Alabama.....	214	50,722	771,671
Mississippi.....	95	47,156	606,555
Louisiana.....	89	46,431	517,739
Texas.....	.....	237,321	212,592
Arkansas.....	.....	52,198	209,639
Tennessee.....	290	45,600	1,002,625
Kentucky.....	166	37,580	982,405
Missouri.....	37	67,380	682,043
Ohio.....	1,713	39,964	1,980,408
Indiana.....	982	33,809	988,416
Illinois.....	777	55,405	851,470
Michigan.....	497	56,243	397,654
Wisconsin.....	130	53,924	305,191
Iowa.....	.....	50,914	192,214
California.....	.....	188,982	164,000
	15,511	1,485,361	23,108,504

Kentucky Coal Fields.

The Coal Fields of the West are, we are glad to perceive, attracting very general attention; and coal lands which, but a few years since, were valueless, are now becoming duly appreciated. At Pittsburgh, coal lands favorably situated; that is, where the coal is of easy access from the River, are worth from ten to fifteen hundred dollars per acre; while those less favorably situated, readily command five hundred dollars per acre. And so at the few points on the Ohio between Pittsburgh and Cincinnati where coal is found near the River, and although the veins are very thin, the value of the land has recently increased a hundred fold.

The Louisville Journal of the 4th of November, speaking of the opening of some coal mines more than three hundred miles south of that city on the Kentucky side, predicts enormous profits to the "Union Coal and Iron Company," from its working its coal veins alone, which are three in number and only three feet thick, underlying three thousand acres. The capital of the Company is one million of dollars, and the coal is brought by railroad to the river bank at a cost of less than three cents per bushel; when the demand far exceeds any possibility of supplying it, at nine cents per bushel. We quote from the Journal of 4th November:

"Some six or eight months ago, a company of gentlemen from Louisville, consisting of Col. G. H. Monsarrat, Col. Stapp, and S. F. J. Trabue, Esq., acting under a most liberal charter from the State of Illinois, proceeded to make, after a thorough survey of that portion of the western coal field lying upon and adjacent to the Ohio River, large purchases of valuable lands, containing not only the most superior coal, but very rich iron ore. Shrewd business men, they readily perceived the amount of profit to be realized from coal, which cost them, delivered from their mines on the banks of the river, a fraction less than three cents per bushel, and which always commands a ready

market at from eight to ten cents per bushel. They determined, therefore, to proceed at once to the development of a portion of their property, so as to be able if possible to supply any demand which might be made upon them by the first of November or December.

"We do not speak too strongly upon the subject, for, besides conversing with a number of intelligent gentlemen who have made private examinations of the property since its development, we have before us copies of official reports, one made by the most eminent geologist in the East, Col. John Pickell, and the other by Dr. George Stealy, at present civil engineer of the city of Louisville, who has spent most of his life in practical examinations of the geological formations of the West—extending from the Alleghany mountains to the Pacific ocean itself—all going to show that the gentlemen of the Union Coal and Iron Company are the owners of property, which, when fully developed, will be a source of profit to them beyond which they need ask nothing more.

In reference to the amount of coal estimated to be contained in this tract of the company's property, we may be permitted to make the following extract from Col. Pickell's report:

"Taking the average thickness of the coal at three feet; which is a deduction of 25 per cent. from its thickness, would give each vein underlying an acre, 180,680 bushels—or in the four veins 522,720 bushels. And making a similar deduction in the extent of the property, bringing it to 3000 acres, it would make up in the aggregate, fifteen hundred and sixty-eight millions one hundred and sixty thousand bushels (1,568,160,000), which would supply a demand of 50,000 bushels per day for one hundred years, estimating the year at three hundred days."

We quote the concluding paragraph of the Colonel's report with this remark, that the regular and fixed price of coal at this mine and those on the lower Ohio is nine cents instead of seven, thereby giving the company a much greater profit than he estimates.

"Miners will excavate and deliver at the mouth of the entries (100 bushels to each miner) 20,000 bushels, at a cost to the company of 3 cents per bushel or \$600.

The coal is now supplied to steamboats at 7 cents per bushel—making for 20,000 bushels, \$1,400—or a net profit of \$800 amounting in a year of 300 days to \$240,000—equal to the interest at 6 per cent. upon \$4,000,000.

However extravagant these calculations may appear, they are predicated upon facts which cannot be controverted—they are confirmed by the mineral character of the property; and I have little doubt, under the auspices of an efficient organization, they can be fully realized."

The same paper of the 14th of November, calls upon the Legislature to take measures for opening Railroads to the interior, by which it alleges, and we doubt not truly, that the City of Louisville could be readily supplied at less than ten cents per bushel, (three dollars per ton,) while they are now dependant for an irregular supply from up the river at "from TWENTY to FORTY cents per bushel, at the caprice and whim of the speculator"—being from six to twelve dollars per ton. The Cincinnati Advertiser in like manner, has been complaining of the exorbitant price of coal in that city, and its final entire exhaustion, (and final stoppage of their manufactories,) when it insists that if sufficient capital could be invested into the business, the enormous wants of the city could be supplied at TWELVE cents per bushel throughout the year. It ridicules the idea of getting a supply from any other source than the River, and urges the investment of capital which would pay enormous returns, while hereafter the inhabitants of "the Queen of the West," could

safely rely upon a steady supply of coal at twelve cents per bushel, or \$3.60 per ton. We quote

(From the Louisville Journal, Nov. 14, '58)

"At Tradewater and Caseyville from eight to twelve thousand bushels of coal are taken out daily—four to six thousand bushels from each.—These mines are nearly three hundred miles below Louisville and about thirty above the great iron hill and coal property of the "Union Coal and Iron Company." They are situated in Union County, Kentucky, and have always found a ready market for every bushel which they have been able to furnish. The cost of mining at the river bank is a fraction less than three cents per bushel; whilst the selling price has been fixed at nine cents per bushel. The coal is bituminous and of a fine quality, containing but little impurity; and for steam purposes it has been found to be equal to any upon the Ohio river.

"The question will now naturally present itself to the minds of many, whether, when these mines are fully developed and worked to their utmost capacity, and when other mines shall have been discovered, improved and placed in successful operation, the immensity of the supply of coal will not destroy the market; reduce the price to an almost nominal figure, and ruin those who have embarked their capital and devoted their time to its development. To him who reflects for a moment, the question is one of easy solution. Wherever coal has been used at all as a fuel, it has been found that, unlike most other commodities, the supply begets the demand. Many years ago the steamers upon the Western waters had their furnaces and flues constructed for the use of wood exclusively—the supply of coal being limited to a very narrow compass. They were always glad however, to use coal whenever they could get it, inasmuch as it was found, for the purpose of generating steam, to be cheaper than cordwood by at least fifty per cent. As coal banks were opened and the supply increased, the demand became greater, until finally there is scarcely a steamer navigating the Western waters which has not its furnaces and flues so constructed as to use coal; and actual experiment has so thoroughly demonstrated its great advantage over cord wood, that there is not now a steamer in all the Western Trade which would not use it exclusively if assured that the demand could always be supplied. The number of steamers upon our Western rivers, all of which will eventually resort to the use of coal, is estimated at eight hundred at the present time. The average quantity of coal consumed per day by each may be estimated at three hundred bushels, and the number of days running time, at two hundred and fifty. This estimate, it will be seen, shows an annual demand, for steamers alone, of sixty millions of bushels, and a saving to the steamboat interest of several millions of dollars. Add then, say forty millions of bushels, for consumption in our Western cities, towns and manufactories, which is probably a low estimate, and the demand may be reasonably set down at one hundred millions of bushels, (three millions four hundred thousand tons). If our Western coal bank could furnish this amount to-day, it would find a ready market, but they cannot do it and will not be able to do so for years to come. In the meantime our commerce is expanding. The number of our steamboats is consequently increasing, and our cities, towns and manufactories are growing, and will require every five or ten years double the amount of fuel consumed. From these premises it follows:

"First, That the investment of capital in the development of our coal interests is one of the most, if not the very most, advantageous investments that capitalists can make.

"Secondly, That the development of these interests will entirely do away with the use of wood upon our steamboats, and in most of our cities, towns and manufactories, substituting coal, and thereby save to consumers upwards of one half the cost of fuel, to be appropriated in the construction of railways, building houses, steamboats, or in any other legitimate use of capital.

"Thirdly, That however great the supply, there

will always be found a sufficient demand to make it a paying investment, though the present profit should be reduced *one half*, an event, highly improbable, if not out of the question."

From these facts put forth at Louisville and Cincinnati, it is manifest, that those who are so fortunate as to possess coal lands within available distance of the Ohio, and the necessary capital to work them, are certain to realize enormous profits upon their investments without any diminution from a prospect of an ultimate glut of the market, which as the *Louisville Journal* truly says, is not only a rapidly increasing market, but one which has been open for years without any prospect of a reasonable supply.

In connection with the subject we copy the following from the Cincinnati Commercial Advertiser, of Aug. 25th, 1853:—

"It seems somewhat singular that the statement 'coal is scarce and high' should be so often applicable to this city: but such is the case now, and such has often been the case, the past few years. There is a cause for this undoubtedly, and one that is susceptible of remedy. The source from which we obtain our supplies is convenient, and the supply inexhaustible; and if a proper course was adopted our citizens could be furnished with good coal *always* at twelve cents per bushel. (14s. 6d. sterling per ton.)

"The annual consumption of coal in this city was, at the three different periods specified, as follows:

	tons.
1840.....	24,000
1846.....	82,000
1852.....	170,000

"It is quite evident from the above statement, that the increase in the consumption of the article, has far outrun the means of supply; hence the citizens within the past few years have had to pay enormous prices occasionally. It is quite evident *there is not now sufficient capital invested in the trade to supply the immense and rapidly increasing demand for the article.* There should be always, at least eighteen months supply in the yards, but of this the capital now employed will not admit.

"A company with sufficient capital, controlling good mines, who would establish two or more large depots in this city, and adopt more speedy means of transporting the coal to this market, and discharging it from their boats to the yards, and fix the prices at twelve cents a bushel, would find that the market could not easily be overstocked.

Considerable has been said about supplying this city with coal, by *Railway at eight cents a bushel, but the idea is practically absurd.* It is to the river we must look as the proper channel through which we are to be supplied with this article. and to it alone."

The importance of a steady and abundant supply of coal is felt to be as necessary to the commercial and manufacturing operations of the West, as the East, while the present available supply is much more limited. We happened to be in the city of Cincinnati in the latter part of October, and found a complete panic prevailing in reference to the small quantity on hand in that city, and which threatened to put out the fires, both in manufacturing establishments and private houses. The only hope of relief was in a "rise of water." The want then felt has yet been only partially met. The development of the above mines will open a much needed source of additional supply.

The use of coal is rapidly increasing on the Mississippi, and as the above fields are most easily reached from that River, of any upon its bank, the demand from this quarter must be very great.

There is no one article in social economy, the use of which increases so rapidly as coal, and none the demand for which, so constantly exceeds the supply. The line of the Ohio River is to be the focus of population, wealth and commerce in the West, and the progress of all these will depend very much upon the cheapness of FUEL.

On the Waste Heat of Locomotive Boilers.

BY ZERAH COLBURN.

A boiler, of any description, performs two offices: those of the *generation and absorption* of heat. The former is carried on in the furnace, the latter from both the furnace and tubes. Heat may be generated and lost in the open air, in which case there are not sufficient means for absorption; it may also be generated and absorbed to such an extent that on its escape it has a temperature below that of the required pressure of steam; in which case the pressure falls until its natural relation to temperature is restored. The extreme absorption of heat is attended with economy of fuel in the production of a given weight of steam of an inferior pressure,—an economy which condensing engines, with plenty of room for boilers, may avail of,—but one which is not to be obtained to the same extent in the use of locomotives. The higher the pressure of steam, the greater is the economy of space necessary for its application, and the less is the relative resistance of the atmospheric, or equivalent exhaust pressure. Economy in space and in back pressure is of the utmost consequence in locomotives, and the former must be had, even with a sacrifice of economy of heat.

Extreme absorption of heat may occur from too great extent of absorbent surface, compared with the natural passage of air through the furnace; and also with a given extent of absorbent surface, by a reduction in the amount of air consumed. In the former case the pressure is likely to be reduced; in the latter the combustion, and necessarily the evaporation, is slow, and the engine does not make steam quickly nor of high pressure.

In any case, the heat imparted by the tubes at the end of the circulation, or front ends of tubes, must be no less than that of the required pressure of steam. The heat imparted cannot be that conveyed by the tubes at their forward ends, as the powers of conduction through metals and through air is different, the atmospheric dissipation being assisted, also, by the draught. If the tubes impart, at their forward ends, but *one-half* the heat they convey, and steam of 150 lbs. pressure, above that of the atmosphere, is desired, the escaping heat must be (150 lbs. = $368\frac{1}{2}^\circ$) 737° . If absorption goes on to an extent sufficient to reduce this temperature to 680° the consequence is $680^\circ + 2 = 340^\circ$ corresponding with 102 lbs. pressure, nearly; a great reduction, certainly.

Now, absorbent surface, only, involves weight. To provide for the sufficient admission of air does not affect the weight; it is only the question whether the same absorbent surface shall be disposed in a smaller number of larger tubes, with larger thimble-openings: whether the furnace can have sufficient capacity, with such relation of length, width and depth, as shall offer the least resistance of fuel to the passage of air. For neither of these adjustments is there any difficulty: the only point is to guard against the unnecessary waste of heat. We only need to know when there

is heat enough. This can only be got at by approximation; for the actual proportions of generating room and absorbing surfaces, air openings, etc., are only deduced, for a given duty of evaporation, by practical observation. This being a question of practice and experiment, practical results can only be given. Engines with a large tube surface, with tubes of small diameter and tightened by thick thimbles; with narrow furnaces, proportionally deep, and often filled to the crown; are found, in practice, not to make steam enough, except with a considerable contraction of the blast pipes. Opposed to these are the general examples of large tube engines, with thin thimbles and wide furnaces, which are found to make steam much faster, and of higher pressure. The little engines built at Lowell in 1840, having $2\frac{1}{4}$ inch tubes, and furnaces nearly *twice* as wide as long, were notorious for their steaming powers. Here are the general facts, we may say the extremes:—we want the *mean*. Combustion, and consequently, (with sufficient absorbent power,) evaporation, being proportional to the amount of air consumed, we must admit all the air which the carbon of the fuel will take up under the most rapid rate of combustion. If this must be reduced the damper must be used, and in no case must the contraction of the grate and tube-openings act as a *permanent damper*. Damping at each end of the boiler prevents the formation or escape of carbonic acid, the normal product of combustion; damping at the furnace end, unless perfectly tight, allows the formation and escape of carbonic oxide, an extravagant and wasteful consumption of fuel. How much more extravagant the consumption of fuel when the production of carbonic oxide is permanent, owing to permanent suppression of oxygen.

Seeing that the ultimate absorption of heat in the tubes must affect the pressure, and that the highest safe pressure is a necessary condition of economical working, brings us to the main subject, the waste of heat necessary in boilers, unless retained by other means than by absorbing it directly from the tubes into the steam-producing water. The temperatures of steam, necessarily corresponding with the ordinary working pressures, are as follows:

70 lbs. equal to 317.8°	120 lbs. equal to 352.4°
80 " " 325.8°	135 " " 360.8°
90 " " 333.2°	150 " " 368.6°
105 " " 343.3°	165 " " 375.6°

It being obviously necessary that the imparted heat at the forward ends shall not be less than the temperature corresponding with the required pressure; and that it is impossible for the heat imparted to equal that conveyed, there must necessarily be a large amount of waste heat continually escaping from the ends of the tubes. Allowing the proportion conveyed to be twice that imparted, our table will stand:

70 lbs. equal to 635.6°	120 lbs. equal to 704.8°
80 " " 651.6°	135 " " 721.6°
90 " " 666.4°	150 " " 737.0°
105 " " 686.6°	165 " " 751.2°

In England the temperature of the interior of the smoke box has been found to be from 400° to 800° , that in the furnace, with coke fire, being at least 3000° . In Mc. Connell's locomotives, with combustion chambers and short tubes, the temperature has been found to be from 1100° to 1200° .

This heat, otherwise wasted, can be partly absorbed by feed water, provided enough heating surface can be presented. If the tubes are prolonged beyond the ordinary tube sheet, and fastened in an additional sheet, the space enclosed will give room for the feed water, with a large extent of heated surface for the elevation of its temperature.

The numbers taken to represent the amount of waste heat are not assumed as correct, but only as indications. It is well ascertained, however, that air of an average temperature of 600° escapes from the tubes. If enough heat can be extracted to raise the feed from 55° to 212°, or perhaps higher, it is so much saved, while the exhaust steam is unaffected.

A difficulty with heaters has been, that they have either depended on the exhaust steam for heat, and thereby abstracted so much from the means for producing the draught, or that being formed only within the smoke box, they become leaky, and having so little surface exposed to the heat, they were not efficient.

With a heater, such as I have proposed, the connection of the feed-pipes, check-valve, etc., would be made in the manner usual in the application of other heaters, there being a check-valve between the heater and boiler, and the heater being formed of the same strength as the boiler.

Journal of Railroad Law.

CAN RAILROAD COMPANIES BE AUTHORIZED TO SUBSCRIBE TO THE STOCK OF OTHER AND FOREIGN COMPANIES?

That the granting of such authority has been decided to be within the scope of Legislative power in our State, is known to most of our readers. Such was the ruling of the Supreme Court in the case of *Hugh White against the Syracuse and Utica Railroad Company*. This case is reported in the lately published 14th volume of Barbour's Reports, and we would succinctly state the nature of the case and the grounds upon which the opinion pronounced by Justice Edwards upon this occasion seems to have principally rested.

In 1851 the New York Legislature authorized any of our Railroad Companies to subscribe to the stock of the Great Western Railroad, Canada West, with the consent of persons owning 2-3ds of its stock, under certain restrictions. Defendants accordingly subscribed for \$75,000 of the stock. The calls amounting to \$7500 were paid and plaintiff brought a suit in order to compel the Directors of the S. and U. Company to refund the sum so paid, and also to restrain them from making further payments.

The Court held

1st that the charter of the defendants was liable to suspension, alteration and repeal in the discretion of the Legislature. A charter must be construed according to its spirit. And it was not proposed by the Legislature, to convert the Syracuse and Utica Company into a new Company of a distinct character from its present one. The objects and business of the Company would, if the Law should take effect, remain unchanged. The surplus capital of the Company, employed as contemplated would probably, by increasing the number of persons coming into this State, increase the business of defendant's road, and would thus be used in a manner fully compatible with the

general scope of the Charter instead of subverting the Charter as contended by the plaintiff.

2nd. The cases of the *Hartford and N. H. R. R. Co. vs. Crosswell* (5 Hill 381) and of the *Middlesex Turnpike Co. vs. Locke* (8: Mass. Rep. 268) have been cited to show that the assent of all the Stockholders is necessary in such a case as this. But in neither of these two cases had the Legislature reserved the right to alter the Charter of the Companies.

3d. Nor is the Legislative Act conferring the authority in question invalid because it was not passed by 2/3ds of the Legislature as required by the Constitution of 1821 under which the defendants were chartered.

For that Constitution contained a provision by which it could be changed, at the People's will by the operation of which the control of future Legislatures over the charters of Corporation could be enlarged.

The Constitution of 1821 has been so changed, and the Legislative former once Charters, enlarged.

4th. Nor is the Legislative Act unconstitutional as being a private or local Act and at the same time embracing more than one subject, thereby violating the Supreme law of our State, which prohibits complex Statutes. It is not a private Act, for it applies to all Railroad Companies. And the subject matter of the Bill is single, consisting solely in authorizing subscriptions under general restrictions to a single description of stocks.

Locomotives for Sale.

2 Locomotive Engines and Tenders, made to order for a five foot gauge (but which are not required at present as the road is not ready to receive them)
16 inch cylinder by 20 inch stroke, 2 pair drivers. One Engine 6 ft. diameter, and the other 5 1/2 ft. dia.—outside cylinders—have a large proportion of boiler, and are expected to be economical working engines—will be sold on very favorable terms, and are now ready for delivery. Apply to

CHAS. W. COPELAND,
7*1 Mo. 64 Broadway.

Machinists' Tools.

THE FAIRMAN AND WILLARD MACHINE TOOL MANUFACTURING COMPANY offer for sale very superior Engine lathes, Planing Machines, Compound planers, upright drills and all other kinds of tools used in Railroad shops, upon reasonable terms.

They also manufacture Fairman's patent CAR WHEEL BORER, which is warranted to do more and better work than any other borer in use.

Also—all sizes Fairman's patent Universal Chuck.
Orders may be addressed to

G. W. FAIRMAN, Agent,
Rochester, N. Y.

3315

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot, gauge, 22 tons weight, 16 + 20 inch Cylinders, and 5 1/2 and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.

Dec. 24

Union Railroad Car Works, PORTSMOUTH, VA.

FREIGHT, PASSENGER, BAGGAGE, EXPRESS, MAR-kot, Coal, Lumber and Hand Cars, manufactured at this establishment of the best material, and in the most approved manner, with either PLATE or SPOKE WHEELS and AXLES, of Salisbury or other Iron. Trucks fitted up, or Wheels and Axles separately will be furnished at the shortest notice, and shipped to any part of the United States.

Having extensive arrangements and superior facilities for manufacturing at this establishment, orders will be received and contracts made for equipping entire roads at short notice.

JOHN A. GREEN.

Portsmouth, Va., December 30, 1853.

P. J. Tournadre,

Chief Engineer Vicksburg, Shreveport and Texas R.R.,
Vicksburg, Miss.

Valuable Works on Railroads, Railway Engineering, Steam Engines, &c.

LARDNER'S RAILWAY ECONOMY, 1 vol. \$2 00
THE STEAM ENGINE, STEAM NAVIGATION, ROADS AND RAILWAYS, Explained and Illustrated by Dr. LARDNER, 8th Edition, revised and improved. 2 00
TREDGOLD ON THE STEAM ENGINE, 3 vols., 4 to., 1/2 calf. 60 00
TREDGOLD'S PRACTICAL TREATISE ON RAILROADS AND CARRIAGES. 1 50
PORTWINE ON THE STEAM ENGINE. 50
BURGOYNE'S ART OF BLASTING ROCKS, QUARRYING, &c. 34
TREATISE ON TUBULAR AND GIRDER BRIDGES. 81
BAKER'S LAND AND ENGINEERING SURVEYING. 62
BAKER'S RAILWAY ENGINEERING AND EARTHWORK. 1 50
PRIDEAUX ON ECONOMY OF FUEL. 51
SEWELL ON STEAM AND LOCOMOTION Vol. 1. 21
HERBERTS ENGINEERS AND MECHANICS ENCYCLOPEDIA, 2 Vols. 9 50
GARRS RAILWAY LOCOMOTION AND STEAM NAVIGATION. 1 75
TRAUTWINE ON EXCAVATIONS AND EMBANKMENTS. 1 00
Imported and for sale by JOHN WILEY,
167 Broadway, New York.

N. York and N. Haven R. R.

NOTICE OF SUMMER ARRANGEMENTS,

Commencing Monday, May 9, 1853.

TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A. M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A. M.—Commutation from New Haven.
9.10 A. M.—Special for Port Chester.	6.15 A. M.—Accommodation from New Haven.
11.30 A. M.—Accommodation for New Haven.	9.35 A. M.—Express from New Haven, stopping at Bridgeport, Norwalk and Stamford.
3.00 P. M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	1.07 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
4.00 P. M.—Accommodation for New Haven.	4.00 P. M.—Special, from Port Chester.
5.00 P. M.—Express for Boston, stopping at N. Haven.	4.00 P. M.—Accommodation from New Haven.
5.35 P. M.—Commutation for N. Haven.	9.30 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
6.30 P. M.—Special for Port Chester.	

GEORGE W. WHISTLER, Jr., Sup't.
New Haven, May, 1853.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
157 Broadway, New York.

CHARLES B. STUART,
DANIEL MARSH,
EDWARD W. SERRELL,
SAMUEL McELROY.

New Works on Civil Engineering.

THE Field Practice of laying out Circular Curves for Railroads.—By JOHN C. TRAUTWINE, Civil Engineer.—2nd edition in pocket-book form.

A new and rapid method of Calculating the Cubic Contents of Excavations and Embankments, by the aid of Diagrams.—By John C. Trautwine, Civil Engineer—with 10 Copper Plates. Price One Dollar each—postage on the Curves Three Cents—and on the Excavations and Embankments, Six Cents.

For sale by
WILLIAM HAMILTON,
Hall of the Franklin Institute,
Philadelphia.

May 4, 1853.

ESTABLISHED 1796.

McAllister & Brother,

OPTICIANS and Dealers in Mathematical Instruments, at the old established stand, 48 Chestnut street, Philadelphia, Pa. Mathematical Instruments separate and in cases, Protractors, Spacing Dividers, Drawing Pens, Ivory Scales, Tape Measures, Salometers, Spy Glasses, Microscopes, Spectacles, Hydrometers, Platina Points, Magic Lanterns, etc., etc. Our Illustrated and priced Catalogue is furnished on application and sent by mail free of charge.
Nov. 19, 1850

\$1,000,000 LITTLE MIAMI RAILROAD COMPANY SIX PER CENT. FIRST MORTGAGE BONDS FOR SALE.

OFFICE OF WINSLOW, LANIER & Co.
No. 52 Wall-st., Oct. 6, 1853.

THE LITTLE MIAMI RAILROAD COMPANY offer for sale one million of their **SIX PER CENT. BONDS**, with coupons. Interest and principal payable in New York, the former half-yearly, 1st of November and 1st of May. They are in sums of \$1,000 each, payable the 1st day of May, 1858.

These Bonds are issued under the express authority of the Legislature of the State of Ohio; and are a part of the \$1,500,000 Loan authorized to be issued by a vote of the stockholders, for the purpose of raising means to make a double track; the greatly increased and increasing business of the road makes this absolutely necessary.

The Little Miami Railroad is eighty-four miles long, commencing at the City of Cincinnati and terminating at Springfield; is now in complete running order; has cost, including equipments, stations, station-houses, &c., up to this date \$2,708,109 10.

This Company hold stock in the Columbus and Xenia Railroad Company to the amount of \$386,000, which now commands a premium of 20 per cent. Also, in the Hillsborough Road the amount of \$11,716.

The receipts of the Road have been as follows:

For the year ending Dec. 1, 1844.....	\$18,623 36
For the year ending Dec. 1, 1845.....	46,827 58
For the year ending Dec. 1, 1846.....	116,052 02
For the year ending Dec. 1, 1847.....	221,139 52
For the year ending Dec. 1, 1848.....	280,085 78
For the year ending Dec. 1, 1849.....	321,398 82
For the year ending Dec. 1, 1850.....	405,697 24
For the year ending Dec. 1, 1851.....	487,845 89
For the year ending Dec. 1, 1852.....	526,746 35
The receipts from Dec. 1, 1852, to Sept. 1, 1853, 10 months were.....	544,625 59
For the same period year before.....	411,797 06

Increase in 10 months.....\$132,823 53

The position of this road, being the natural, shortest and most usually travelled route from Cincinnati and the vast country south and west of it, to the northern cities, must ever make it one of the most important and profitable lines in the country.

An inspection of a map will show its connections to be many and important. This road operates the Columbus and Xenia Road, and runs in connection with the Cleveland and Columbus Road; in fact they are now run as one line greatly to the advantage of all.

Regular annual 10 per cent. dividends have been declared since December, 1847, with an extra dividend of 5 per cent. in 1852. In 1852 two cash dividends of 5 per cent. were made.

The present surplus and reserve fund amounts to.....	\$98,646 10
The mortgage covers the entire line of road, costing to date...	2,708,108 19
To be expended on double track, &c.....	1,500,000 00

Value of security.....\$4,208,109 19

The security for the payment of these Bonds is one of the most ample character, being a first and only mortgage or deed of trust (excepting one of \$100,000 to the City of Cincinnati) on the Company's Road, Stations, Franchises, net income, &c., to J. F. D. LANIER, Esq., of this city, in trust for the bondholders, with ample power to take possession of the Road, its real and personal estate, franchises, &c.; and to sell the same to the highest bidder for cash, if default be made in payment of interest or principal. The mortgage is for \$1,500,000, and cannot be increased.

The Stock owned by the Road in the Columbus and Xenia and Hillsborough Railways will much more than pay off the \$100,000 prior lien to the

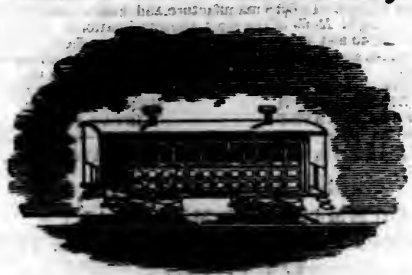
City of Cincinnati, and all other debts of the Company, excepting this loan of \$1,500,000.

These Bonds are offered at private sale by the undersigned, Agents of the Company.

Printed statements of the affairs of the Company, and any further information relative to the securities, will be given by

WINSLOW, LANIER & CO.,
No. 52 Wall-st.

Elmira Car Manufactory.



THE Undersigned is prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.

WM. E. BUTTER.

Elmira, N. Y., June 1, 1853.

The Hamilton Car Company,

ARE prepared to Contract for the Manufacture to order Rail Road Cars of every description, such as Passenger, Baggage, Freight, Dumping and Hand Cars, &c. &c.

Having ample facilities for Manufacturing at the lowest rates, and being supplied with Eastern Mechanics in every department under the Superintendence of H. P. Lanckton, who has had charge of T. W. Wason's well known establishment at Springfield Mass., for the last Six years, we can guaranty ours to be equal in style and quality to any manufactured.

Car Manufacturers and Rail Road Companies Supplied with Car wheels from the most approved patterns at the lowest prices. Castings of all kinds for Cars, Rail Road Bridges, &c. made to order at short notice.

Orders Respectfully Solicited.

Address, HENRY SIZER, Agent,
Cincinnati Ohio.
Office 596 Fifth Street, Cincinnati, at Rail Road Depot Building.

Railroad Car Works.

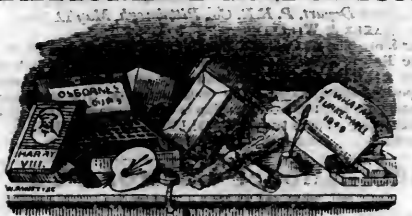
THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.

Maysville, Ky., Sept. 29, 1853.

Hufty's

Engineers, Architects and Draftsmen's
STATIONERY EMPORIUM.



WHATMAN'S Turkey Mill Drawing paper, Tracing paper, Plan and Profile, Protractors, Drawing Pins, Faber's, Jackson's and other makers' Pencils; Field, Level, and Memorandum Books of various patterns; Mathematical Instruments, Tape-lines, Mouth Glue, Cross Section paper, Triangles, Sabel Brushes, Gum Bands, Maiden Gum, Red Tape, Ink, Inkstands and Sand, Water Colors, Pallets, Patent Binders for letters, Portfolios, etc., together with a general assortment of Stationery and Blank Books. All goods packed with care, and forwarded to any part of the United States.

JOSEPH HUFTY,

Successor to H. L. Lipman,
139 Chestnut st., Philadelphia.
May 15, 1851.

Buffalo Car Works.

TOWNSEND & COIT, Proprietors.

WE are now erecting an extensive Establishment for the manufacture of Railroad Cars, which will be furnished with all the conveniences known to the business, and ready for operation by the 1st day of June next, at which time we will be ready to execute orders for Baggage, Box, Platform and Cattle Cars, of the most approved style and finish. Meantime we are prepared to make contracts for work to be furnished during the summer and fall.

February 23, 1854.

TOWNSEND & COIT, Buffalo.

A. N. GRAY, Cleveland, O.,

RECEIVER and FORWARDER of Railroad Iron, Chairs and Spikes

Also, Cars, Locomotives, and all kinds of Machinery for Railroad purposes.

Office next door to the Custom House, Main st.
January 12, 1853.

SIXTY MILES DISTANCE SAVED!—ONLY THIRTY-SIX AND A HALF HOURS TO CHICAGO.

MICHIGAN SOUTHERN RAILROAD LINE, carrying the Great Western U. S. Through Mail—FOR CHICAGO AND ST. LOUIS, MILWAUKEE, RACINE, KENOSHA, and all Ports on Lake Michigan.—Through from Buffalo to Monroe IN FOURTEEN HOURS WITHOUT LANDING.

The following magnificent and unequalled steamers from the line between Buffalo and Monroe:

EMPIRE STATE, J. WILSON, Commander, leaves Buffalo Mondays and Thursdays.

SOUTHERN MICHIGAN, A. D. PERKINS, Commander, leaves Buffalo Tuesdays and Fridays.

NORTHERN INDIANA, I. T. PHEATT, Commander, leaves Buffalo Wednesdays and Saturdays.

One of the above splendid steamers will leave the Michigan Southern Railroad Line Dock, at 9 o'clock, P. M. every day, (except Sundays) and run direct through to Monroe without landing, in 14 hours, where the Lightning Express Train will be in waiting to take passengers direct to Chicago in 8 hours; arriving next evening after leaving Buffalo.

THE LAKE SHORE RAILROAD.

runs in connection with this line, forming the only continuous line of Railroad to Chicago and the Illinois River.

For Through Tickets, by New-York and Erie and Buffalo and New-York City Railroad via Buffalo, or by the People's Line of Steamboats, Hudson River Railroad via Albany and Buffalo, apply to

JOHN F. PORTER, Agent,
No. 193 Broadway, corner Dey-st., N. Y.

MONTREAL & NEW YORK AND

Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6:30 a.m. and 6 p.m., arrive at 8 a.m. and 7:30 p.m.

Leave Plattsburgh for Montreal 7:30 a.m. and 4 p.m., arrive at 10 a.m. and 6:50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate stations.

Trains connect at Moores Junction with Northern (Ogdensburg) Railroad for Ogdensburg and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequalled for comfort and dispatch, and attended with less fatigue and delay than any other. It possesses moreover the advantage of a short ferrage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.

For particulars see Freight and Passenger Tariff

BAGGAGE checked through.

H. W. NELSON, Superintendent.

New York and Erie R. R.

PASSENGER TRAINS leave Pier foot of Duane street, as follows, viz:—

DAY EXPRESS, at 6 a. m. for Dunkirk and Buffalo.

MAIL, at 8 1/2 a. m. for Dunkirk and Buffalo, and all intermediate stations. Passengers by this train will remain over night at any station between Binghamton and Corning, and proceed the next morning.

ACCOMMODATION, at 12 1/2 p. m. for Delaware and all intermediate stations.

WAT, at 3 1/2 p. m. for Delaware and all intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

EXTRAORDINARY, at 6 p. m. for Dunkirk and all intermediate stations.

On Sundays only one Express Train—at 5 p. m.

The Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Chicago, etc., and at Buffalo with first class splendid steamers for Cleveland, Sandusky, Toledo, Detroit and Chicago.

CHAR. MINOT, Sup't.

Notice to Contractors.

WARSAW & ROCKFORD RAILROAD.

THE preliminary Surveys are now complete for the First Division, (about 120 miles) from Warsaw, through Nauvoo, Oquawka, Keithsburg, Rock Island and to Port Byron, including both Rapids of the Mississippi, and the location progressing. The character of the country is such, and the surveys so near to any location that will be made, that Contractors can satisfy themselves of the value of the work as well now as hereafter. Proposals are asked at the Office of the Company in Warsaw, Hancock County, Illinois, for the construction of the whole or part of the road, either by quantities or by the mile. Contract will not be made before the 1st of January, 1854, and only so soon thereafter as advantageous offers can be made. The Company are willing to make general contract, for cash or for cash and securities.

The route of the road is generally in the valley and second bottoms of the Mississippi, and the work can be completed very rapidly. The road is important as one of the improvements of the navigation of the Rapids, and also from its several (two at least) connections with other railroads.

WM. H. ROOSEVELT,

President.

W. R. KINGSLEY,

Engineer.

T. S. O'SULLIVAN,

Consulting Engineer.

Warsaw, Nov. 17, 1853.

Drawing.

B. BLANDOWSKI, Topographical and Ornamental Draughtsman and Designer. Maps accurately drawn, enlarged or reduced from notes or copies. Ornamental designs for decorations, furniture, fences and ornamental foundry work. Architectural designs. Drawings from nature carefully prepared.

REFERENCES. Messrs. Miller and Freund, Ligneous Marble Works, corner of Franklin and Center streets, New York. Also H. V. Poor, Esq., Editor Railroad Journal, and Zerah Colburn, Assistant do.

Address, care of Railroad Journal, 9 Spruce street New York.

CORROSIVE SUBLIMATE.

THIS article now extensively used for the preservation of timber, is manufactured and for sale by POWERS & WEIGHTMAN, manufacturing Chemists, Philadelphia.
Jan. 20, 1849.

To Railroad Companies, Machinists, Car Manufacturers, etc., etc.

CHARLES T. GILBERT,
NO. 80 BROAD ST., NEW YORK.

IS prepared to contract for furnishing at manufacturer's prices—

Railroad iron,
Locomotive Engines,
Passenger and Freight Cars,
Car Wheels and Axles,
Chairs and Spikes.

Orders are invited; and all inquiries in relation to any of the above articles will receive immediate attention.

Krupp's CELEBRATED CAST STEEL,

Which obtained the Council Medal at the London Exhibition in 1851.

Warranted unapproachable as to Quality and Size.

PLATERS and other Cast-Steel Rollers, of any dimensions not exceeding six feet long by eighteen inches diameter. Piston Rods and Shafts for Steam Engines, not exceeding 3000 lbs. in weight.

Railway and other Axles, Cranks, Springs and Tyres, Cannon, Rifle and Gun Barrels, Mint and other Rolling Mills.

Orders received by

THOMAS PROSSER & SON,
25 Platt street, New York.

Sole Agents for the United States.
Nov. 19, 1853.

Machinists' Tools.

A SUPERIOR CLASS.

DESIGNED particularly for Railroad work, manufactured by L. B. TING & CO., (late ALDRICH, TING & Co.)
October 7, 1853. LOWELL, MASS.

Henry I. Ibbotson,

MANUFACTURER OF

FILES AND SAWS,

Warranted of superior quality.

Office and Warehouse, 218 Pearl st., New York.

Small Rails.

THE SUBSCRIBERS manufacture and keep constantly for sale, Light Rails of the most approved pattern, weighing 22, 25, 28, 40 and 60 lbs per yard, suitable for Colliers, Miners, Quarriesmen and Contractors, or for turnouts, depot and branch tracks.

1744.

CHAS. E. SMITH.

THOS. T. TASKER.

Fairmount Iron Works, Philadelphia.

HENRY MORRIS.

WISTAR MORRIS.

Railroad Iron Via Quebec.

JOHN ANDERSON & Co.,

COMMISSION MERCHANTS,

SHIPPING AGENTS AND BROKERS,

QUEBEC,

PARTICULAR attention given to the Transhipment of Iron in Transit for the Western Lake Ports, likewise to the Shipment of Rails in Great Britain.
Quebec, Dec. 2, 1853.

Railroad Iron.

TWO THOUSAND TONS Erie Pattern, 58 lbs. to the yard, already shipped, and expected here soon—for sale by
38tr JOHN H. HICKS, 90 Beaver st.

To Railroad Companies.

COLLINS' PATENT
VENTILATORS,

FOR

Ventilating all kinds of

PUBLIC AND PRIVATE BUILDINGS

Railroad Cars, Depots, etc.



THE Subscribers would invite the attention of the public to the above celebrated Patent Ventilator. This Ventilator is the best one now known of, for giving a pure air in rooms, and ejecting all foul air. It has been adopted by all the principal Railroad Companies and Car Factories, and is extensively used for private dwellings, and for the cure of smoky Chimneys cannot be excelled. Manufactured and for sale by

BAKER & WILLIAMS,

No. 406 Market st., Girard Row,

Sole Agents for Pennsylvania.

CERTIFICATES.

Engineer Department P.R.R., Altoona, Feb. 8, 1853.

This is to certify that Messrs. BAKER & WILLIAMS, of 406 Market st., Philadelphia, have furnished a large number of Collins' Patent Galvanized Iron Ventilators for the P. R. R. Co., and that they have given every satisfaction, acting fully as represented. I consider them as a necessary appendage to an Engine House. We have them in use thirteen inches, and two feet diameter, acting equally well. So well satisfied am I of their usefulness, that the Engine Houses we are about building will be supplied with them at every point where a draft is necessary to free building of smoke.

STRICKLAND KNEASS,

Principal Assistant Engineer P. R. R. Co.

Engineer Depart. P. R. R. Co., Pittsburgh, May 12, 1853.

Messrs. BAKER & WILLIAMS,
Dear Sirs—The 23 Collins' Patent Ventilators furnished by you for the Engine House at this place, have been in use several months and their merits have been fully tested and have given most perfect satisfaction; being constructed on true principles of Ventilation, and the workmanship is of a substantial and superior character. Yours truly,
3m40 OLIVER W. BARNES,
Principal Assistant Engineer P. R. R. Co.

India-Rubber Railroad Car Springs, etc.

THE UNITED STATES CAR SPRING COMPANY, having completed their new Factory, are manufacturing and furnishing to Railroad Companies, and Car Builders, RUBBER SPRINGS of the best quality, on the most favorable terms. Also, McMillen's superior WHITE HOSE, not only for Railroads, but all other purposes, and of any size or thickness required.
Aug. 10, 1853. 3m New York.

Railroad Iron.

2,000 TONS FIRST CLASS WELSH RAILWAY IRON, to be made to any ordinary T pattern required by the buyers, and for shipment from Newport, Wales, in December, January, and March next, apply to the undersigned, for many years connected with the largest house in the trade.
JOHN H. AUSTIN & CO.,
2 Ingram Court, Fenchurch street London.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of 1 years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c.; to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

E. B. SUMNER,

No. 61 Camp Street,

New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

1300 Tons Yorkshire T rail, weighing 56 lbs. to the yard, and of a superior quality daily due and for sale by,

NAYLOR & CO.

Oxford Furnace, N. J.

ESTABLISHED A. D. 1743.

THE Subscriber manufactures and keeps constantly on hand for sale, every variety and size of Railroad Wheels made from the celebrated Oxford Iron. All orders addressed to CHAS. SCRANTON, Oxford Furnace P. O., will be attended to promptly.
Sept. 11, 1852. 1y

Book and Job Printing.

The undersigned have added to the PRINTING ESTABLISHMENT of the "RAILROAD JOURNAL," an extensive OFFICE for BOOK AND JOB PRINTING, which they are now prepared to execute in the BEST manner, and with DISPATCH. They respectfully solicit from RAILROAD COMPANIES, orders for the PRINTING of Exhibits

Time-tables, Circulars, Tickets, &c., &c.

J. H. SCHULTZ & CO.

New York April 9, 1853.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X, No. 2.]

SATURDAY, JANUARY 14, 1854.

[WHOLE No. 926, VOL. XXVII.]

The Mechanical Engineering department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Commercial Policy of Pennsylvania.....	17
New Railroad in Georgia.....	18
New York and Erie Railroad.....	19
Pacific Railroad of Texas.....	23
North Carolina Railroad.....	23
Management of French Railroads.....	23
Commerce of the New York Canals.....	23
Little Miami Railroad.....	23
Stock and Money Market.....	24
Georgia Central Railroad.....	27
Saugatuck Iron Works.....	27
Journal of Railroad Law.....	28
Muscogee Railroad.....	28
Great Western Railroad of Canada.....	28
Indianapolis and Cincinnati Junction Railroad.....	29
Savannah and Mobile Railroad.....	29
Chicago and St. Louis Railroad.....	29

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, January 14, 1854.

Commercial Policy of Pennsylvania.

The recent Message of the Governor of Pennsylvania contains the following reference to the Erie troubles.

Recent occurrences at the City of Erie evince an intensity of feeling among the people, seldom equalled on a question of this kind, indicating not only the propriety, but necessity, for prompt and decisive legislative action as to the rights of this company.

It must be clear to the impartial observer, that the Legislature never intended, by any previous act, to authorize the construction of a railroad between the City of Erie and the Ohio line. Indeed, the highest judicial tribunal in the State has expressed the opinion that no such authority can be found in the charter of the Franklin Canal Co.; and, in my opinion, the grant should hereafter be made on such conditions only, as will protect and advance the interest of the people of Pennsylvania, so far as they may be involved in the subject. It so happens that Pennsylvania holds the key to this important link of connection between the East and the West, and I must unhesitatingly say, that where no principle of amity or commerce is to be violated, it is the right and the duty of the State to turn her natural advantages to the promotion of the views and welfare of her own people.

It may be said that a restriction that would require a break of railroad gauge at the harbor of Erie, would be the use of an illiberal principle. The answer is, that the necessity for a break of gauge between the Ohio line and the seaboard exists, as a consequence of a difference in the width of the New York and Ohio Roads. The only question to settle, therefore, relates to the point at which it should occur. I have been able to discover no reasons, founded in public policy, why the break should be fixed at Buffalo, that do not apply with equal force in favor of Erie. Tonnage and passengers can be as well transhipped at the latter, as at the former city.

So far as concerns the benefits to either city, incident to a transhipment, the idea is unworthy of notice. But the effects of a break of gauge, and consequent transhipment east of Erie, upon the business of that harbor, must be paralyzing, if not fatal. It would virtually require shipments to be made either at Cleveland or Buffalo. Scarcely less embarrassing would this arrangement be upon the interests of the Sunbury and Erie Road, or any other avenue that may hereafter connect the lakes with the City of Philadelphia.

It may be that neighboring States, possessing similar natural advantages, would give them away for our benefit, but I have not been able to discover any fact in their former policy, to justify such a conclusion. I shall await your action with anxiety.

We have here a definite statement of the doctrine held by the state of Pennsylvania in reference to the right to impose restrictions upon railroads crossing her territory. Let us see to what results its application would carry us.

The Governor says that Pennsylvania, holding the key to the commerce of the country between the East and West, has an unquestioned right "to turn her natural advantages to the promotion of the views and welfare of her own people."

What these advantages are, he explains in the following paragraph. "The effect of a break of gauge and consequent transhipment east of Erie, upon the business of that harbor, must be paralyzing, if not fatal."

How would transhipment east of Erie be fatal to the business of that city?

Suppose a train of cars be loaded at Cincinnati with freight designed for New York. This train would pass through the flourishing cities of Columbus and Cleveland without breaking bulk. Would this fact destroy the business of these two cities? By no means, as experience fully proves. Why?

Because their business does not depend upon the inconvenience to which commerce is subjected in passing through their limits. Do these cities believe their business to be affected because the freight that passes through them now breaks bulk at Erie? Certainly not, except so far as they are interested in the untaxed movement of commerce.

But suppose midway between Cleveland and Columbus, the railroad track broke gauge at a point of no business importance, and that the necessary transhipment gave employment to a population that had no other means of support, and whose gains were measured by what another portion of the community lost. In such case it is easy to see that were the disjointed tracks made to conform their gauges, they would, in the language of Governor BIGLER, prove fatal to the business of such place, because it had no other.

Precisely in the same manner, is the business of Erie to be ruined by a uniform gauge through that city, the gains of which are the exact measure of the loss that the public suffers.

"Pennsylvania has an unquestioned right," says Governor BIGLER, "to use the advantages of her position to promote the interests of her own people." If Pennsylvania has this right, every other State has a similar right. The position of Ohio is analogous to that of Pennsylvania; Indiana to that of Ohio, and Illinois to that of Indiana. Suppose a train of cars load at St. Louis for Philadelphia, to run over the uniform gauge which is soon to exist between the two cities. But the State of Illinois says, "We hold the key to the commerce between the Mississippi and Philadelphia, and have a right to turn our position to our own advantage." She therefore compels all freight to break bulk at Springfield, for the purpose of adding to the business of that city. On reaching the Indiana State Line the train is met with a similar demand. Indiana says, "We will not unlock our position without being paid for it." A transfer of freight from car to car has again to take place. The same change for a similar object is again required at Indianapolis. Ohio meets the advancing train with the same doctrine, and compels another break at her boundary; another at Columbus; another at the Ohio River. Another is made in crossing a portion of Virginia. But be-

fore the last point is reached, the increased cost chargeable to *transshipment and delays*, exceed the value of the freight, and commerce between the different sections of the country is destroyed simply by the *burdens* imposed upon it. Such is the necessary result of Governor Bigler's doctrine. Carried out to its legitimate conclusions it would destroy every advantage our political system has secured, and would convert the country, in a very few years, from a *unit*, into numerous petty communities, arrayed in an attitude of hostility towards each other, between whom no useful intercourse could exist, which would soon relapse into a state of semi-barbarism, consequent upon a state of constant warfare.

It is well known that the different States could not have been forced to consolidate themselves in to one, but for the inconveniences caused by the restraints imposed by each upon the trade of its neighbor, and the advantages which an *unrestricted* commerce promised to secure. The articles of *consolidation*, if we may use that term, prohibited the several States from levying duties upon parties or property of other States, passing through their territories. The right to do this has been claimed, but always successfully resisted. It is again to be asserted by Pennsylvania, though in a different manner from any previous attempt. But the rights claimed by her are no less incompatible with the constitution, are fatal to commerce between different portions of the country, and consequently to the value of our railroads, which have been constructed for the accommodation of this commerce.

The cheapness of transportation in the United States compared with the high cost on the continent of Europe, was the object of conversation between ourselves and a party of intelligent German gentlemen a short time since. The vastly greater cheapness in this country was ascribed to the entire absence of *local charges*. It was shown that heavy freight could be taken from Chicago to New York, a distance of 1500 miles, for some five or six dollars per ton, for the reason, that the *charges* were the *cost* of transportation. On the continent, freight in passing the same distance is subject perhaps to a dozen local charges, imposed by as many different States, by way of *impost* or *license*, which often exceeds three or four times the actual cost of carriage. Now Governor Bigler's doctrine would convert the United, into hostile States, whose highest conception of the use and objects of political organization would be to prey upon each other.

We have always felt that one of the most imminent dangers that threatened the railroad interest of the country was precisely the claim now set up by Pennsylvania, that of sacrificing the general good to *local interest*. Commerce is purely cosmopolitan, and flourishes just in proportion to its freedom of movement. As before stated, the leading object in bringing the whole country under one government was to obliterate *State lines* as far as commerce is concerned. This result in the main has been achieved. The few local pretensions that have been set up, have gradually yielded to the general convenience. The lines of our railroads have been located rather with a view to the commerce of the *whole* country than to that of a *locality*. The Legislation of the States has been in harmony with a general plan. It is reserved to Pennsylvania to set up a different doc-

trine, a doctrine which we have seen, if carried out to its legitimate results, would prove fatal, not only to the internal commerce, but to the value of the railroad property of the whole country. Against such a doctrine we most earnestly protest, and call upon all parties interested in railroads, to join with us in this protest.

We see no possible advantage to be gained by the State of Pennsylvania by a break of gauge at Erie, except the one named, and which involves an equal sacrifice by other interests. As the Ohio gauge differs from that of Pennsylvania, all merchandize reaching Erie from the west, and designed for Philadelphia, must break bulk at that city. Should the Ohio gauge be carried to Dunkirk and Buffalo, the freight designed for New York will have to break bulk at these points. We do not see that any thing is to be gained by Philadelphia by having a complete break at Erie, or refusing to allow Ohio gauge to run into the State of New York. But were any advantage to arise from a break within the territory of Pennsylvania, this advantage is soon to be lost by the proposed construction of other lines, preserving an uniform gauge through the State. The Alleghany Valley Railroad, for instance, proposes, in connection with other lines, to carry the Erie, or six feet gauge through the State, parallel to the course of the Lake Shore road. Another line of the 4 feet 8½ inch gauge is also to be formed in connection with the Hempfield, Pennsylvania Central, and the line of road now in progress from Harrisburgh to Easton—on the Delaware. This last line will open a direct route from New York to Ohio without touching Philadelphia, and bids fair to become the great avenue between the former city and the west, unless, perchance, the Pennsylvanians should repeat their Erie doings, and destroy the road, which we are by no means sure would not be the case. But if the State respects the rights of chartered companies, New York will soon have two uninterrupted lines of road to the west, which will enable her, without any inconvenience, to dispense with the Lake Shore line.

But we are by no means clear that Pennsylvania would respect the charters of the companies that will make up the proposed New York lines, or any charters of roads running toward other cities than Philadelphia, the privileges of these roads may be incompatible with the claims put forth by Governor Bigler. So long as this doctrine is proclaimed as the policy of the State, we presume that no capitalists out of it will touch the security of a Pennsylvania road. We do not see how they can do so with safety. If the State may compel a break at Erie, they may compel others at other points.

Suppose the Alleghany Valley Railroad to be built, affording an uniform gauge from the city of New York to the Ohio State line, and that freight seeking a market, takes this route to that city. Governor Bigler, speaking for the State, would say "It will never do to let any freight pass through our territory that does not go to Philadelphia, our position allows us to control this matter." A break of gauge therefore is compelled, to stop the continuity of the current toward New York. If one will not accomplish the object, a second, and a third, are required, until the avenue to New York becomes so clogged as to be impracticable. Such are the conditions under which capitalists

must purchase Pennsylvania securities, which conditions when enforced, might render such securities worthless in a day. Who will trust their money to such contingencies, and who will encourage the works of a State, the policy of which is at war with the railroad interest of the whole country.

The people of Pennsylvania have been: "*sowing the wind. They may reap the whirlwind.*"

Proposed Railroads in Georgia.

The completion of the Wilmington and Manchester Railroad is about giving a new course to the travel through Georgia, and is already turning attention to the construction of such connections as shall furnish the most direct routes between the Eastern and the Western portions of the State. The Post Office department is about transferring the mail from the Wilmington steamers to the Wilmington and Manchester Railroad, and it is anticipated that the government contract with Brooks and Barden, on the Charleston and Savannah route, will be soon afterwards terminated. The mails between these latter cities will consequently have to be carried around by way of the South Carolina, Augusta and Waynesboro and Georgia Central roads, a distance in all of 267 miles. The City of Charleston and citizens of South Carolina are, however, endeavoring to build a direct road between the two cities, and have applied to the Legislature of Georgia for permission to cross the Savannah River above Savannah. A charter is also asked for a road, crossing the Savannah River at Sister's Ferry, and to extend to Branchville on the South Carolina Railroad.

The travel accompanying the great mail will at present pass over the Wilmington and Manchester road; thence over the Columbia Branch Railroad to Branchville; thence over the South Carolina road to Augusta; thence over the Augusta and Waynesboro road to Millen, the point of intersection with the Georgia Central road, and thence to Savannah, or to Macon and the South West. By this connection the entire length of the Central Road will be employed by the through travel, which may reach Millen, destined either for Savannah or Macon. A project has however been started to construct a road from Macon through Milledgeville to Warrenton, by which the Georgia road will have the South Western through travel for the distance from Augusta to Camak and Warrenton, 51 miles. The Georgia Central road, however, who have already aided largely in the construction of the Waynesboro road, propose to construct a road from Millen (the intersection of their own with the latter road), across the Savannah River to Branchville on the South Carolina road.

This latter road would be of much value to Savannah in aiding her Central road, and as a more direct communication with Charleston until the completion of other proposed routes. It would also benefit Charleston not only mutually with Savannah, but give her a more direct route to the South West than is furnished by her own road through Augusta.

The Central Railroad Company have been applied to by many of the towns near the line of their road for aid in the construction of branches and independent lines for the accommodation of the agricultural interests.

The people of Monticello ask the Central Com-

pany to guarantee to them 7 per cent. on the cost of a road from Monticello to Eatonton—the people of Newton and Walton counties ask for aid to build a road from Eatonton by Shady Dale to Covington—citizens of Butts county have asked for aid to build a road to connect the Indian Springs with the Central road. The people of Hancock have also asked for aid to build a road from Sparta to the Central Road at Davisboro or Tennille.

The proposed road from Eatonton to Monticello would throw an increased business over the Milledgeville and Eatonton road, and would ultimately benefit the Central Company.

The short remaining distance between Monticello and Covington, the latter on the Georgia road, could not fail to be a useful connection between the two great roads parallel, and without any other connection for nearly two hundred miles.

Report of the Directors of the New York and Erie Railroad Company to the Stockholders.

(Continued from Page 836.)

The first road on the New York Central line, was built with two inclined planes, worked by stationary engines, a thin flat rail, laid on longitudinal timbers of southern pine, which rested on stone blocks, protected from displacement by frost, by deep trenches filled with broken stone. This mode of construction was subsequently improved upon by the substitution, from time to time, of thick flat rails, and next, of those of the present form, changed successively from thirty, to fifty, and to sixty-five pounds weight, per lineal yard.

The stone blocks and broken stone were laid aside; and cross ties, laid on ballasting were substituted.

The inclined planes at Schenectady and Albany, were abandoned; at the latter place a new line was built, which was worked by horse power, and subsequently at both places, new lines were built on grades, adapted to the use of locomotives.

The first locomotives built, weighed six tons; some of those now in use on that line, weigh 25 tons.

The New York and Erie Railroad, was commenced at a later date, than the Central, and the greater portion of it was built, after the existing improved plans of construction were generally adopted. It has therefore escaped many of the extra expenses, that have been incurred on the other great lines.

It has, however, been subjected to some expenses of this character.

On the Eastern Division, the iron rails originally laid down, were found too light, to sustain the large engines and trains, and the great traffic which has passed over the road.

Many of the bridges were, from the same causes, found too weak, and experience has shown, that the use of longitudinal sills, on this part of the road, was an inferior mode of construction.

On the Western half of the road, a large expenditure was made, in constructing a piled road, and with grades and lines, which on subsequent examinations, were abandoned and left unused and valueless.

The losses to the Company from these causes, may be estimated roughly, at three millions of dollars, the amount of the loan received from the State.

VI.—AN ANALYSIS OF THE PRESENT BUSINESS.

The annexed tables show:

F.—The number of passengers, and the receipts therefrom, on the several sections of the road, in periods of six months, for the years ending October 1st, 1852, and 1853.

G.—The tonnage and receipts for freights, in the same manner, and for the same period.

H.—A comparison of the through and local receipts from passengers and freights.

I.—The number of through and way passengers, and the mileage for each month of the last year.

J.—The classification of the tonnage, and receipts therefor.

K.—The proportions of the different kinds of freight shipped from and received at the principal stations.

L.—The quantity of lumber shipped from the principal stations, and its destination.

The earnings, for the years ending September 30, 1852 and 1853, have been as follows:

	From Passengers.	From Freight.
For the year ending Oct. 1, 1852	\$1,299,796 51	1,869,403 19
" " " 1853	1,601,085 33	2,539,680 03
Increase.....	\$301,288 82	670,276 84
	From other sources.	Total earnings.
For the year ending Oct. 1, 1852	149,526 09	3,318,725 79
" " " 1853	180,474 76	4,321,240 12
Increase.....	30,948 67	1,002,514 33

These tables exhibit the following general results, in reference to the business of the last year.

1st. That while the whole earnings, exceed those of the preceding year by thirty per cent, the receipts from freights, form two-thirds of that increase.

2d. That the local business from passengers, has increased, by one per cent. more than the through, and that the through business from freight, has increased, by seven per cent. more than the local.

3d. That the earnings for the transportation of freight, exceed those for passengers, by more than one-half, for the year, and about one-third, for the last quarter of the year.

4th. That the receipts from the through business, form about one-third of the whole receipts, being twenty-nine per cent. from passengers, and thirty-seven per cent. from freight.

5th. That the receipts for transportation, between all way stations and the termini of the road, are about twenty-five per cent. of the whole, for both passengers and freight, and those between the way stations only, are forty-two per cent. of the whole, being forty-five per cent. on passengers, and thirty-nine per cent. on freight.

6th. That nearly one-half of the freight business was received at the New York office; about five per cent. at the offices of the Eastern Division; three per cent. on the Delaware; fifteen per cent. on the Susquehanna; and eight per cent. at the offices on the Western Division.

7th. That nearly one-half of the increase from freight over the previous year, was received at the New York office; nearly one-fifth at Dunkirk; twelve per cent. on the Susquehanna, and eight per cent. of the increase at the offices on the Western Division; and a small increase on the Eastern, and none on the Delaware Division.

8th. That nearly one third of the passenger business for the last year, was received at New York, and one-fifth at Hornellsville and Dunkirk. The Eastern Division furnished four per cent; the Delaware six per cent; the Susquehanna twenty per cent; and the Western Division furnished six per cent. of the whole passenger business, excluding the New York business from the Eastern Division; the Hornellsville from the Susquehanna; and the Dunkirk business from the Western Division.

9th. That nearly one-fifth of the whole increase from passengers, over the previous year, was received at the New York office; one-fourth at the Hornellsville and Dunkirk offices; one-fifth from the offices on the Susquehanna Division, and a small increase from the offices on the other divisions.

10th. That the receipts for the transportation of the product of animals, vegetable food, manu-

factures and merchandize, form eighty per cent. of the freight receipts, while the tonnage of the same articles, forms fifty-seven per cent. of the tonnage.

11th. That the freights westward, exceeded those eastward; (excluding lumber,) in each of the months of the last year, except December, Jan'y, and February, and that in those three months, the freights eastward, exceeded those westward, by thirty-two thousand tons, of which, less than one-third was made up of lumber.

12th. That the lumber transported eastward, during seven months of the year, nearly equalized the freights in both directions, and nearly equalized the tonnage of freight transported, during each month of the year.

13th. That during each of eight months of the year, the tonnage was nearly equal, being from fifty-two to sixty thousand tons per month, the eastward tonnage being from twenty-six to thirty-five thousand tons, and the westward from twenty-two to twenty-six thousand tons.

14th. That the tonnage, during the remaining four months, ranged from thirty-seven to sixty-four thousand tons per month; the eastward tonnage, being from twenty-three to thirty-seven thousand, and the westward, from twelve to twenty-seven thousand tons.

The above analysis shows:—

FIRST. That the present business of the road, could not be materially affected, by the competition of any existing railroads, and,

SECOND. That the preponderance of its business, being the transportation of freight, and the chief part of that being derived from the adjacent country, in the event of any check in the present prosperous condition of this country, the regular increase of the main business of this road, will not be interrupted, while that of other lines, which depend mainly on passenger travel, will be materially reduced; because, during such periods, pleasure travel is mainly suspended, and business travel is much lessened, whilst a contrary effect is produced in the freight traffic, the producer at such times, generally sending larger amounts to market.

The last Annual Report of the State Engineer, contains tables showing the tonnage and value, of all the articles transported, for the last five years on the Erie Canal, and on the line of railroads, running parallel with it.

Those tables show, that one class of articles, was, during that time, chiefly carried by the Canal, another class, chiefly by the railroads, and a third class, was carried by both.

In the first class are embraced, lumber, cereal products, iron and salt.

In the second class, animals and their products, vegetables, manufactures and merchandize.

The proportion of the whole tonnage of the Canal, to that of the railroad, was, as thirty-two to one, while that of the first class, was, as one hundred and eight to one; of the second class, was, two and one-third to one, and of the third class, was sixteen and one-half to one.*

The value per ton, of the same articles, which were transported on the canal and on the railroads, was as follows:

1st class on the Canal,	\$18 06 per ton.
2d " " " "	219 86 " "
3d " " " "	91 32 " "
1st " " " Railroad,	35 26 " "
2d " " " "	248 60 " "
3d " " " "	196 61 " "

The average value, of all the articles transported on the Canals, for the four years named, was \$48 68 per ton, and of those transported on the railroad for the same period, was \$227 41.

The Report states, "Thus the conclusions are arrived at, that those products and articles which

* This statement does not convey an accurate perception of the relative tonnage carried by the Canal and Railroad, because the average distance which the Canal tonnage was moved, was more than two hundred miles, while that of the railroad, was less than seventy miles.

are more profitably transported over the railroads, (the New York Central Line) could not, in most instances, be moved on the canal, without serious loss to the owner, and that the diversion of this business, from our navigable channels, has served to augment the legitimate business of the Erie Canal.

These tables show the effect of a canal, running parallel to a railroad, in distributing the appropriate business on each.

The New York and Erie Railroad, is intersected in four places by canals—the Delaware and Hudson, which runs parallel to it for twenty-two miles; the Chenango Canal; the Chemung Canal and feeder, which runs parallel for twenty-four miles, (including twelve miles of the Junction Canal, nearly completed) and the Genesee Valley Canal, which, when completed, will run parallel for fourteen miles.

The comparative distance to the City of New York, by the railroad, and each of these canals, is as follows:—From Delaware by railroad eighty-nine miles; by canal one hundred and sixty-two miles. From Binghamton, by railroad, two hundred and fifteen miles, by canal, three hundred and fifty-seven miles; from Elmira, by railroad, two hundred and seventy-four miles; by canal four hundred and fifty-nine miles. From Corning by railroad, two hundred and ninety-one miles; by canal, four hundred and sixty-nine miles. From Cuba, by railroad, three hundred and eighty-three miles; by canal (when completed) five hundred and nine miles.

The circuitous routes which these canals follow, and the increased time occupied in transit, prevented them from becoming competitors, for such articles of freight, as are desirable for transport on this road, while they provide a cheap mode of conveyance, for the heavy products of the country, which have too small value, to pay for railroad transportation.

The effect of these canals is therefore more particularly beneficial to the railroad, than where they run contiguous and parallel to it, as is the case on the New York Central. The annexed tables (T) show the amount of tonnage of each article shipped by the State Canals, where they are intersected by or are contiguous to the New York and Erie Railroad, and also the tolls paid thereon.

THE LUMBER TRADE.

The quantity of lumber transported during the year is one hundred and thirty thousand tons, or nearly one hundred millions of feet board measure, transported an average distance of two hundred and twenty-five miles. The receipts therefrom have been during the last fiscal year \$283,832, which is equal to one and one-third cents per ton, per mile. At the September rate of charges of transporting lumber, the receipts during the year would have been \$519,472.

The present rates of freight average over one and four-fifths cents per ton, per mile.

The lumber formed twenty per cent. of the whole tonnage, thirty per cent. of the tons carried one mile, and sixteen per cent. of the whole receipts from freight.

More than one half of the whole quantity, was transported to tide water, and the balance, chiefly to the points of intersection with the State Canals.

The Genesee Valley, ships forty per cent. of the lumber, and the Susquehanna, nearly the same amount. The Allegheny ships twelve per cent., and the Delaware five per cent. of the whole quantity.

The quantity of lumber now on hand, ready for shipment, is over fifty millions of feet, of which forty millions is seasoned, and the same quantity is destined for the Hudson River.

It is estimated, that there would be shipped, more than two hundred millions of feet annually, for the next five or ten years, if sufficient means should be provided, for transporting it.

Of this quantity, one-half would be furnished from the Genesee, and one-third from the Susquehanna Valley.

Urgent solicitations have been made, by the lumber manufacturers, to have that which is now on hand, transported to market, and to provide for the regular conveyance of that which is annually manufactured.

All of the motive power of the road, has been called into the most active requisition, during the present fall, to transport those freights, which are more remunerative than lumber.

As soon as the additional locomotives, which are now being built, are furnished, it is intended to establish trains, for the more uniform transportation of lumber.

The tariff for lumber * was increased on the first of September, ten per cent. on that shipped to the Hudson, and fifteen per cent. on that delivered at way stations. Arrangements have been made for weighing it, after being loaded on the cars, to prevent the errors of estimating partially seasoned lumber.

The quantity of coal carried during the last year, was about sixty-five thousand tons, moved an average distance of thirty-one miles. The receipts therefrom were \$25,642 46, which is equal to one and three-tenths cents per ton per mile; the shippers furnishing cars, and loading and unloading.

Coal can be conveyed cheaply over the light grades of the Susquehanna Division, and by means of the railroads and canals branching therefrom, it can be distributed to the consumers, in the interior of the State. Coal is now successfully used in the manufacture of salt at Syracuse, and it may be reasonably anticipated, that the railroads will be called upon, to deliver considerable quantities for use, at the salt works, when the water lines are closed.

VII.—A COMPARISON OF THE BUSINESS DONE, AND OF THE RECEIPTS AND EXPENSES OF THE LAST, WITH THOSE OF FORMER YEARS.

The annexed tables exhibit:

M.—The earnings from each source, for each month of the year, ending September 30th, 1853.

N.—The expenses of transportation in detail, for each month, of the same period.

O.—The expense in detail, per mile run by the trains, and also per ton, and per passenger, per mile carried.

P.—The miles run each month, by each class of trains.

They show:

1st. That the receipts from passengers were twenty-two per cent., and from freight thirty-four per cent. greater the last year, than the year previous, and that these increased per centages, were made up in the first quarter, by fourteen per cent. on passengers, and forty-seven per cent. on freight; in the second quarter, by forty-three per cent. on passengers, and thirty-four per cent. on freight; in the third quarter, by twenty-one per cent. on passengers, and the same on freight; and in the fourth quarter, by nineteen per cent. on passengers, and thirty-nine per cent. on freight.

2d. That the number of passengers carried in 1853, was one-third greater than in 1852. That the mileage of the trains, was twenty-eight per cent. greater, and that of the passengers twenty-one per cent. greater.

3d. That the tonnage of freight carried, was forty per cent. greater, the mileage of the trains eleven per cent. more, and that of the freight five per cent. greater for the last, than for the previous year.

4th. That the expenses were thirty-six per cent., and the earnings twenty-nine per cent. greater, than those of the previous year.

5th. That the expenses, were two and two-tenths per cent. greater, for the last, than those of the previous year.

* White pine, green, weighs 4600 lbs. per M. ft. bd. meas. Seasoned 2500 lbs.

Hemlock timber, green, weighs 4000 lbs. per M. ft. bd. meas. Seasoned 3500 lbs.

Norway, green, weighs seasoned 3200 lbs.

6th. That the expense, per mile run by the trains, was ten and one-tenth cents greater, and the expense per ton, or per passenger carried one mile, was two-hundredths of a cent greater, than that of the previous year.

These tables further show, that the expense of operating the road, including that of repairing the rolling stock and road-way, was fifty-two and four-tenths per cent. of the receipts for the whole year: fifty-one and five-tenths per cent. for the first quarter, sixty-seven and two-tenths per cent. for the second, fifty-eight and seven-tenths per cent. for the third, and forty-five and four-tenths per cent. for the last quarter of the year.

That the expenses for repairs of the track, etc., were three and eight-tenths cents per mile run by the trains; and for operating the road six and eight-tenths cents more, during the last than the previous year. The cost per mile run, for repairs of engines, was five-tenths of a cent less.

That the chief part of the excess, in the repairs of the engines, cars, etc., (per mile run) was in the expense of repairs of the freight engines and cars.

That the greatest excess in the cost of operating, per mile run, was in the expenses of the freight trains.

That the chief part of the excess in the average expense of transporting a passenger, or a ton of freight, one mile, was in the item of repairs of the track.

That the expenses of operating the road, per mile run by the trains, during each month of the year, were greatest in the months of December, January, June and July consecutively, and that the excess of the expenditures, during these months, was in the pay of office clerks and employees on the road; and in the repairs of the track, etc., in the summer months.

It thus appears—

That the business has increased nearly thirty per cent., the increase being greater in freight than in passengers.

That the passenger and freight trains, and the mileage of passengers and freight, have been greater for the last than the previous year.

That the cost of transportation has been reduced, during the latter part of the year, though for the whole year it does not show any material difference from the previous one; and that a much larger sum has been expended in the repairs of the track and machinery, from which it would be inferred, (as is the fact,) that the road and equipment is in better condition than it was at the end of the previous year.

COMPARISON OF THE COST, REVENUE, AND EXPENSES, OF THE NEW YORK AND ERIE WITH OTHER ROADS.

The annexed tables give—

Q.—The cost, revenue, expenses, and business done, on the New York and Erie, and the New York Central line, (including the Hudson River Railroad,) from Buffalo to New York, for the year ending September 30th, 1852.

R.—The cost in detail, per mile run by the trains, on the same roads.

These tables show—

That the whole length and expenditure on the Erie and the Central, (including the Hudson River,) were nearly the same.

That the cost of the road and equipment of the Erie, has been about five thousand dollars, per mile of single track, more than the Central.

That the number of passengers carried one mile on the Central, was more than twice the number carried one mile on the Erie; and that the tonnage of freight carried one mile on the Erie, was nearly twice the tonnage carried one mile on the Central.

That the receipts of the Central exceeded those of the Erie, thirty per cent., and the expenses twenty-one per cent.

That the cost per mile run by the passenger trains, on the Central, exceeded that on the Erie seventeen per cent.; and that the cost per mile run by the freight trains on the Erie, exceeded that of the Central, nine per cent.: a larger number of

passengers and a less amount of freight being carried in the trains on the Central, than in those on the Erie.

That the cost per mile of the Erie, compares favorably with the cost of the New England roads, and of the Baltimore and Ohio road.

That the cost of operating, per mile run by the trains, is less than that of nearly all the New England roads quoted, and is generally less for fuel, and more for repairs of machinery.

That the expenses form a larger per centage of the earnings of the Erie, than on most of the roads quoted, and also that the earnings per mile of road are less on the Erie than on the majority of the other roads; but, that the increased business of the last year on the Erie, has made its earnings per mile, nearly equal to those of any other, and that the diminished expenses of transportation, during the last half year, and the increased tariff of charges, furnish a guaranty, that hereafter, the per centage of the expenses, to the earnings, will compare favorably with that of any road, the circumstances of which are similar.

VIII.—THE PRESENT ORGANIZATION AND MANAGEMENT.

The Board of Directors have stated meetings, on the third Wednesday of each month, and at other times, when called together, for the transaction of special business.

The President and the Executive Committee, perform all the legislative business, during the recess of the Board of Directors, and report their proceedings at the stated meetings.

The President is the chief executive officer, and all of the operations of the work are performed under his immediate direction.

The Chief Engineer has charge of the construction of new work, and is aided by two superintending Engineers, and a number of assistants; one of these Superintending Engineers, however, also performs the duties of Division Superintendent.

The work of construction is so nearly completed, that the Engineer department will soon be disbanded.

The transportation department is placed under one General Superintendent, an Assistant Superintendent, five Division Superintendents, one General Freight and one General Ticket Agent.

There is also a Treasurer, a Secretary, an Auditor, a General Land Agent, a Store-keeper, a Book-keeper, and a Chief Clerk.

The financial embarrassment, under which the enterprise has been prosecuted, and the great importance of the work of construction, and the attention which was bestowed thereon, during its progress, have necessarily embarrassed the management of the running of the road, the latter having been treated as of secondary importance, while the former was under way.

The former may now be regarded as substantially completed, and the work is relieved, not only from the cost of the employment of two sets of officers, but also from their frequent conflicting operations, which necessarily retarded and embarrassed each other, and enhanced the cost of both.

In the early opening of the road, as one of the great thoroughfares between the east and west, it was necessary to make it known to the travelling and trading public. Its great rival had long been known as the only through route—first as the Indian path, afterwards as the main stage route. To these succeeded the increased comfort and ease of Canal Packet boats, and finally, the first great line of railroads. During the latter of these periods, the increasing speed, comfort, and economy of the steamers on the Hudson, formed no inconsiderable inducement to the traveller taking the Central route.

Under these circumstances, it became indispensable for the New York and Erie Railroad Company, to use the greatest exertions to make their route favorably known at the west, to overcome prejudices, and to offer superior inducements, in comfort, promptness, and cheapness of transportation.

These efforts were necessarily attended with increased expenses, while the resulting benefits were tardily received.

They have, however, now placed it in such a favorable light before the public, that many of these expenses have become unnecessary.

Two subjects have engaged the particular attention of the Directors during the past summer—the reduction of the expenses of operating the road, and the increase of its receipts.

It was deemed that the first of these could be effected by the establishment of a system, by which the managers could ascertain the value received for all the expenditures made; by exacting a rigid accountability therefor, and by imposing a check on improvidence, in the requirement of estimates in advance for all proposed expenditures.

The value received can be ascertained, by comparisons of the expenses of the various operations with those of other similar roads, and with the several divisions of the road itself; and the expenses of the different conductors, enginemen, etc., with each other.

Such comparisons would naturally lead to an examination of any increased cost, in any particular operation, upon any division of the road, or on the part of any operative; and the cause being known, the remedy is easily applied. The effect of such investigations, is to incite the officers and subordinates to greater watchfulness and economy, to obtain from them suggestive remedies, and to create an emulation, among those of the same class, to so conduct the affairs entrusted to their charge, as to secure the approbation of their superior officers, who, they know, have the means of determining with accuracy their relative merits.

By requiring estimates in advance of the proposed expenditures, the heads of departments are compelled to exercise their discretion, in authorizing every expenditure, and this they do, with the knowledge, that this discretion will also pass under the review of, and be commented upon, by their superiors, and that the estimates will be compared with the actual cost.

To carry out the above views, the Executive Committee, in August last, passed the following resolutions:—

"The Chief Engineer must present to the President, quarterly, the expense of constructing, maintaining, and operating the road, as compared with other similar roads.

"The Superintendent must present to the President, monthly, the comparative expense of maintaining and operating each division of the road, and for each class of service, and the same in detail quarterly.

"The Division Superintendents must report monthly, through the Superintendent, to the President, the comparative expense of running the different trains, by different conductors and enginemen, of fuel, oil, etc. Also, the service performed by the engines, the actual running and loss of time, and the cost of repairs thereon.

"The Auditor must report monthly, to the President, the amount of the estimates, of the proposed expenditures, by the different officers, and also a statement, showing the estimates for, and the actual expenditures made, during each month.

"The Chief Clerk must report monthly, to the President, the amount of receipts from the different sources, and quarterly, the amount of receipts from each important station, of each service."

The personal inspection of the work, by the members of the Board, and the close investigations which they have instituted, have enabled them to reduce the current expenses, without, (as they believe,) lessening the efficiency of the works. They are happy to add, that they have generally found a cheerful acquiescence and earnest support in carrying out these views, on the part of the officers and the subordinates of the Company.

So much has already been accomplished, that the Board feel assured, that the results of the next year's operation will be gratifying to the stockholders.

THE TELEGRAPH.

As has been previously stated, the Company has in operation four hundred and ninety-seven miles of Telegraph, used exclusively for its own business, and fifty-two offices, and has sixty-five operators employed.

No expenditure which has been made on this work has proved more profitable than that made for this purpose. It has added to the safety of the passengers, and has given a feeling of security, to the managers and operatives of the road, against a large class of accidents, to which, without it, they are peculiarly exposed.

When accidents do occur, information is communicated immediately from the nearest station, and assisting engines, cars and men, are dispatched with the greatest promptness: thus saving in every instance the loss of considerable time and expense, besides the advantage of communicating the intelligence to all approaching trains, and avoiding the further damage, which has proved so disastrous on some other Roads.

By the rules of all well managed Railroads, freight trains are required to lie by, when they approach the stated time for the passage of passenger trains, and in like manner all the trains moving in one direction, on a single track, are required to lie by for the trains from the opposite direction. During particular seasons of the year, on certain days of the week, and on special occasions, some of the trains are so heavily laden on every road, that they cannot make the regular time between stations. In these cases, without the use of the Telegraph, all other trains moving on the road would be correspondingly delayed. By means of the Telegraph, however, the chief part of the delay in the other trains is obviated, as they can, with perfect certainty and safety, be moved forward to advanced stations for passing, and thus save the expense and inconvenience of tedious delays.

By means of the Telegraph, the Superintendent, at whatever station he may happen to be for the time, is able to place himself in direct communication with every other station on his line, learn the position of every train, and direct the movement of each, with greater precision and safety than could be done by any of the regulations which have been established on other roads.

Such regulations, however, are always observed with the same care on this, as on other roads, and the Telegraph is only permitted to be used for this purpose, when the trains have become deranged, and then only by one person, on each Division, specially authorized to perform this duty.

In the transmission of all important orders by Telegraph, there is a standing regulation, which requires that the person to whom the order is sent, should telegraph back the precise terms of the order, as it was received by him, and thus one of the causes of error is obviated.

There are many other incidental advantages, arising from the use of the Telegraph, which are so obvious, that it is unnecessary to mention them.

There are run daily, each way, over the road, three Express, and one Mail Passenger Trains, and a Way Passenger Train, on the Eastern, and another on the Susquehanna Divisions, and eight Passenger Trains, from Jersey City to Paterson.

There are also run daily, each way, four regular Freight Trains, on the Eastern, and two on each of the other divisions of the Road, besides Extra Trains, which are run daily, in the time of the regular Trains.

The relative capacity of the different sections of the road, will be practically understood, by a statement of the size of the loaded freight trains, as they are made up on the different divisions.—The same Engine will haul, with the same case, sixteen cars on the Western Division, forty on the Susquehanna Division, twenty five over the Delaware Division, (with the exception of a short distance where an assisting engine is used,) and fourteen over the Eastern Division.

Freight trains generally travel twelve miles per hour, and Passenger trains thirty-five miles per hour. The former are usually kept a quarter of

pare favorably with those of any of the great lines of Railroad in the United States, and its prospects for the future, are as promising as its warmest friends could hope for.

All of which is respectfully submitted.

HOMER RAMSDELL, GOUVERNEUR MORRIS,
SAMUEL MARSH, NELSON ROBINSON,
HENRY SHELDON, WILLIAM J. MCALPINE,
WILLIAM E. DODGE, DANIEL DREW,
SHEPHERD KNAPP, EDWARD C. WEEKS,
CORNELIUS SMITH, ALANSON ROBINSON,
THOMAS J. TOWNSEND, JOHN ARNOT,
MARSHALL O. ROBERTS, AMBROSE S. MURRAY,
CHARLES M. LEUPP,

Texas Pacific Railroad--Southern Route.

We have received from Austin, the capital of Texas, a copy of the new bill, entitled "An Act to provide for the construction of the Mississippi and Pacific Railroad." The act was finally passed by both Houses of the Legislature by a large vote. It provides for a liberal grant of land to the Corporation that shall undertake the construction of the road.

Sec. 1. Grants twenty sections of land, of 640 acres each, for each and every mile of said road: limiting the course from any point on the boundary line of Texas, not north of Fulton in Arkansas, to a suitable point on the Rio Grande, at or near El Paso.

Sec. 2. A right of way is granted for said road through the public domain, of 300 feet in width—with all timber, &c. adjoining and requisite for the continuation of the road.

Sec. 3. Limits the rails to not less than 64 pounds to the yard; fifty miles to be finished in eighteen months after the contract, and one hundred miles every year thereafter.

Sec. 4. The Governor authorized to issue advertisements, inviting proposals for the construction of said road. Such proposals to be filed before 20th of April next, in the office of the Secretary of State.

Sec. 5. The Governor authorized to select on or after May 1st such bids as shall, under all the circumstances, offer the best assurances of the completion of the road by contracting parties.

Sec. 6. Charter granted to such contracting party for the period of ninety-nine years.

Sec. 7. The Company to maintain a railroad from the Mississippi to the Pacific, by forming connections with such other companies as they may deem proper.

Sec. 8. The capital stock shall be "twenty millions of dollars," and may be increased to such sum as shall be essential for the construction of the road.

Sec. 9. The Company authorized to borrow money upon their bonds, with power to mortgage the road to secure the payment of such bonds and the interest thereon.

Sec. 10. Authorizes trials before the District Court and in Justices' Courts, in all disputed cases of damages for land taken from individuals for the use of the road.

Sec. 11. The Company to keep the road in good repair, with suitable carriages, &c. (No penalty stated for failure.)

Sec. 12. The Company, within sixty days after the contract, to deposit with the State Treasurer \$300,000, as a guarantee that fifty miles or more of such road shall be constructed within eighteen months, such fund to become the property of the State in case of non-execution of the contract.

Sec. 13. Authorizes the survey of the lands through which the first fifty miles of the road shall pass, and the grant of patent to the company for lands "thirty miles on each side of the same," and further, for all distances beyond the first fifty miles, as fast as finished.

Sec. 14. All the vacant lands of the State east of 103 degrees longitude, and between the parallels of latitude 31 and 32 north; also all west of 103 longitude, and between latitude 30.30 and 32 degrees north latitude shall be reserved from sale until the said road is located.

Sec. 15. In case the company fail to complete the said road according to contract, all incomplete portions and parts shall revert to the State.

Sec. 16. The Governor authorized in such case of forfeiture, to contract with other parties for the completion of the road.

Sec. 17. An appropriation made to pay preliminary expenses for the execution of this law.

We understand that the lands granted by the above act will probably become vested in the company of which Mr. Chatfield is President. The above may be considered as an important move in favor of the Northern route for the Pacific Railroad.

North Carolina Railroad.

The Directors of this road held their regular quarterly meeting at Charlotte on the 21st ult.

We learn that no business of special importance was transacted. The President reported a purchase of 4,000 tons additional iron, making, with what has been purchased for the 1st division, 13,000 tons as yet contracted for, or enough to lay 138 miles of the road. The new purchase is to be shipped in February or March, and is to be applied to the 2d division. Some 7,000 tons of iron are lying at Charlotte for the 4th division, and 2,000 more, perhaps have been landed at Charlotte. The laying of the track from Charlotte will be commenced as early in the approaching year as it can be done. The Company we learn, will do this itself; competent superintendents have been engaged, and efforts are making to hire the requisite number of hands.

No selection has yet been made of a location for the principal machine shops.

Twelve miles and a half of the 1st division have been laid down with iron.

We also learn that the accounts from the survey of the Western Extension indicate that a more favorable route to Asheville may be had than the fondest anticipations have led its friends to believe,—*Raleigh Standard*.

Responsibilities of Conductors on French Railroads.

A "railroad accident" happened on the road between Paris and Bordeaux. It was just one of these cases where no blame is attached to the driver; there was a delay of a train, a little obstinacy on the part of a conductor, a trifling degree of carelessness on the part of a station master, etc., (as in the whole chapter of railroad accidents, *passim*), a smash-up, six lives lost and twenty persons more or less injured. It was brought before a Court, examined into with boundless patience, the trial lasting many days, and ending with the condemnation of conductor, station master and two others, to fine and imprisonment. The law, in accordance with the terms of which they were condemned, reads as follows: "Whoever shall have involuntarily caused personal injury by unskillfulness, imprudence, inattention or disregard of regulations, shall be punished by imprisonment of not less than one week, nor of more than six months, and by a fine of not less than fifty nor more than one thousand francs; if he has caused death, the limits of the term of imprisonment are six months and five years, and of the fine 300 and 3,000 francs."

Appointment.

The Dauphin and Susquehanna Coal Company, which is chiefly owned in New York, have appointed Ellwood Morris, Esq., Civil Engineer, to the charge of their extensive lands, mines and railroads in Pennsylvania. This company own a very large and valuable coal estate, comprising 40,000 acres of land, about 60 miles of first class railway, and have invested nearly \$4,000,000. Mr. Morris is an engineer of well established reputation, and we regard his appointment as a very favorable one for the interests of the above company.

Commerce of the New York Canals.

The following summary will show the amount and value of the tonnage which reached tide unto the past year over the New York Canals.

1852.		
Description.	Tons.	Value.
Forest.....	1,061,677	\$12,487,658
Agriculture.....	989,268	45,009,889
Manufactures.....	47,512	3,356,804
Merchandise.....	10,605	5,749,824
Other articles.....	122,760	2,289,427

Total.....2,234,822 \$66,893,102

1853.		
Description.	Tons.	Value.
Forest.....	1,348,903	\$13,626,301
Agriculture.....	921,321	47,286,341
Manufactures.....	42,501	3,256,056
Merchandise.....	13,382	5,749,123
Other articles.....	170,390	3,675,244

Total.....2,491,497 \$73,393,065

The number of tons and value thereof going from tide-water in 1852 and 1853, is as follows.

1852.		
Description.	Tons.	Value.
Merchandise.....	396,087	.....
Furniture.....	639	.....
Other articles.....	124,801	.....

Total.....621,527 \$118,896,444

1853.		
Description.	Tons.	Value.
Merchandise.....	426,400	.....
Furniture.....	401	.....
Other articles.....	133,952	.....

Total.....560,754 \$114,090,801

Aggregate statement of the tonnage and value of the property which came to and went from the Hudson River, on all the canals in the years 1853 and 1852:

	Tons.	Value.
1853.....	3,052,251	\$187,482,866
1852.....	2,756,349	185,789,546

Increase.... 295,902 \$1,694,320

Compared with the preceding year of 1852, it will be seen there is an increase of 256,676 tons of down tonnage with an increased valuation of \$6,499,963, and that there is an increase of 39,227 tons of upward tonnage with a decreased valuation of \$4,805,634, making an increased tonnage of 295,902 tons and of valuation \$1,694,320.

The increased tonnage is mainly chargeable upon lumber, one or two articles of provisions, wheat, and upon articles unimportant in value, classed under the head of "other articles." The deficiency in tonnage is upon flour, corn, ship-stuffs, tobacco, &c., &c.

The flour and wheat arrived at tide water is valued at THIRTY MILLIONS of dollars, being more than forty per cent. of the value of all the articles received.

Little Miami Railroad.

The Directors of this Company in announcing their dividend of 5 per cent. say:

"The business of the year just closed, has been large, yielding a net profit of \$352,132 78, which, after paying two dividends of 5 per cent. each, leaves a surplus of \$89,996 69 carried to the contingent fund and subject to the future disposition of the Company. The Board of Directors have been induced to give the Stockholders the privilege of receiving their dividend in stock (now worth, with their dividend, 20 per cent. premium), from the fact that the earnings of the year have been mostly expended in the construction of the double track, which has been pushed forward with energy, and is expected to be finished to the Hillsborough Railroad (23 miles) by the 1st day of June next. The privilege of receiving stock will expire on the 1st day of March next, after which the dividends will be payable in cash only. Those stockholders registered on the New York books,

wishing their dividend in stock, will notify their wishes to the Treasurer in writing, who will forward their certificate to the New York Office by return mail."

American Railroad Journal.

Saturday, January 14, 1854.

Stock and Money Market.

The Share market continues inactive with slightly receding prices. Any immediate general improvements are probably out of the question, until foreign affairs take a more definite shape. The public mind of this country is as uncertain as to what would be the influence of an European war upon the United States, as it is, as to what the event is to be. So long as this feeling of uncertainty prevails, no decided movement will take place in any direction.

The present State of things is not in the whole unfavorable to the Railroad interests of the country. It will check the bringing out of new enterprises, but will not materially postpone the construction of such as have made any considerable progress towards completion. This fact will render the investments that have been made the more valuable, and will enable our people to avail themselves of the light of experience as a guide to future progress.

In the mean times the earnings of our railroads continue to show a very large increase over those of the previous given. The year that has just closed has been one of extraordinary prosperity, which cannot fail to exert a strong influence in sustaining the prices of Railway shares and bonds.

We learn that there has been a considerable improvement in the foreign demand for our securities for a few weeks past.

	1853.	1853.
Hudson River R. R.	\$123,174	\$88,889
New York and New Haven	59,338	52,226

Earnings of Railroads for December.

	1853.	1852.
New York Central	\$420,025	\$357,717
Ohio and Pennsylvania	64,680	33,854
Cincinnati, Hamilton and Dayton	41,258	23,833
Pennsylvania R. R.	250,000	217,121
Erie	415,402	352,138

Reading Railroad.—The annual meeting of this company was held at Philadelphia on the 10th inst. The following is a statement of the operations of the road the past year:

The gross receipts for the year 1853 were	\$2,688,287 59
Working expenses	\$1,056,551 53
Drawback, etc.	165,985 90
	1,222,587 52
Nett profit for the year	\$1,465,750 07
Interest for year	\$571,914 00
Renewed fund	106,974 23
	\$678,888 23
Dividend Fund	786,861 34
Add Dividend Fund '52	2,115 66
Total Dividend Fund	\$788,977 50

Which was disposed of as follows:

July and January dividends on preferred stock, State taxes, sinking funds and interest account, Total, \$506,244 83. Leaving a dividend fund for 1853 of \$282,732 67.

The gross receipts for 1853 exceed those of 1852

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.		Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equip'm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares
Atlantic and St. Lawrence	Maine.	150	1,538,100	2,978,700	5,159,278	254,743	113,520	none	82
Androscoggin and Kennebec	"	55	809,878	1,016,500	2,064,458	140,561	80,053	none	30
Kennebec and Portland	"	72	952,621	29,80	2,511,067	168,114	100,552	none	41
Port., Saco and Portsmouth	"	51	1,355,500	123,884	1,459,381	208,669	6	99	24
York and Cumberland	"	20	285,747	341,100	713,605	23,946	11,256	none	85
Boston, Concord and Montreal	N. H.	98	1,649,278	622,200	2,540,217	150,538	79,659	none	88
Concord	"	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	"	54	2,078,625	720,900	3,002,094	287,768	55,266	5	38
Northern	"	82	3,016,634	none.	3,016,634	328,782	163,075	5	51
Manchester and Lawrence	"	24	717,543	none.	717,543	132,545	51,513	6	89
Nashua and Lowell	"	15	600,000	none.	651,214	182,545	61,518	8	106
Portsmouth and Concord	"	47	none.	none.	1,400,000	none.	none.	none.	21
Sullivan	"	26	none.	550,000	673,500	none.	none.	none.	20
Connecticut and Passumpsic	Vt.	61	1,097,600	550,000	1,745,516	495,397	266,539	none.	30
Rutland	"	120	2,486,000	2,429,100	5,577,467	1,500,000	Leased to the Vt. Cent.	none.	80
Vermont Central	"	117	8,500,000	3,500,000	12,000,000	Recently opened.	Recently opened.	none.	13
Vermont and Canada	"	47	1,500,000	none.	1,500,000	388,108	130,881	7	93
Western Vermont	"	51	392,000	700,000	none.	659,001	338,215	7	103
Vermont Valley	"	24	none.	none.	673,500	469,656	227,434	6	85
Boston and Lowell	Mass.	28	1,830,000	none.	1,995,249	758,819	331,296	7	100
Boston and Maine	"	83	4,076,974	150,000	4,092,927	70,743	30,056	2	40
Boston and Providence	"	53	3,160,390	390,000	3,546,214	229,004	72,028	5	55
Boston and Worcester	"	69	4,500,000	425,000	4,945,967	488,798	241,017	7	87
Cape Cod branch	"	28	421,295	171,800	633,906	229,445	99,589	8	100
Connecticut River	"	52	1,591,100	193,500	1,801,946	574,574	232,787	6	93
Eastern	"	75	2,850,000	500,000	3,120,391	164,230	43,950	7	117
Fall River	"	42	1,050,000	none.	1,050,000	67,251	23,415	none	68
Fitchburg	"	66	3,540,000	112,305	3,623,073	322,213	101,510	none	91
New Bedford and Taunton	"	20	500,000	none.	520,475	137,406	24,399	8	58
Norfolk County	"	26	547,015	819,743	1,245,927	218,679	18,648	none	214
Old Colony	"	45	1,964,070	282,300	2,293,534	162,109	66,900	4	58
Taunton Branch	"	12	250,000	none.	307,136	137,406	24,399	8	97
Vermont and Massachusetts	"	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	214
Worcester and Nashua	"	45	1,134,000	171,210	1,321,945	162,109	66,900	4	58
Western	"	155	5,150,000	5,319,520	9,953,759	1,339,373	683,194	6	97
Stonington	R. I.	50	467,700	467,700	467,700	240,572	110,892	6	66
Providence and Worcester	"	40	1,457,500	300,000	1,731,498	253,690	139,514	6	95
Canal	Conn.	45	922,500	500,000	1,400,000	none.	4	66	124
Hartford and New Haven	"	72	2,350,000	800,000	3,150,000	639,529	294,269	10	124
Housatonic	"	110	2,500,000	2,500,000	2,500,000	329,041	168,902	none	39
Hartford, Prov. and Fishkill	"	50	none.	none.	In progress	69,629	none.	none	99
New London, Wil. and Palmer	"	66	558,861	800,000	1,511,111	114,410	428,173	7	99
New York and New Haven	"	61	3,000,000	1,641,000	4,978,487	806,718	428,173	8	52
Naugatuck	"	62	926,000	440,000	1,380,610	267,561	116,965	4	59
New London and New Haven	"	55	750,500	650,000	1,380,610	267,561	116,965	4	59
Norwich and Worcester	"	54	2,121,110	701,600	2,596,488	267,561	116,965	4	59
Buffalo and New York City	N. Y.	91	900,000	1,550,000	2,550,000	Recently opened.	Recently opened.	none	85
Buffalo, Corning and N. York	"	132	none.	none.	In progress	none.	none.	none	65
Buffalo and State Line	"	69	879,636	872,000	1,921,270	Recently opened.	Recently opened.	130	68
Canandaigua and Niagara F.	"	50	none.	none.	In progress	none.	none.	none	68
Canandaigua and Elmira	"	47	425,509	582,400	987,627	76,760	39,360	none	77
Cayuga and Susquehanna	"	35	687,000	400,000	1,070,786	74,241	23,496	none	66
Erie, (New York and Erie)	"	464	10,000,000	24,003,865	33,070,863	3,537,766	1,691,623	7	77
Hudson River	"	144	3,740,515	7,046,395	10,527,554	1,063,659	338,783	none	66
Harlem	"	130	4,725,250	977,463	6,102,935	681,445	324,494	5	54
Long Island	"	95	1,875,148	516,246	2,446,391	205,068	44,070	none	80
New York Central	"	504	23,085,600	10,778,823	33,859,423	480,137	195,847	none	114
Ogdensburgh (Northern)	"	118	1,579,969	2,969,760	5,133,834	480,137	195,847	none	30
Oswego and Syracuse	"	35	350,000	201,500	607,803	90,616	43,609	4	70
Plattsburg and Montreal	"	23	174,042	181,000	349,775	Recently opened.	Recently opened.	none	30
Rensselaer and Saratoga	"	25	610,000	25,000	774,495	213,078	96,737	none	33
Rutland and Washington	"	60	850,000	400,000	1,250,000	Recently opened.	Recently opened.	none	30
Saratoga and Washington	"	41	899,800	940,000	1,822,945	178,545	135,017	none	30
Troy and Rutland	"	32	237,690	100,000	329,577	Recently opened.	Recently opened.	none	33
Troy and Boston	"	39	430,936	700,000	1,043,357	Recently opened.	Recently opened.	none	80
Watertown and Rome	"	96	1,011,940	650,000	1,663,711	225,152	116,706	8	95
Camden and Amboy	N. J.	65	1,500,000	none.	4,327,499	1,388,385	478,413	10	145
Morris and Essex	"	45	1,022,420	128,000	1,220,325	149,941	79,252	7	181
New Jersey	"	31	2,197,840	476,000	3,245,720	603,942	316,259	10	8
New Jersey Central	"	63	986,106	1,500,000	2,379,880	260,899	124,740	8	5
Cumberland Valley	Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	125
Erie and North East	"	20	600,000	none.	750,000	Recently opened.	Recently opened.	none	8
Harrisburgh and Lancaster	"	36	830,100	713,227	1,702,523	265,327	106,320	8	62
Philadelphia and Reading	"	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	78
Philad., Wilmington and Balt.	"	98	8,850,000	2,403,276	6,813,339	657,785	383,501	5	79

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equip't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn. 250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97½
Philadelphia and Trenton....	" 30	.....	.....	.....	.....	.....	.....	102½
Pennsylvania Coal Co.....	" 47	.....	.....	.....	.....	.....	.....	57½
Baltimore and Ohio.....	Md. 331	9,188,300	9,827,123	19,542,307	1,325,663	615,384	7	57½
Washington branch.....	" 38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna....	" 57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....	Va. 65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	" 27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	" 64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	" 73	1,372,324	200,000	.....	.....	.....	.....	70
Richmond and Petersburg.....	" 22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	" 76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	" 62	1,857,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	" 107	1,400,100	446,036	In prog.	176,485	74,902	none	61
Virginia and Tennessee.....	" 60	3,000,000	1,500,000	In prog.	.....	.....	none	98
Winchester and Potomac.....	" 32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.....	N. C. 161	1,338,878	1,134,698	2,965,574	610,038	153,898	6	.....
Charlotte and South Carolina.	S. C. 110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.....	" 140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina.....	" 242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester.	" 101	3,500,000	418,187	3,463,879	986,074	535,608	8	115
Georgia Central.....	Ga. 211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Georgia.....	" 101	1,214,283	168,000	1,596,283	296,584	153,697	9	100
Macon and Western.....	" 71	.....	.....	In prog.	.....	.....	.....	.....
Muscogee.....	" 60	586,887	150,000	743,525	129,395	71,535	8	.....
South Western.....	Ala. 55	.....	.....	In prog.	.....	.....	.....	.....
Alabama and Tennessee River	" 93	776,259	400,000	In prog.	.....	.....	.....	.....
Memphis and Charleston.....	" 33	879,868	.....	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	" 88	688,611	.....	1,330,960	173,542	76,079	8	.....
Montgomery and West Point.	Miss. 60	.....	.....	.....	.....	.....	.....	.....
Southern.....	" 80	835,000	541,000	In prog.	.....	.....	.....	.....
East Tennessee and Georgia..	Tenn. 125	2,093,814	850,000	In prog.	.....	.....	.....	70
Nashville and Chattanooga....	" 38	1,430,150	900,000	In prog.	.....	.....	.....	80
Covington and Lexington.....	Ky. 29	357,218	.....	584,902	87,421	44,250	.....	.....
Frankfort and Lexington.....	" 65	.....	.....	In prog.	.....	.....	.....	.....
Louisville and Frankfort.....	" 100	1,239,450	1,371,000	2,963,756	194,429	123,306	6	86
Maysville and Lexington.....	Ohio. 147	2,000,000	1,600,000	1,317,140	.....	.....	.....	92½
Cleveland and Pittsburgh.....	" 95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Toledo.....	" 135	3,027,000	408,200	3,655,000	777,793	483,454	12	124
Cleveland, and Erie.....	" 46	.....	.....	2,000,000	.....	.....	.....	80
Cleveland and Columbus.....	" 61	.....	.....	.....	.....	.....	.....	.....
Columbus, Piqua and Indiana..	" 60	2,100,000	500,000	2,659,653	321,793	200,967	.....	106
Columbus and Lake Erie.....	" 40	310,000	550,000	925,000	Recently opened.	.....	.....	72
Cincinnati, Ham. and Dayton	" 20	.....	.....	In prog.	.....	.....	.....	80
Cincinnati and Marietta.....	" 36	.....	.....	.....	.....	.....	.....	60
Dayton and Western.....	" 31	.....	.....	.....	.....	.....	.....	.....
Dayton and Michigan.....	" 37	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	" 84	2,370,784	.....	2,634,157	526,746	314,670	10	113
Greenville and Miami.....	" 84	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Hillsboro.....	" 167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	95
Little Miami.....	" 57	.....	.....	In prog.	.....	.....	.....	90
Mansfield and Sandusky.....	" 187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	87
Mad River and Lake Erie.....	" 44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Ohio Central.....	" 54	1,092,137	113,500	1,257,714	Recently	135,363	15	116
Ohio and Mississippi.....	" 31	.....	.....	In prog.	237,506	.....	.....	90
Ohio and Pennsylvania.....	" 131	.....	.....	.....	.....	.....	opened.	115
Ohio and Indiana.....	" 83	.....	.....	.....	.....	.....	.....	168
Scioto and Hocking Valley....	" 90	.....	.....	In prog.	.....	.....	.....	77
Xenia and Columbus.....	" 62	.....	.....	.....	.....	.....	opened.	82
Evansville and Illinois.....	" 88	1,650,000	750,000	2,400,000	516,414	268,075	10	70
Indiana Central.....	" 40	.....	.....	In prog.	.....	.....	.....	65
Indiana Northern.....	" 72	632,387	663,100	1,353,019	105,944	71,446	4	108
Indianapolis and Bellefontaine	Ill. 135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Lawrenceburg and Ind.....	" 92	1,932,361	500,000	In prog.	473,548	286,162	.....	136
Lafayette and Indianapolis....	" 315	2,800,000	2,629,000	6,430,246	592,187	293,046	.....	126
Madison and Indianapolis.....	" 282	4,866,700	3,977,563	8,618,505	1,145,598	582,816	8	99
Perru and Indianapolis.....	" 88	1,000,000	none.	In progres	Recently opened.	.....	.....	.....
Terre Haute and Indianapolis	Mo. 88	.....	.....	.....	.....	.....	.....	.....
Rock Island and Chicago.....	" 88	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.....	" 88	.....	.....	.....	.....	.....	.....	.....
Illinois Central.....	" 88	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago.....	" 88	.....	.....	.....	.....	.....	.....	.....
Michigan Southern.....	" 88	.....	.....	.....	.....	.....	.....	.....
Michigan Central.....	" 88	.....	.....	.....	.....	.....	.....	.....
Pacific.....	" 88	.....	.....	.....	.....	.....	.....	.....

by \$207,661 18, those from coal being in excess \$104,017.

Passengers.....\$57,338 04
 Merchandise.....41,648 19
 U. S. Mail and miscellaneous.....4,662 96

The expenses in each department are less than in 1852, giving increase with profits of \$218,762, 78.

We learn that the Managers have declared dividends of 3½ per cent. on the Preferred, and 4 per cent. on the common stock, making 7 per cent. on each for the year, leaving a surplus of \$52,152 82.

The sinking funds give a fund for distribution in common stock of one and a half per cent. on both stocks, in addition to the cash dividends and loans or surplus of \$1,075 29 for the preferred and \$43,094 97 for the common stock for future division.

The following statement will show the earnings of the Baltimore and Ohio Railroad by months for the year just closed:—

1853.	Main stem.	Wash'ton Br.
January.....	101,819 49	27,629 10
February.....	99,017 27	29,847 85
March.....	216,267 37	54,158 02
April.....	200,219 59	32,527 47
May.....	204,950 01	32,318 66
June.....	189,967 51	30,642 84
July.....	164,140 42	27,170 85
August.....	217,011 39	29,197 77
September.....	239,300 41	31,729 08
October.....	257,876 96	32,291 28
November.....	256,273 53	27,768 25
December.....	294,066 76	28,097 61

Total.....2,480,910 71 383,272 59
 The receipts in

1853 were.....1,511,732 52 356,697 62

Increase.....958,178 49 26,575 97

The revenue for December was as follows

	Main stem.	Wash. Br.	Totals.
Passengers.....	\$838,531 31	\$20,140 35	\$58,671 06
Freight.....	255,535 45	7,957 26	263,492 71

\$294,066 76 \$28,097 61 \$322,164 37

The receipts of the above road for December, 1852, were—

Main Stem—133,863. Wash'ton Branch—26,782.

The following is a comparative statement of receipts and expenditures of the Pennsylvania Railroad for the years 1852 and 1853.

Months.	1852.	1853.
January.....	\$87,220 54	\$238,536 26
February.....	155,598 64	284,461 49
March.....	244,457 53	310,955 82
April.....	266,411 21	270,126 62
May.....	163,634 05	195,072 90
June.....	126,024 80	156,973 59
July.....	122,127 89	167,244 90
August.....	153,769 61	236,493 19
September.....	174,315 69	260,036 76
October.....	160,045 69	245,058 30
November.....	143,100 94	246,145 33
December.....	217,121 72	250,000 00

Total.....\$1,943,827 81 \$2,846,110 16

Receipts for 1852.....\$1,943,827 81

Expenses.....1,329,334 85

Net profits, 1852.....\$614,442 96

Receipts for 1853.....\$2,846,110 16

Expenses.....1,700,000 00

Net profits, 1853.....\$1,146,110 16

Increase of profits over 1852.....\$531,667 20

The following is a comparative statement of the earnings of the Erie railroad for the years 1852 and 1853.

	1852.	1853.
January.....	\$171,400	\$263,898
February.....	201,300	287,011
March.....	251,100	363,837
April.....	320,895	412,288
May.....	369,285	350,142
June.....	312,300	336,018
July.....	301,800	318,182
August.....	313,600	410,671
September.....	375,100	516,019
October.....	376,838	552,995
November.....	348,162	503,327
December.....	352,138	415,402

Total.....\$3,693,919 \$4,729,290
Increase.....\$1,035,301

The comparative receipts of the New York Central Railroad for the past five months have been as annexed:

	1853.	1852.
August.....	\$488,195 44	\$374,075 94
September.....	562,752 29	428,674 97
October.....	555,945 34	416,541 17
November.....	460,821 66	361,889 35
December.....	420,025 39	357,717 21

Total.....\$2,487,740 17 \$1,948,888 69
Increase.....\$538,851 43

The deposits of Gold at the Philadelphia Mint in December were \$4,445,000, against \$3,336,981 in December of last year. The table for the year is as follows:

GOLD DEPOSITED AT THE PHILADELPHIA MINT.

	1852.	1853.
January.....	\$4,161,688	\$4,962,962
February.....	3,010,222	3,548,523
March.....	3,892,156	7,533,752
April.....	3,091,037	4,766,000
May.....	4,345,578	4,425,000
June.....	6,689,474	4,545,179
July.....	4,193,880	3,505,531
August.....	2,671,563	4,512,000
September.....	4,253,687	3,027,802
October.....	4,140,069	4,452,000
November.....	7,279,941	3,650,000
December.....	3,336,931	4,445,000

Total.....\$51,066,276 \$53,373,552

The coinage for the month of December was:—

	Pieces.	Amount.
Gold.....	471,674	\$4,291,133 50
Silver.....	9,401,810	914,260 00
Copper.....	1,568,403	15,498 46

The total coinage for the year 1853 is as follows:

	Pieces.	Amount.
Gold.....	7,253,476	\$51,888,882 50
Silver.....	55,751,068	7,852,571 00
Copper.....	6,770,825	67,059 78

Total.....69,775,469 \$59,808,513 28

The Gold deposits at the Branch Mints, during the year 1853, up to December 1, were—

Dahlonga.....	\$405,246 29
Charlotte.....	112,095 84
New Orleans.....	1,767,546 13

Total.....\$2,284,888 26

The whole deposits of Gold at all the Mints, during the year, with the exception of the Branch Mints in December, are \$55,658,491. Of this about \$30,000,000 have been taken out of the country, leaving about \$25,000,000. The total deposits of Gold at all the Mints since the discovery of California Gold, is about \$213,000,000.

The subjoined Railroad Companies paid on the

first day of January semi-annual Dividends as follows:—

	PER CENT.		PER CENT.
*New York Central,	6	Fall River,	4
Harlem (Preferred)	4	Bost. & Wor.	3½
Bellefon. & Indiana	4	Wor. & Nash.	2½
Indianap. & Belle.	4	Bost. & Lowell	3
Ferre Haute & India.	4	Bost. & Maine	4
Little Miami	5	Bost. & Prov.	3½
Ohio & Pennsylv.	4	Cheshire (pref.)	2
Columb. & Xeina	5	Concord	4
Michigan Southern	10	Eastern	3
Michigan Central	8	Fitchburgh	3
Man. & Lawrence	3½	Nash. & Lowell	4
Northern	2½	Reading	4
Norw'ch. & Worc'str.	2	Rut'd. (pref.)	4
Port. & Portsmouth	3	Vt. & Canada.	4
Phila. Wilm. & Balt.	3	Naugatuck	4
Danbury & Norwalk	3	Morris & Essex	3½

*For nine months. For the year.

The Steubenville and Indiana Railroad.

This road is completed and in operation, from Steubenville to Port Union, 21 miles. By the first of February, 21 miles more will be in operation. The whole line to Newark, 117 miles, will be completed during the year, as the work of graduation is well advanced and the iron mostly on the ground.

Correction.

In our list of railroads published last week, we omitted the Indianapolis and Cincinnati R. R., which is in operation, and 90 miles long. The length of line of the New Albany and Salem Road opened is 253 miles instead of 191. These additions would make the number of miles of railroad in operation in Indiana 1134, instead of 934; and 15,663 in the United States, instead of 15,511, as given in our tables.

Railroad Equipment out of Employ.

Since the extension of the broad gauge of the New York and Erie Railroad into Jersey City, a considerable equipment of cars and engines formerly running on the 4 feet 10 inch gauge, from Jersey City to Rahapo, has been thrown out of use. Among these we notice one large first class outside connected engine, with 15 by 20 inch cylinders and six feet wheels; two lighter inside connected engines with six feet drivers, besides a number of smaller engines, there being, we believe, eight in all. Most of these engines are of Rogers, Ketchum and Grosvenor's make, and have been in use but a few years, a good share being comparatively new. We believe the present is a good opportunity for western roads of the same gauge to supply themselves with a good class of engines at a moderate price. An advertisement of this equipment will be found in our advertising columns.

Madison, Indianapolis and Peru Railroad.

The stockholders of the Madison and Indianapolis, and the Peru and Indianapolis railroads have consolidated their lines, to take effect on the first day of January inst., under the name of the "Madison, Indianapolis and Peru Railroad Company." The measure has been carefully considered, and it is not doubted that its effect will be largely to promote the interests of all concerned. The new Road extends from Madison, on the Ohio River, to Peru, Ind., a very important port on the Wabash and Erie Canal, a distance of 159 miles, passing through one of the best portions of the State of Indiana. At Peru it will connect with the Wabash Valley road, now being constructed from Toledo, Ohio, at the head of

Lake Erie, to Lafayette, Indiana, and also with a line from Cincinnati to Chicago, which crosses at Peru and is now under construction.

Columbus and Xenia Railroad.

The following statement will show the operations of this road for the past year.

Capital stock to provide a dividend.....	\$1,291,000
Gross earnings, Dec. 1, 1852, to Nov. 30, 1853.....	\$317,000
40 per cent expenses.....	126,800
Total.....	\$190,200
10 per cent. deprecia fund.....	31,700—\$158,500

Dividend and interest in June. \$73,300
Dividend in December..... 64,500—137,800

Leaving surplus for 1853..... \$20,700
The surplus in 1852..... 17,600

Surplus, after providing for depre'n road..... \$38,300
The debt of the road is less than \$300,000.

Two semi-annual dividends of 5 per cent. each have been paid.

Taxable Property in Ohio.

The total valuation of the taxable real property of Ohio, according to the Assessors' list for 1853, is \$566,961,835
1846..... 824,495,772

Increase.....\$229,533,520

The number of acres taxed is 24,811,855; value \$382,725,323. The above does not include lots in towns and cities. The number of domestic animals taxed is: Horses, 574,844; Mules, 3,026; Cattle, 1,506,563; Sheep, 3,773,269; Hogs, 2,341,502. Aggregate value, \$53,680,281. The wheat crop was—

Date.	Average per acre.	Total.
1850.....	17.3	23,769,130
1851.....	15.2	25,309,225
1852.....	14.1	22,962,774

The corn crop was—

Date.	Average per acre.	Total.
1850.....	36.8	56,619,608
1851.....	36.7	61,171,282
1852.....	33.6	52,165,517

Presentation.

William Parker, Esq., late General Superintendent of the Baltimore and Ohio Railroad, has been made the recipient of several handsome presents from his late employees as testimonials of their respect and esteem. These consist of a silver tea set service, valued at \$1000; a gold watch, valued at \$225, a gold head cane, and a gold pen and pencil. Mr. Parker has been appointed Superintendent of the Boston and Lowell Railroad, and enters soon upon his new field of labors.

Locomotive Factory in Milwaukee.

We learn that the "Menomonee Machine Shop" of Milwaukee has built several locomotives, most of which are in use on the Milwaukee and Mississippi Railroad. The nuclei of several large establishments for the manufacture of locomotives are already established in the West. Cincinnati, Louisville, Nashville, Covington, Zanesville, Cleveland, Chicago, St. Louis, and Milwaukee are already occupied points; while Detroit and Pittsburgh, and perhaps Indianapolis, will soon have large and productive capitals invested in this business. We learn that Hyde's works in Detroit are approaching completion, and that, probably, during the present year, they will be in operation.

Georgia Central Railroad and Banking Co.

The recent report of the Board of Directors of the above Company shows the following exhibit of the business and financial condition of their work for the year ending November 30th, 1853.

The entire cash payments on account of earnings of Bank and Road for the year, have been as follows, to-wit:

From Road.....\$910,908 82
From Bank.....75,167 02

\$986,075 84

And the entire cash payments, thereout, have been as follows:

Current R. R. Expenditures.....\$407,783 64
Current Bank Expenses.. 13,805 24
For Interest.....28,927 83
For Dividends, (rate 8 per cent.).....279,869 50

\$730,335 71

Leaving a surplus of.....\$255,788 13

And this surplus has been disposed of as follows, viz:

Carried to cost of R. R...\$200,000 00
Carried to Reserved Fund 55,788 13

\$255,788 13

The amount at credit of reserved fund this day is.....\$322,398 95

There has been paid into Bank from earnings of the road to 30th Nov., 1853, the sum of.....\$850,339 83
Leaving uncollected66,742 51

\$917,082 34

This Company has had charge of the Eatonton Railroad since the first day of April, 1853, at an annual rent of \$14,000.

They have also had charge of the Milledgeville and Gordon Railroad since 1st April, 1853, at a like annual rent of \$14,000. No payment has yet been made on account of the hire of these roads.

The charge of the Augusta and Waynesboro' Railroad, has been continued, taking the portion of the road finished between Waynesboro' and Green's cut, without any additional charge of hire for it. The annual hire, which, by agreement, is to be paid for the Augusta and Waynesboro', is at the rate of \$18,000 per annum, until the road shall be opened to Augusta. When the road is entirely finished seven per cent. is to be paid on the cost of it until the first day of January, 1856, when the agreement of lease ends.

The hire of these roads to be paid within the ensuing six months, will be \$46,000.

The current expenses of the road during the year, are exhibited under the appropriate heads, as follows:

Maintenance of way\$124,711 58
Maintenance of machinery and motive power, including oil and fuel. 108,707 10
Maintenance of cars, including all material and labor on cars, oil and tallow for same, and salary of Master Carpenter.....39,309 77
Transportation expenses, including wages of conductors, train hands, labor at depots, agents, clerks, damage, portage, salary of supernumerary, &c.....126,824 61
Incidental expenses, including printing, advertising, stationery, and all other expenses not included under other heads.....8,180 58

Total.....\$407,783 64

Statement of the Financial Condition of the Company on the 6th December 1853.**RESOURCES AND PROPERTY.**

Railroad and Appurtenances.....\$3,465,879 00
Notes and Bills Discounted and Bills Receivable.....562,611 86
Due by other Banks59,077 83
" " Agents and other Companies 66,198 55
Stock in other Companies.....501,300 00
Banking House and other Real Estate.....16,690 40
Specie.....\$88,192 11
Notes of other Banks... 16,606

99,698 11

\$4,771,455 75

LIABILITIES.

Capital Stock\$3,500,000 00
Bonds due by the Company418,187 00
Bank notes in circulation.....214,018 00
Suspense account.....8,915 19
Due other Banks and Companies... 45,800 27
Individual Deposits.....102,883 33
Unclaimed Dividends18,940 29
Dividends declared this day.....139,941 00
Railroad Earnings since 1st December, 1853.....371 72
Balance being Reserved Fund.....322,398 95

\$1,771,455 75

Saugatuck Iron Works--New Car Wheel, etc.

We recently made an agreeable visit to the above works, which are the property of Messrs. Miller and Williamson, and are situated at the Westport Station of the New York and New Haven Railroad, 47 miles from New York.

Messrs. Miller and Williamson, whose works are represented in New York by Messrs. Clark and Jesup, of 38 Exchange Place, have been established at Westport for about three years, during which time they have turned their attention to the production of a superior class of railroad equipments, and materials for railroad superstructure. Their works are situated beside the railroad, and upon the west bank of the Saugatuck river, from which full cargoes may be received or shipped in any direction.

The articles made are railroad Wheels and Axles, Trucks, Chairs, Switches and Frogs; Screw Presses, Screw Cutters and Drills for Repair Shops, Jack Screws, Hoisting Blocks, and a variety of other parts of railroad work. In all of these the very best materials and workmanship are employed. In most of these, improvements of a decided character are introduced. Mr. Miller has the advantage of long experience in building roads, from which he has learned the value of thorough work, and he has spared no trouble or expense in giving his work a character for the best qualities.

For two years Mr. Miller and his partner have given their best efforts to the production of a perfect Car Wheel. Satisfied that the form of the wheel, for which so many patents are granted, was of less importance than the combination and character of Iron, they have experimented continually, with different varieties, until they have reached their object. Their wheel, but lately perfected, and the result of two years' constant and costly experiment, is of the "single plate" form, similar to that of the *Brandon* wheel, except that it is better stiffened, and is cast from an ascertained combination of several of the best varieties of Iron. It is well known that furnace masters are enabled to improve their iron by mixing, and the

value of this method of working is well shown in the repeated and successful tests to which Messrs. Miller and Williamson's wheels have been exposed:

Quite recently a trial was made on Capitol Square, before the State House, at Richmond, Virginia, by invitation of the Virginia Board of Public Works, at which these wheels were entered against a large number of others from the most celebrated foundries in the country. The wheels were submitted to the test of blows struck with sixteen-pound sledges, in the hands of stout laborers. The result of these trials was that Messrs. Miller and Williamson's improved Wheel stood 175 blows on the *disc*, without any signs of fracture. 88 blows were afterwards struck with the sledge on the flange, before an impression was made, and then the flange only broke, taking with it no part of the tread. The best results in testing the other wheels were only 80 blows on the disc of the wheel, at which point fracture commenced. The combination of Iron of the Saugatuck wheels was regarded the best put into any wheel.

The trial was fairly made, and in every respect satisfactory to the Board of Public Works, and to the large number of Engineers and railroad men present.

Mr. Miller has perfected his frog patterns, giving easy entrance and clearance for the wheels, and has always shod his frogs in the most secure manner with the best cast steel, equal in quality to that used for cutting tools. The New York and New Haven road has been supplied entirely with these frogs for the last three years, upwards of two hundred having been put down, out of which but two have been broken, whereas one a week was broken before. The Harlem road have adopted these frogs with equal success.

There is also made a peculiarly well-fitted, simple and secure switch, with substantial cast iron base and conspicuous target. The fastening of this switch is simple and secure, and is one of its best features. It was designed by Mr. Van Blarcomb, the master of machinery of the Housatonic and the Saugatuck Railroads.

A strong and elegant screw press, for forcing car wheels on and off the axles, the screw of best iron, running in a large brass nut, the whole operated either by hand or by power; a simple and well made screw cutter, and a wall drill, are among the machinery built for the use of repair shops.

Jack Screws are also made from the best English refined iron, the inner surface of the socket and the end of the rest, or bearing block, being also faced with hardened steel; a good improvement, and one by which the wear and the tendency to "bind" is materially reduced.

We noticed some brass Hoisting Blocks, of fine workmanship, in construction to fill an order from the West Indies.

The castings made at these works, besides being of the strongest iron, have a beautiful surface. From 200 to 300 tons of the framing of the New York Crystal Palace were furnished from the Saugatuck works. Every one of these castings stood the full test to which all were subjected by the builders of the palace, a result by no means realized with all the iron work furnished from other quarters.

All of the manufactures of the Saugatuck Iron

Works are supplied by the Agents, Messrs. Clark and Jesup, of 38 Exchange Place, New York, who are also general commission and supply agents for all descriptions of railroad superstructure and equipments. Z. C.

Texas.

INCREASE OF TAXABLE PROPERTY.

The taxable property throughout the State of Texas has increased in value for the last eight years, but more especially for the past three years. The increase in this period has been at a rate seldom known, being almost one hundred per cent., affording unmistakable evidence of the prosperity and growth of the country. The following table presents the aggregate property for each of the last eight consecutive years, commencing with 1846 and terminating with 1853, with the increase per cent. for each year.

Year.	Aggregate Taxable Property.	Increase Taxable Property.	Increase.
1846.....	34,391,175	.....	.....
1847.....	37,563,505	3,171,330	8 1-2
1848.....	43,812,537	6,250,032	16 2-3
1849.....	46,241,589	2,429,052	5 1-2
1850.....	51,814,615	5,573,026	12 2-5
1851.....	69,739,581	17,924,966	33 1-3
1852.....	80,754,094	11,014,513	16 1-2
1853.....	99,155,114	18,401,020	23

Journal of Railroad Law. NUISANCES.

The Supreme Court of Pennsylvania has coaxingly hinted to the Erie rioters, that "by destroying the Western end of the Franklin Canal Company's railroad, they may be doing wanton mischief, even if the road should be on the whole ultimately adjudged to be a nuisance." That Court, and also Judge Irwin of the Circuit Court of the United States, have severally enjoined the rioters against any further outrages, whatever, until the final decision of the question in controversy, and the United States Marshal is ordered to take temporary charge of the road in question. On the 7th instant appeared Governor Bigler's proclamation, rather feebly enjoining obedience to the mandates of the Courts, which it seems Erie and Harbor Creek are disposed to resist, on the pretence that the subjoined road is a nuisance. What is a public nuisance?

Such a nuisance is the doing a thing to the annoyance of the public or the neglecting to do what the common good requires. But the annoyance or neglect must be of a real and substantial character; fears, imagination, speculation, cannot create a nuisance. To establish any thing to be a public nuisance facts must be produced sufficient to satisfy a jury that the public good has actually received detriment from the alleged nuisance.

But will an inconsiderable pecuniary privation sustained by a few individuals, constitute such public detriment?

If it will, then no new roads competing with old ones should ever be built, and old roads should seldom be repaired, for thereby travelling will be expedited, and the profits of certain Inn-keepers, may be, diminished.

It is well established that any one may pull down or otherwise destroy an actual common nuisance. But the aggrieved party, must like Shylock, take "the pound of flesh and nothing more." He must only abate so much of the thing as makes it a nuisance. No more damage must be done than is legitimately necessary for abating the nuisance.

The destruction of a house in which disorderly persons assemble for unlawful purposes, cannot be justified as the abatement of a nuisance; nor can an assault upon one who resists the destruction of his property for such a cause, be justified; for it is not the house, but the disorderly conduct permitted in it, that constitutes the nuisance. Two wrongs do not make a right. The foregoing principles are sustained in *Hart et al. vs. the Mayor of Albany*, 9 Wend. 571. *Gates vs. Blincoe*, 2 Dana 158. *Gray vs. Ayres* 7 Dana 375.

THE BROADWAY RAILROAD CASE—THE PEOPLE ON THE RELATION OF DAVIS AND ANOTHER VS. OSCAR W. STURTEVANT.

This hardly fought case was finally decided by the Court of Appeals, on the 31st ult., in accordance with the previous decisions of the Courts below. By the following forcible arguments does Judge Johnson assail the main fortress of Mr. Sturtevant, to wit:—that in authorizing the construction of the railroad, he and his brethren, had only acted legislatively, and were therefore not amenable to the Courts.

"A satisfactory answer to this position is, that the act in question in this case, was not in any just sense, an act even of municipal legislation. It is true that it took the form of a resolution, but in substance was a grant upon condition; and even if immunity belongs to municipal legislation, it cannot be that by giving to an act not legislative, the form of an ordinance or resolution, the jurisdiction of the Courts can be defeated. Should it even be conceded that the resolution in question was partly legislative in its character, another part was most clearly a matter of agreement or grant. The latter, it was within the jurisdiction of the Court to prohibit, so far as its prohibition would be operative. And if the Common Council were still desirous of exercising their legislative functions upon the subject, it behooved them to see to it, that they made a complete separation of the legislative part of the resolution from the residue. Making a grant, is in its own nature, not a legislative act. It is such an act as it has always been in the power of any Court possessing equity jurisdiction, to prohibit by injunction. A Corporation, municipal or private, is capable of being sued. As a corporate body merely, it has no immunities which set it beyond the jurisdiction of the Courts. It may be enjoined from making a grant, just as it may be ordered to make one. And, as in the latter case it would be no answer to the Court which ordered a grant to be made, to say that to obey required legislative action, and that the order was therefore beyond its jurisdiction, so I apprehend, that in the former case, the answer grounded on the same position is equally insufficient, when addressed to a Court which has forbidden a grant."

The Judge proceeded to say in substance that whether the act was legislative or not, the question of its character was a legitimate and proper one for the adjudication of the Superior Court. Hence it had power to temporarily arrest the consummation of the act, until it should determine its character, and its order for that end could not be deemed void.

The question as to the character of the act of defendant must be determined by a judicial tribunal, none was more competent to determine it than that to which it was presented, and the de-

cision of such tribunal must be deemed authoritative until reversed.

TAXATION OF RAILROADS.

In his annual report the State Comptroller invokes the action of the Legislature in order to establish some uniform rule for assessing the real estate of Railroad Companies. Farms and lots have a definite market value. With railroads it is not so. Hence has arisen much litigation in respect to Assessments. Judge Parker holds, that the lands, erections and fixtures of Railroad Companies, must be appraised by the Assessors like the adjacent property, without any reference to the profits of the road,—or to its remaining portion. But this decision is frequently disregarded.

Georgia.

Muscogee Railroad.—The earnings of this road from January 1st, 1853, to November 30th, 1853, a period of eleven months, were.....\$59,599 39 and the current expenses for the same period have been\$7,867 95

Showing nett profits to 30th Nov..\$21,731 44

The tabular statements of receipts, show that these profits all accrued in the last four months, and that the previous seven months barely covered current expenses, due to the fact, that a connection was not made with the South Western Railroad until the middle of May, and that its influence on the business was not sensibly felt until late in July.

Estimating the receipts in December and January as equal to those in November, there is for receipts, of six months, from 1st Aug., to 31st Jan., inclusive, say.....\$55,750 00 And for expenses of same period.....20,760 00

Showing nett profits for six months....\$35,000 00

The above will enable to pay six months interest on \$175,000 seven per cent. bonds issued.....\$6,125

Also six months interest on \$75,400 preferred stock, guaranteed seven per cent. per annum.....2,674

Together with a semi-annual dividend of \$4 per share on \$423,800 of general stock. 16,952

25,751 00

And leave a surplus in hand of.....\$9,249 00

This result being beyond reasonable doubt it is confidently believed that the above named dividend of 4 per cent. will be paid on the first of February next.

Great Western Railway of Canada.

On Monday, the 16th inst., the entire line of this road, from the Niagara to the Detroit rivers, is expected to be formally opened. Speaking of the connection across Niagara River, the Rochester *American* says:

The work on the Suspension Bridge is progressing. The stone towers, two on each side, are done, and two heavy cables connecting them are suspended across the river, at a great height above the foot bridge. These form the first outlines of the new structure, which is to bear the iron way from the States to the Canadas. The Railroad track will be some 21 feet above the present bridge, which is to be used as a foot and carriage way. Two tracks, one for the Central and the other for the Great Western gauge, will be laid upon the bridge, thus allowing the change of cars to be made on either side. This bridge is to be opened in July next. Already the G. W. R., particularly during the Erie troubles, is looked to as the route

between the East and West, and travellers between these two sections can find no better. Passengers leaving Rochester at 7.30 A. M. by the Lockport Road will connect at the bridge with the cars on the G. W. R., and returning should connect at the bridge with the train reaching there about half past 6 P. M.

Indianapolis and Cincinnati Junction R. R.

The first report of this Company is received.—The Junction Railroad was originally chartered to run from Rushville, Indiana, to Hamilton, Ohio. The Ohio and Indianapolis Company was chartered to run from Rushville to Indianapolis. These two companies were consolidated in April 1853, giving a continuous route between Cincinnati and Indianapolis, by way of Hamilton, Oxford, Connersville and Rushville. The Country traversed is fertile, and the seat of a large and wealthy population. The route is direct and likely to become the channel of a large portion of the trade and travel between the cities of Cincinnati and Indianapolis.

The entire line is under contract for the grading and masonry. The bridges on the second division of 22½ miles are under contract. The cross ties for 79½ miles are purchased.

The Engineer's estimate of the cost of the road for 98 miles, from Hamilton to Indianapolis, is based upon the contracts issued, adding twenty per cent. for increased work and contingencies. It is in all \$2,180, 159, being \$21,736 per mile, equipped and in running order.

Amount of subscription of Cincinnati, Hamilton and Dayton Railroad Company, in cash and bonds equal thereto..... \$160,000
Subscriptions by contractors..... 246,624
Individual cash subscriptions..... 186,500

Real Estate sub. C. H. & D. R. R. Co. 40,000
Other Real Estate subscriptions..... 1,136,350

Total on Dec. 17th, 1853..... \$1,769,474

Additional subscriptions are making daily, by which they will soon reach two millions, or nearly the estimated cost of the entire road, completed and in running order. The amount of work actually performed has cost \$240,000, which has been paid.

New Works.

We have received from Messrs Stringer and Townsend a full set of the last volume of their admirable republication of the Glasgow Practical Mechanics' Journal. This work is one of the oldest and best conducted Journals of the kind in the world. It embraces the range of engineering subjects, including reports of the transactions of the scientific bodies of England and Scotland, records of patents, etc. We generally find it the medium for the best descriptions of foreign improvements in railways and railway machinery. Its mechanical execution, including its abundant and elaborate illustrations, is of the best order. Messrs. Stringer and Townsend also receive the Practical Draughtsman's Drawing Book of Industrial design, edited by the editor of the Practical Mechanics' Journal. This is an excellent work, perspicuous and elementary in its teachings and embodying also much useful, philosophical, and engineering instruction. It is abundantly illustrated with elaborate steel plates of engineering and architectural subjects, and forms a good companion to the Mechanics' Journal.

Savannah and Mobile Railroad.

The charter and right of way of this road from the Georgia State line to Mobile, have been granted by the legislature of Alabama. The conditions of the charter are the same as of the Savannah and Albany road, in Georgia, and of the Girard road, in Alabama. The law authorizes a connection with the Girard road, if such shall be desired; or that the Savannah and Mobile road shall cross the Mobile river within one mile of the Girard road, the depot in either case being within the city of Mobile. Authority is given to unite with the Mobile and Ohio road at such point as the companies may agree upon. The gauge is to be the same as that of the Girard road.

A branch from Albany, through Eufaula, to Montgomery is also authorized; to be commenced within two years and completed within five years from the passage of the act; or otherwise to be given to any other company desirous of making the connection.

The Albany Patriot says the branch road authorized from Albany through Eufaula to Montgomery, Ala., will run through a fertile territory favorable for the construction of a road, and its length will probably not exceed 150 miles. The distance from Savannah to Mobile by this road, will be about 450 miles; from Savannah to Montgomery about 340 miles.

We observe in the Savannah papers that an instalment of ten per cent. on the stock of the company has been called, payable on the 16th of January. Proposals are also invited, up to February 16th, for the grading, bridging and superstructure of fifty-three miles of the road from Savannah to the Altamaha River.

The President of the company is J. P. Screven; the Engineer, F. P. Holcomb, both of Savannah.

Saugatuck Iron Works.

In another column will be found a notice of the above Works, of which Messrs. Clark & Jessup, 38 Exchange Place, in this city, are agents.—Messrs. C. & J. are agents for the sale of Railroad Equipments of various kinds, of which they have an extensive assortment at their place of business. We are happy to speak of them as gentlemen of high character, as prompt and energetic business men, who, we have no doubt, will serve Railroad Companies, who want any thing in their line, to their entire satisfaction.

DIVIDEND NOTICE—THE SEMI-ANNUAL INTEREST falling due in this city on the FIRST DAY of JANUARY, 1854, on the following named securities, will be paid on and after the 3d proximo, at the office of the undersigned, on presentation of the proper Coupons, viz:

The bonds of the State of Indiana for Banking purposes, issued in 1834, being the \$1,390,000 Loan, 5 per cent.

The bonds of the city of Pittsburgh, (Penn.) issued to the Ohio and Pennsylvania Railroad Company 6 per cents.

The bonds of the city of Allegheny, (Penn.) issued to the Ohio and Pennsylvania Railroad Company 6 per cents.

The bonds of the city of Chillicothe, (Ohio,) issued to the Marietta and Cincinnati Railroad Company, 7 per cents.

The bonds of the city of Marietta, (Ohio,) issued to the Marietta and Cincinnati Railroad Company, 7 per cents.

The bonds of the city of Steubenville, (Ohio,) issued to the Steubenville and Indiana Railroad Company, 7 per cents.

The bonds of the city of Covington, (Kentucky,) issued to the Covington and Lexington Railroad Company, 6 per cents.

The bonds of the city of New Albany, (Indiana,) issued to the New Albany and Salem Railroad Company, 7 per cents.

The bonds of Franklin County, (Ohio,) issued to the Columbus and Xenia Railroad Company, 7 per cents.

The bonds of Franklin County, (Ohio,) issued to the Cleveland, Columbus and Cincinnati Railroad Company, 7 per cents.

The bonds of Greene County, (Ohio,) issued to the Columbus and Xenia Railroad Company, 7 per cents.

The bonds of Stark County, (Ohio,) issued to the Ohio and Pennsylvania Railroad Company, 6 per cents.

The bonds of Richland County, (Ohio,) issued to the Ohio and Pennsylvania Railroad Company, 6 per cents.

The bonds of the County of Allegheny, (Penn.) special loan of \$75,000, 6 per cents.

The Ross County (Ohio) bonds, issued to the Marietta and Cincinnati Railroad Company, 7 per cents.

The Athens County (Ohio) bonds, issued to the Marietta and Cincinnati Railroad Company, 7 per cents.

The Washington County (Ohio) bonds, issued to the Marietta and Cincinnati Railroad Company, 7 per cents.

The bonds of Van Wert County, (Ohio,) issued to the Ohio and Indiana Railroad Company, 7 per cents.

The Bonds of Allen County, (Ohio,) issued to the Ohio and Indiana Railroad Company, 7 per cents.

The Bonds of Allen County, (Indiana,) issued to the Ohio and Indiana Railroad Company, 7 per cents.

The Bonds of the County of Coshocton, (Ohio,) issued to the Steubenville and Indiana Railroad Company, 6 per cents.

The Ohio and Pennsylvania Railroad Company's Mortgage Bonds, 7 per cents.

The Bellefontaine and Indiana Railroad Company Real Estate Special Mortgage Bonds, 7 per cents.

The Indianapolis and Bellefontaine Railroad Company's Mortgage Bonds, 7 per cents.

The Marietta and Cincinnati Railroad Company Mortgage Bonds, 7 per cents.

The Steubenville and Indiana Railroad Company Mortgage Bonds, 7 per cents.

The Dayton and Michigan Railroad Company Mortgage Bonds, 7 per cents.

The Peru and Indianapolis Railroad Company Mortgage Bonds, 7 per cents.

The Fort Wayne and Chicago Railroad Company Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Income Bonds, 10 per cents.

The Bonds of the several Townships in the Counties of Jefferson, Carroll, Harrison, Tuscanawas, Coshocton, Muskingum and Licking, (Ohio,) issued to the Steubenville and Indiana Railroad Company.

WINSLOW, LANIER & CO., No. 52 Wall st.
New York, Dec. 27, 1853.

Drawing.

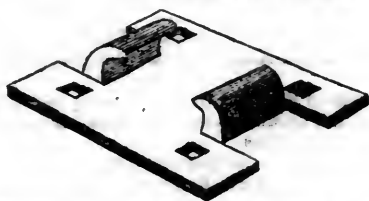
B. BLANDOWSKI, Topographical and Ornamental Draughtsman and Designer. Maps accurately drawn, enlarged or reduced from notes or copies. Ornamental designs for decorations, furniture, fences and ornamental foundry work. Architectural designs. Drawings from nature carefully prepared.

REFERENCES. Messrs. Miller and Freund, Ligneous Marble Works, corner of Franklin and Center streets, New York. Also H. V. Poor, Esq., Editor Railroad Journal, and Zerah Colburn, Assistant do.

Address, care of Railroad Journal, 9 Spruce street New York.

NEW YORK Wrought Iron Railroad Chair Company,

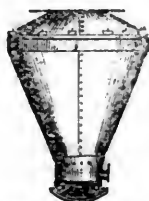
Office, 38 Exchange Place, New York.
A. B. LANSING, President.



THIS Company is prepared to receive orders for the manufacture of Wrought Iron Railroad Chairs of the best material, on a new and superior model, and by improved patented machinery.

The thickness of the Lips of the Chair increases through the bend, where the greatest strength is required, and diminishes towards the edge;—so that a less weight of metal may be used and a strength acquired equal, if not superior, to that of a heavier Chair of uniform thickness.

RADLEY & HUNTER'S Improved Spark Arrester.

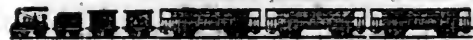


RADLEY & HUNTER'S celebrated new invention is now offered to the public as a *Perfect Spark Arrester*, which possesses the advantage over all others of being of the most simple construction, and much more durable than any ever used. The manufacturer invites an examination of this Arrester by the railroad public, confident that it will meet with universal approbation.

The undersigned hereby gives public notice that he is the sole manufacturer of the above article under the Radley & Hunter Patent, of whom alone they can be purchased in the United States.

EDWIN R. BENNET,
Office 48 and 50 Duane st., New York.

To Contractors.



SEALED PROPOSALS will be received at the office of the undersigned in Indianapolis until the 16th day of JANUARY, 1854, for the Grading, Masonry, and Bridging of that portion of the Indiana and Illinois Central Railway, extending westward from the Wabash River through the Counties of Vermillion in Indiana and Edgar in Illinois.

The Maps and Profile, together with the Plans and Specifications will be ready for inspection at the office of the Engineer, at Montezuma on and after the 7th day of January, 1854.

Any further information may be obtained at the office of JOHN C. CAMPBELL, Chief Engineer at Indianapolis.

Attention is called to the above as comprising heavy work and as it is proposed to place the balance of the Road under Contract as soon as the line can be prepared.

M. C. STORY & Co.

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot gauge, 22 tons weight, 16 + 20 inch Cylinders, and 5½ and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.
Dec. 24

CORROSIVE SUBLIMATE.

THIS article now extensively used for the preservation of timber, is manufactured and for sale by POWERS & WEIGHTMAN, manufacturing Chemists, Philadelphia.

Jan. 20, 1849.

NEW YORK & ERIE RAILROAD.

NEW YORK, December 31, 1853.

THE NEW YORK & ERIE RAILROAD COMPANY, have for sale on favorable terms, the following Schedule of Rolling Stock of the Gauge of FOUR FEET, TEN INCHES,

all of which can be delivered immediately.

It can be seen at Paterson, and is the entire stock of the Union Railroad, the Paterson & Ramapo Railroad, and the Paterson & Hudson River Railroad.

Reasonable credit will be given on the above, on satisfactory security.

CHAS MINOT, Supt.

SCHEDULE.

ENGINES.	MAKER.	CYLINDER.	STROKE.	WHEEL.	CONDITION.
R. L. Colt...	New Jersey Locomotive Co.....	16	20	5 feet	Good.
Union.....	Rogers, Ketchum, & Grosvenor.	15	20	6	Good.
New York...	do. do.	14½	18	6	Good.
Ramapo.....	do. do.	14½	18	6	Wants painting & small repairs.
Passaic.....	do. do.	14½	22	5½	do. do. do.
Paterson.....	do. do.	12	22	5	do. do. do.
Whistler.....	Made in Baltimore	11	16	8	Wants much repairs.
McNeil.....	Made in Liverpool.....	9½	16	4	In bad order.

CARS.	DESCRIPTION.	BY WHOM MADE.	CONDITION.
2.....	Passenger, 8 wheels	Cummings & James, Jersey City.	Good.
2.....	do. 8	Wm. Cummings, Jersey City.....	Good, but wants painting.
2.....	do. 8	Tracy & Fales, Hartford.....	Very good.
4.....	do. 8	Springfield Car & Engine Co.....	Good, but three want painting.
2.....	do. 8	A. T. Pearce, Norwich.....	Good.
2.....	do. 8	Eaton & Gilbert, Troy.....	Want repairs.
1.....	do. 8	New York & Erie R. R. Co.	Good, new.
1.....	Baggage, 8	do. do.	Good.
6.....	do. 8	Unknown	Want small repairs.
1.....	do. 6	do.	do. do.
8.....	Box freight, 8	New York & Erie R. R. Co.	Good.
18.....	do. 4	Unknown	Want small repairs.
16.....	Platform, 8	New York & Erie R. R. Co.	Good.
9.....	do. 4	Unknown	Want considerable repairs.
1.....	do. 6	do.	do. do. do.
2.....	do. 8	do.	do. do. do.

Valuable Works on Railroads, Railway Engineering, Steam Engines, &c.

LARDNER'S RAILWAY ECONOMY, 1 vol.	\$2 00
THE STEAM ENGINE, STEAM NAVIGATION, ROADS AND RAILWAYS, Explained and Illustrated by Dr. LARDNER, 8th Edition, revised and improved.	2 00
TREDGOLD ON THE STEAM ENGINE, 3 vols., 4 to., ½ calf.	50 00
TREDGOLD'S PRACTICAL TREATISE ON RAILROADS AND CARRIAGES.	1 50
PORTWINE ON THE STEAM ENGINE.	50
BURGOYNE'S ART OF BLASTING ROCKS, QUARRYING, &c.	31
TREATISE ON TUBULAR AND GIRDER BRIDGES.	31
BAKER'S LAND AND ENGINEERING SURVEYING.	62
BAKER'S RAILWAY ENGINEERING AND EARTHWORK.	1 50
PRIDEAUX ON ECONOMY OF FUEL.	31
SEWELL ON STEAM AND LOCOMOTION Vol. 1.	31
HERBERT'S ENGINEERS AND MECHANICS ENCYCLOPEDIA, 2 Vols.	9 50
GARRS RAILWAY LOCOMOTION AND STEAM NAVIGATION.	1 75
TRAUTWINE ON EXCAVATIONS AND EMBANKMENTS.	1 00

ESTABLISHED 1796.

McAllister & Brother,

OPTICIANS and Dealers in Mathematical Instruments, at the old established stand, 43 Chestnut street, Philadelphia, Pa. Mathematical Instruments separate and in cases, Protractors, Spacing Dividers, Drawing Pens, Ivory Scales, Tape Measures, Salometers, Spy Glasses, Microscopes, Spectacles, Hydrometers, Platina Points, Magic Lanterns, etc., etc., etc.

Our Illustrated and priced Catalogue is furnished on application and sent by mail free of charge.
Nov. 19, 1850

N. York and N. Haven R. R. NOTICE OF SUMMER ARRANGEMENTS,

Commencing Monday, May 9, 1853.

TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A. M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A. M.—Commutation from New Haven.
9.10 A. M.—Special for Port Chester.	6.15 A. M.—Accommodation from New Haven.
11.30 A. M.—Accommodation for New Haven.	8.15 A. M.—Accommodation from New Haven.
3.00 P. M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	9.35 A. M.—Express from New Haven, stopping at Bridgeport, Norwalk and Stamford.
4.00 P. M.—Accommodation for New Haven.	1.07 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
5.00 P. M.—Express for Boston, stopping at N. Haven.	4.00 P. M.—Special, from Port Chester.
5.35 P. M.—Commutation for N. Haven.	4.00 P. M.—Accommodation from New Haven.
6.30 P. M.—Special for Port Chester.	9.30 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Supt.
New Haven, May, 1853.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
157 Broadway, New York.

CHARLES R. STUART,
DANIEL MARSH,

EDWARD W. SERRELL,
SAMUEL McELROY.

New Works on Civil Engineering.

THE Field Practice of laying out Circular Curves for Railroads.—By JOHN C. TRAUTWINE, Civil Engineer—2nd edition in pocket-book form.

A new and rapid method of Calculating the Cubic Contents of Excavations and Embankments, by the aid of Diagrams.—By John C. Trautwine, Civil Engineer—with 10 Copper Plates.

Price One Dollar each—postage on the Curves Three Cents—and on the Excavations and Embankments, Six Cents.

For sale by

WILLIAM HAMILTON,
Hall of the Franklin Institute,
Philadelphia.

May 4, 1853.

\$1,000,000 LITTLE MIAMI RAILROAD COMPANY SIX PER CENT. FIRST MORTGAGE BONDS FOR SALE.

OFFICE OF WINSLOW, LANIER & Co.
No. 52 Wall-st., Oct. 6, 1853.

THE LITTLE MIAMI RAILROAD COMPANY offer for sale one million of their **SIX PER CENT. BONDS**, with coupons. Interest and principal payable in New York, the former half-yearly, 1st of November and 1st of May. They are in sums of \$1,000 each, payable the 1st day of May, 1858.

These Bonds are issued under the express authority of the Legislature of the State of Ohio; and are a part of the \$1,500,000 Loan authorized to be issued by a vote of the stockholders, for the purpose of raising means to make a double track; the greatly increased and increasing business of the road makes this absolutely necessary.

The Little Miami Railroad is eighty-four miles long, commencing at the City of Cincinnati and terminating at Springfield; is now in complete running order; has cost, including equipments, stations, station-houses, &c., up to this date \$2,708,109 19.

This Company hold stock in the Columbus and Xenia Railroad Company to the amount of \$386,000, which now commands a premium of 20 per cent. Also, in the Hillsborough Road the amount of \$11,716.

The receipts of the Road have been as follows:

For the year ending Dec. 1, 1844.....	\$18,623 36
For the year ending Dec. 1, 1845.....	46,327 58
For the year ending Dec. 1, 1846.....	116,052 02
For the year ending Dec. 1, 1847.....	221,139 52
For the year ending Dec. 1, 1848.....	280,085 78
For the year ending Dec. 1, 1849.....	321,398 82
For the year ending Dec. 1, 1850.....	406,597 24
For the year ending Dec. 1, 1851.....	487,845 89
For the year ending Dec. 1, 1852.....	526,746 35
The receipts from Dec. 1, 1852, to Sept. 1, 1853, 10 months were.....	544,625 59
For the same period year before.....	411,797 06

Increase in 10 months.....\$132,823 53

The position of this road, being the natural, shortest and most usually travelled route from Cincinnati and the vast country south and west of it, to the northern cities, must ever make it one of the most important and profitable lines in the country.

An inspection of a map will show its connections to be many and important. This road operates the Columbus and Xenia Road, and runs in connection with the Cleveland and Columbus Road; in fact they are now run as one line greatly to the advantage of all.

Regular annual 10 per cent. dividends have been declared since December, 1847, with an extra dividend of 5 per cent. in 1852. In 1852 two cash dividends of 5 per cent. were made.

The present surplus and reserve fund amounts to.....	\$98,546 10
The mortgage covers the entire line of road, costing to date...	2,708,108 19
To be expended on double track, &c.	1,500,000 00

Value of security.....\$4,208,109 19

The security for the payment of these Bonds is one of the most ample character, being a first and only mortgage or deed of trust (excepting one of \$100,000 to the City of Cincinnati) on the Company's Road, Stations, Franchises, net income, &c., to J. F. D. LANIER, Esq., of this city, in trust for the bondholders, with ample power to take possession of the Road, its real and personal estate, franchises, &c., and to sell the same to the highest bidder for cash, if default be made in payment of interest or principal. The mortgage is for \$1,500,000, and cannot be increased.

The Stock owned by the Road in the Columbus and Xenia and Hillsborough Railways will much more than pay off the \$100,000 prior lien to the

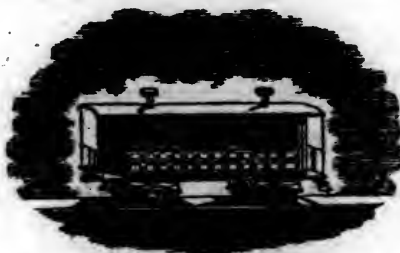
City of Cincinnati, and all other debts of the Company, excepting this loan of \$1,500,000.

These Bonds are offered at private sale by the undersigned, Agents of the Company.

Printed statements of the affairs of the Company, and any further information relative to the securities, will be given by

WINSLOW, LANIER & CO.,
No. 52 Wall-st.

Elmira Car Manufactory.



THE Undersigned is prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.

Elmira, N. Y., June 1, 1853.

WM. E. RUTTER.

The Hamilton Car Company,

ARE prepared to Contract for the Manufacture to order Rail Road Cars of every description, such as Passenger, Baggage, Freight, Dumping and Hand Cars, &c. &c.

Having ample facilities for Manufacturing at the lowest rates, and being supplied with Eastern Mechanics in every department under the Superintendence of H. P. Lanckton, who has had charge of T. W. Watson's well known establishment at Springfield Mass., for the last Six years, we can guarantee ours to be equal in style and quality to any manufactured.

Car Manufacturers and Rail Road Companies Supplied with Car wheels from the most approved patterns at the lowest prices. Castings of all kinds for Cars, Rail Road Bridges, &c. made to order at short notice.

Orders Respectfully Solicited.

Address, HENRY SIZER, Agent,
Cincinnati Ohio.

Office 596 Fifth Street, Cincinnati, at Rail Road Depot Building.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.
Mayville, Ky., Sept. 29, 1853.

Hufty's

Engineers, Architects and Draftsmen's
STATIONERY EMPORIUM.



WHATMAN'S Turkey Mill Drawing paper, Tracing paper, Plan and Profile, Protractors, Drawing Pins, Faber's, Jackson's and other makers' Pencils; Field, Level, and Memorandum Books of various patterns; Mathematical Instruments, Tape-lines, Mouth Glue, Cross Section paper, Triangles, Sabel Brushes, Gum Bands, Maiden Gum, Red Tape, Ink, Inkstands and Sand, Water Colors, Palettes, Patent Binders for letters, Portfolios, etc., together with a general assortment of Stationery and Blank Books. All goods packed with care, and forwarded to any part of the United States.

JOSEPH HUFTY,
Successor to H. L. Lipman,
139 Chestnut st., Philadelphia.

May 15, 1851.

Buffalo Car Works.

TOWNSEND & COIT, Proprietors.

WE are now erecting an extensive Establishment for the manufacture of Railroad Cars, which will be furnished with all the conveniences known to the business, and ready for operation by the 1st day of June next, at which time we will be ready to execute orders for Baggage, Box, Platform and Cattle Cars, of the most approved style and finish. Meanwhile we are prepared to make contracts for work to be furnished during the summer and fall.

TOWNSEND & COIT, Buffalo.

February 22, 1854.

SIXTY MILES DISTANCE SAVED!—ONLY THIRTY-SIX AND A HALF HOURS TO CHICAGO.

MICHIGAN SOUTHERN RAILROAD LINE, carrying the Great Western U. S. Through Mail—FOR CHICAGO AND ST. LOUIS, MILWAUKEE, RACINE, KENOSHA, and all Ports on Lake Michigan.—Through from Buffalo to Monroe IN FOURTEEN HOURS WITHOUT LANDING.

The following magnificent and unequalled steamers from the line between Buffalo and Monroe:

EMPIRE STATE, J. WILSON, Commander, leaves Buffalo Mondays and Thursdays.

SOUTHERN MICHIGAN, A. D. PERKINS, Commander, leaves Buffalo Tuesdays and Fridays.

NORTHERN INDIANA, L. T. PERATT, Commander, leaves Buffalo Wednesdays and Saturdays.

One of the above splendid steamers will leave the Michigan Southern Railroad Line Dock, at 9 o'clock, P. M. every day, (except Sundays) and run direct through to Monroe without landing, in 14 hours, where the Lightning Express Train will be in waiting to take passengers direct to Chicago in 5 hours; arriving next evening after leaving Buffalo.

THE LAKE SHORE RAILROAD.

runs in connection with this line, forming the only continuous line of Railroad to Chicago and the Illinois River.

For Through Tickets, by New-York and Erie and Buffalo and New-York City Railroad via Buffalo, or by the People's Line of Steamboats, Hudson River Railroad via Albany and Buffalo, apply to

JOHN F. PORTER, Agent,
No. 193 Broadway, corner Dey-st., N. Y.

MONTREAL & NEW YORK AND Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6:30 a.m. and 5 p.m., arrive at 8 a.m. and 7:30 p.m.

Leave Plattsburgh for Montreal 7:30 a.m. and 4 p.m., arrive at 10 a.m. and 6:50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate stations.

Trains connect at Moons Junction with Northern (Ogdensburg) Railroad for Ogdensburg and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequalled for comfort and dispatch, and attended with least fatigue and delay than any other. It possesses moreover the advantage of a short Ferriage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.

For particulars see Freight and Passenger Tariff.

Baggage checked through.

H. W. NELSON, Superintendent.

New York and Erie R. R.

PASSENGER TRAINS leave Pier foot of Duane street, as follows, viz:—

DAY EXPRESS, at 6 a.m. for Dunkirk and Buffalo. MAIL, at 8½ a.m. for Dunkirk and Buffalo, and all intermediate stations. Passengers by this train will remain over night at any station between Binghamton and Corning, and proceed the next morning.

ACCOMMODATION, at 12½ p.m. for Delaware and all intermediate stations.

WAT, at 2½ p.m. for Delaware and all intermediate stations. NIGHT EXPRESS, at 6 p.m. for Dunkirk and Buffalo.

EMIGRANT, at 6 p.m. for Dunkirk and all intermediate stations. On Sundays only one Express Train—at 5 p.m.

The Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Chicago, etc., and at Buffalo with first class splendid steamers for Cleveland, Sandusky, Toledo, Detroit and Chicago.

CHAR. MINOT, Sup't.

A. N. GRAY, Cleveland, O., RECEIVER AND FORWARDER of Railroad Iron, Chairs and Spikes.

Also, Cars, Locomotives, and all kinds of Machinery for Railroad purposes.

Office next door to the Custom House, Main st. January 12, 1853.

Notice to Contractors.



WARSAW & ROCKFORD RAILROAD.

THE preliminary Surveys are now complete for the First Division, (about 120 miles) from Warsaw, through Nauvoo, Oquawka, Keithsburg, Rock Island and to Port Byron, including both Rapids of the Mississippi, and the location progressing. The character of the country is such, and the surveys so near to any location that will be made, that Contractors can satisfy themselves of the value of the work as well now as hereafter. Proposals are asked at the Office of the Company in Warsaw, Hancock County, Illinois, for the construction of the whole or part of the road, either by quantities or by the mile. Contract will not be made before the 1st of January, 1854, and only so soon thereafter as advantageous offers can be made. The Company are willing to make general contract, for cash or for cash and securities.

The route of the road is generally in the valley and second bottoms of the Mississippi, and the work can be completed very rapidly. The road is important as one of the improvements of the navigation of the Rapids, and also from its several (two at least) connections with other railroads.

WM. H. ROOSEVELT,

President.

W. R. KINGSLEY,

Engineer.

T. S. O'SULLIVAN,
Consulting Engineer.
Warsaw, Nov. 17, 1853.

Locomotives for Sale.

2 Locomotive Engines and Tenders, made to order for a five feet gauge (but which are not required at present as the road is not ready to receive them).

10 inch cylinder by 20 inch stroke, 2 pair drivers. One Engine 6 ft. diameter, and the other 5 1/2 ft. dia.—outside cylinders—have a large proportion of boiler, and are expected to be economical working engines—will be sold on very favorable terms, and are now ready for delivery. Apply to

CHAS. W. COPELAND,
No. 64 Broadway.

Machinists' Tools.

THE FAIRMAN and WILLARD MACHINE TOOL MANUFACTURING COMPANY offer for sale very superior Engine lathes, Planing Machines, Compound planers, upright drills and all other kinds of tools used in Railroad shops, upon reasonable terms.

They also manufacture Fairman's patent CAR WHEEL BORER, which is warranted to do more and better work than any other borer in use.

Also—all sizes Fairman's patent Universal Chuck.

Orders may be addressed to

G. W. FAIRMAN, Agent,
Rochester, N. Y.

To Railroad Companies, Machinists, Car Manufacturers, etc., etc.

CHARLES T. GILBERT,
NO. 80 BROAD ST., NEW YORK.

IS prepared to contract for furnishing at manufacturer's prices—

Railroad iron,
Locomotive Engines,
Passenger and Freight Cars,
Car Wheels and Axles,
Chairs and Spikes.

Orders are invited; and all inquiries in relation to any of the above articles will receive immediate attention.

Union Railroad Car Works, PORTSMOUTH, VA.

FREIGHT, PASSENGER, BAGGAGE, EXPRESS, Market, Coal, Lumber and Hand Cars, manufactured at this establishment of the best material, and in the most approved manner, with either PLATE or SPOKE WHEELS and AXLES, of Salisbury or other Iron Trucks fitted up, or Wheels and Axles separately will be furnished at the shortest notice, and shipped to any part of the United States.

Having extensive arrangements and superior facilities for manufacturing at this establishment, orders will be received and contracts made for equipping entire roads at short notice.

JOHN A. GREEN.

Portsmouth, Va., December 30, 1853.

P. J. Tournadre,

Chief Engineer Vicksburg, Shreveport and Texas R.R.,
Vicksburg, Miss.

Machinists' Tools.

A SUPERIOR CLASS,

DESIGNED particularly for Railroad work, manufactured by L. B. TING & CO., (late ALDRICH, TING & Co.)
October 7, 1853. LOWELL, MASS.

Henry I. Ibbotson,

MANUFACTURER OF

FILES AND SAWS,

Warranted of superior quality.

Office and Warehouse, 215 Pearl st., New York.

Small Rails.

THE SUBSCRIBERS manufacture and keep constantly for sale, *Light Rails* of the most approved patterns, weighing 22, 25, 28, 40 and 60 lbs per yard, suitable for Colliers, Miners, Quarrymen and Contractors, or for turn outs, depot and branch tracks.

CHARLES E. SMITH & Co.
Fairmount Iron Works, Philadelphia.
1744 CHAS. E. SMITH, HENRY MORRIS.
THOS. T. TASKER, WISTAR MORRIS.

Railroad Iron Via Quebec.

JOHN ANDERSON & Co.,

COMMISSION MERCHANTS,
SHIPPING AGENTS AND BROKERS,
QUEBEC,

PARTICULAR attention given to the Transhipment of Iron in Transit to the Western Lake Ports, likewise to the Shipment of Rails in Great Britain.
Quebec, Dec. 2, 1853.

Railroad Iron.

TWO THOUSAND TONS Erie Pattern, 58 lbs. to the yard, already shipped, and expected here soon—for sale by
38tr JOHN H. HICKS, 90 Beaver st.

To Railroad Companies.

COLLINS' PATENT

VENTILATORS,

FOR

Ventilating all kinds of

PUBLIC AND PRIVATE BUILDINGS

Railroad Cars, Depots, etc.



THE Subscribers would invite the attention of the public to the above celebrated Patent Ventilator. This Ventilator is the best one now known of, for giving a pure air in rooms, and ejecting all foul air. It has been adopted by all the principal Railroad Companies and Car Factories, and is extensively used for private dwellings, and for the cure of smoky Chimneys cannot be excelled. Manufactured and for sale by

BAKER & WILLIAMS,
No. 406 Market st., Girard Row,
Sole Agents for Pennsylvania.

CERTIFICATES.

Engineer Department P. R. R. Co., Altoona, Feb. 3, 1853.
This is to certify that Messrs. BAKER & WILLIAMS, of 406 Market st., Philadelphia, have furnished a large number of Collins' Patent Galvanized Iron Ventilators for the P. R. R. Co., and that they have given every satisfaction, acting fully as representatives. I consider them as a necessary appendage to an Engine House. We have them in use thirteen inches, and two feet diameter, acting equally well. So well satisfied am I of their usefulness, that the Engine Houses we are about building will be supplied with them at every point where a draft is necessary to free the building of smoke.
STRICKLAND KNEASS,
Principal Assistant Engineer P. R. R. Co.

Engineer Depart. P. R. R. Co., Pittsburgh, May 12, 1853.

Messrs. BAKER & WILLIAMS,
Dear Sirs—The 23 Collins' Patent Ventilators furnished by you for the Engine House at this place, have been in use several months and their merits have been fully tested and have given most perfect satisfaction; being constructed on true principles of Ventilation, and the workmanship is of a substantial and superior character. Yours truly,
3m40 OLIVER W. BARNES,
Principal Assistant Engineer P. R. R. Co.

India-Rubber Railroad Car Springs, etc.

THE UNITED STATES CAR SPRING COMPANY, having completed their new Factory, are manufacturing and furnishing to Railroad Companies, and Car Builders, RUBBER SPRINGS of the best quality, on the most favorable terms.

Also, McMillen's superior WHITE ROPE, not only for Railroads, but all other purposes, and of any size or thickness required.
4ug, 10, 1853. 3m New York.

Railroad Iron.

2,000 TONS FIRST CLASS WELSH RAILWAY IRON, to be made to any ordinary T pattern required by the buyers, and for shipment from Newport, Wales, in December, January, and March next, apply to the undersigned, for many years connected with the largest house in the trade.
44tr JOHN H. AUSTIN & CO.,
2 Ingram Court, Fenchurch street London.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense, are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

1300 Tons Yorkshire T rail, weighing 56 lbs. to the yard, and of a superior quality daily due and for sale by,

NAYLOR & CO.

Oxford Furnace, N. J.

ESTABLISHED A. D. 1743.

THE Subscriber manufactures and keeps constantly on hand for sale, every variety and size of Railroad Wheels made from the celebrated Oxford Iron. All orders addressed to CHAS. SCRANTON, Oxford Furnace P. O., will be attended to promptly.
Sept. 11, 1852. 1y*

Book and Job Printing.

The undersigned have added to the PRINTING ESTABLISHMENT of the "RAILROAD JOURNAL," an extensive OFFICE for BOOK AND JOB PRINTING, which they are now prepared to execute in the best manner, and with DISPATCH.

They respectfully solicit from RAILROAD COMPANIES, orders for the PRINTING of Exhibits

Time-tables, Circulars, Tickets, &c., &c.

J. H. SCHULTZ & CO.

New York April 9, 1853.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 3.]

SATURDAY, JANUARY 21, 1854.

[WHOLE No. 927, VOL. XXVII.]

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Comparative view of American and European Securities	33
New York and Erie Railroad	34
Safety System of the New York and New Haven Railroad	37
Stock and Money Market	40
Chicago and St. Louis Railroad	41
Nashville and Chattanooga Railroad	42
Jacksonville and Carrollton Railroad	42
Syracuse and Binghamton Railroad	42
Improvements in Communication by Highways	43
Pacific Railroad	44
American Geographical Society	46
Cincinnati and Chicago Railroad	46
Journal of Railroad Law	46
Bellefontaine and Indiana Railroad	46
Michigan Central Railroad	49

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, January 21, 1854.

Comparative View of American and European Securities.

The probable effect that a European war would have upon the commercial affairs of this country, is one of the most interesting and exciting topics before the public. It is a subject upon which the opinion of hardly any two men agree. Some see in a war, high prices for many of our staples, active employment for our shipping, and a large influx of foreign capital, flowing for safety to this country. Others see in a war, an exactly reversed state of things; a great loss in the general derangement of business, a diminished amount of aggregate productions in foreign countries, and a consequently diminished demand for other staples of our own, which, perhaps, perform a more important part in our commercial affairs than corn and provisions. They fear, too, should public credit in Europe sustain a severe shock, that property there could not be converted into ready money for exportation to this country; that the exportation of some of our own leading staples would languish, and that the importation of foreign capital, which has been steadily coming into this

country for several yearspast, would very nearly cease.

There can be no doubt that a state of things injurious to the interest of the European nations, is prejudicial to our own, though in a less degree. All commercial nations compose *one* family, the losses of the several members of which are shared by the others. Money, or property of which money is the representative, always seeks an equilibrium. It flows in the direction of the vacuum. If it be abundant in Europe, it moves off, to use the expression, to other countries. Should the reverse prove true, the current will be in the opposite direction. The prosperity of one member of the great commercial family reacts upon all the others, while all are more or less implicated in the disasters of the individual. The highest good of each, is in fact, measured by the aggregate good of all.

An European war therefore could not fail to affect this country disastrously. A sudden outbreak of hostilities might send, in the outset a large amount of capital to this country. But the sudden abundance would be like the cargo of a wrecked vessel scattered profusely along our shores, which for a time would make a vastly greater show than if safely received into warehouses, and dealt out in the ordinary course of trade. The sudden influx would bear the same relation to the sums of which this country have been in the constant receipt from the continent, which have been the surplus of a prosperous industry, that the disaster supposed, would to the regular course of trade. Commercially, the United States have the same interest in the preservation of peace throughout the world, that European nations have, though this interest is more remote and contingent.

But whether war is to result or not, the fear of war, and the measures taken to escape, as far as possible, from its evils, cannot fail to excite general inquiry as to the value of the securities of this country, and their safety for investment, for persons seeking to place their means beyond the reach of contingency. The securities of the old World are distrusted, and attention is turned to those of the United States, as offering better conditions of safety. It strikes us that only a cursory examination will show that the securities of

this country are entitled to a vastly greater degree of confidence than those of Europe.

In commercial matters it is the *character* of a transaction that renders its fulfillment probable. On the contrary, as a rule of law, an obligation unaccompanied by a *consideration* received by the *obliged* party to the contract, is *voidable*. It is only an extension of this principle, which is the reason why a *banker* will not discount *accommodation* paper. He sees that the obliged party has received no benefit by lending his name, and further, that as the *paper* does not represent a *bona fide* transaction, or the transfer of property from one person to another, that there may be no such basis and nothing from which the paper can be met at maturity. Such, as before stated, are principles of law, and such the practical construction given to contracts which are not based upon a regular and ordinary business transaction. Now the securities of the United States, both of the States and of private companies, are based upon regular *business* transactions. They represent money borrowed for *useful* objects. The consideration has been actually *received*; and more than this, the benefits gained are more than quadruple the amount of money borrowed. There is not a doubt, that for every dollar expended upon our public works, the value of the taxable property of the country has been increased more than four fold. The credits, therefore, used for the construction of railroads and canals, and works of a similar character, have been in the nature of regular *bona fide* transactions, where the value represented has been received, and where to crown the whole, the ventures, if they may be so called, have proved most fortunate, and where the borrowing parties have, to show for their debts, property exceeding in amount four times their obligations.

The *commercial* character of the obligations contracted by the several States is further shown by the measures adopted (with one or two exceptions) for their prompt payment. In this particular the policy of the National and State governments, of this country, contrasts most strikingly with that of European States. Our general government is rapidly liquidating its trifling debt of some £10,000,000, by purchasing its *immatured* obligations at a premium of *twenty-one per cent*! Nearly all State governments are rapidly liquid-

ating their liabilities incurred in most instances for works of internal improvements. The progress of a few years will extinguish the obligations of the most of them. Those liabilities are treated exactly as are those of a private commercial house, which are not left, as a matter of course, as an inheritance to heirs. The public debt of this country is in such a process of rapid payment, that the lapse of ten years will reduce the aggregate indebtedness of this kind, to one-tenth its present amount.

Of the character described are the liabilities of private companies. These have all the guarantees of soundness, by the nature of the original transactions, and the successful results which have been achieved. To an unquestioned moral and legal obligation may be added the abundant means in the hands of our people, which the public works themselves have created. No possible excuse can be framed for non-payment, neither in the nature of the original transactions, nor for the want of sufficient means.

Contrast the nature of the bases upon which the public obligations of this country rest, with those which underlie the obligations of European States. It is not invidious to say, that the debts of the latter were not contracted solely with a view to promote the material and social advantage of the people, but to carry out the measures, or policy of the governments, quite adverse in their influence, to the public good. The national debt of England, for example, was created for the purpose of carrying on distant, expensive, and useless, wars; wars worse than useless, because attended with a vast destruction of property and life, demoralizing in the highest degree to all connected with them, and entailing vast burdens upon the industry of the nation, in addition to those which the debts have created. Debts of other States have been contracted for similar objects, or for the purpose of providing means to curb still further the rights of the people. Such debts, the great mass feel no obligation for their payment, in the sense of benefits received. The obligations imposed are not met with that feeling of moral duty which renders the payment of an ordinary debt a pleasure. Those upon whom in the end, the burden falls, the laboring classes, having had no voice in their contraction, nor payment, do not look with anxious eyes to the final emancipation from their liabilities, as do those by whom, from the nearer relation the individual sustains to the State, a public debt is regarded in almost the same light as a private one. While in Europe the great mass are indifferent to the future payment of the public liabilities, the privileged and wealthy classes, have too many burdens resting upon their shoulders, to think of providing anything but for the wants of the day. Under such a state of feeling, the debts of the European governments go on steadily increasing from year to year, absorbing in useless expenditures, no small portion of the annual increments of wealth of their subjects.

As contrasted with those of our own people, the debts of European governments lack that sense of moral obligation for benefits received, which lie at the foundation of the obligations of the general and State governments of this country.

Neither have they been productive of results, by which the aggregate value of the property of the country has been vastly increased, and the

general condition of the people, improved: in other words, they have not been in the nature of commercial transactions, nor would many of them be sustained, tried by the test that determines the validity of ordinary contracts.

With these differences in principle, we contend that American securities rest upon a much stronger basis than those of the European States. With us no sophistry can destroy the sense of moral obligation. In Europe that sense does not exist, because it cannot be connected with an idea of a benefit received. A change in the structure of European Governments might sweep away all acknowledgement of past obligations, because they rest only in memory. To effect a similar change in this country, human nature itself must be changed. A person therefore who purchases the securities of the latter takes a part in its progress, which based upon legitimate means, cannot fail to be accompanied by the most satisfactory results. Our indebtedness has been incurred as the most efficient means for promoting the physical comfort of our people. In Europe, the public debts have been incurred mainly upon political considerations. The results that have followed, instead of improving have rendered the condition of the great mass less tolerable, and if the nature of a transaction depends upon its original character what is there, when this is forgotten, why the obligation itself should not be repudiated?

In addition to the grounds that have been urged in favor of the securities of this country is to be taken into consideration, the facts, that the Government of the United States is the most stable one in the world for the reason that there is no person subject to its laws, that does not believe that he would be the loser by this change. Every man in the community therefore acts as a custodian of our institutions. The loyalty to the Government is not an enforced one. It is the result of conviction rather than coercion. So long as this feeling prevails, fundamental change is impossible. The securities of this country therefore, partake of the immutability of the public sentiment, which must for a long time continue. They are inseparably connected with the material progress of our people. This progress insures their safety, and this safety must continue so long as the character of our general indebtedness remains unchanged.

Discovery of Gold on the Northern, or Gov. Stevens', route to the Pacific.

The last mail from the Pacific brings the report that gold has been discovered by Capt. McClelland's surveying party upon the banks of the Yennass. Parties were engaged in digging, and were making from \$3 to \$6 per day. It will be recollected that Captain McClelland is engaged in conjunction with Gov. Stevens, in making the survey of the railroad from St. Pauls, Minnesota, to Puget's Sound.

This is another encouraging omen in favor of the Great Northern Route to the Pacific, and if the mines prove productive, we may expect, another season, to see hosts of adventurers flocking to them by this route.

Louisville and Covington Railroad.

The Louisville Democrat states, that notwithstanding the difficulties in the money market, and other obstacles, the most vigorous measures were adopted at a recent meeting of the Board of Directors to prosecute the work of the Louisville

and Covington Railroad with renewed energy. Arrangements were made to place an increased force on the road, means provided to pay, and a determination manifested to carry on the work rapidly.

Abstract of Schedules and Tables appended to the New York and Erie Railroad Report.

CONSTRUCTION ACCOUNT—Schedule A.

This was given in the Journal of Dec. 17, 1853; but the footings may be repeated.

Amount to Sept. 30, 1852.....	\$26,571,732 77
From Sept. 30, 1852 to Sept. 30, 1853.....	4,651,101 44

Total, Sept. 30, 1853.....\$31,222,834 21

FUNDED DEBT—Schedule B.

1st Mortgage Bonds.....	\$3,000,000 00
2d " ".....	4,000,000 00
Income Bonds.....	2,649,000 00
Convertible Bonds, 1871.....	4,351,000 00
" " 1862.....	3,500,000 00
Mortgage Bonds, 1883.....	2,170,000 00
7 per cent. certificates.....	503,868 90
	\$20,173,868 90

FLOATING DEBT—Schedule C.

Bills payable.....	\$3,038,089 40
" receivable.....	353,062 91

Balance, floating debt.....\$2,685,026 49

TRANSPORTATION ACCOUNT—Schedule D.

To Interests paid during year.....	\$1,298,291 29
" Dividend on stock.....	252,660 00
" Transportation expenses, 1853..	2,407,373 13
" Rents and losses.....	111,408 55
" Balance to new account.....	366,390 69

\$4,436,123 66

By Balance from old account.....	\$ 117,161 30
" Freight earnings, 1850.....	2,537,214 52
" Passenger " ".....	1,601,209 71
" Other earnings and rents.....	142,019 46
" Dividends, Buffalo and State Line Railroad.....	38,518 67

\$4,436,123 66

TRANSPORTATION EXPENSES—Schedule F.

Office and Station Expenses.

Office expenses and Stationery.....	\$ 88,711 78
Agents and Clerks.....	108,500 24
Labor, loading and unloading.....	124,020 17

Cost of Running.

Porters, watchmen and switchmen...	48,845 62
Wood and water Station attendance..	8,058 78
Fuel, first cost and labor.....	373,818 45
Pass. Conductors, Baggage and Brakemen.....	85,772 27
Freight Conductors and Brakemen...	118,889 42
Passenger Enginemen and Firemen...	78,874 34
Freight Enginemen and Firemen....	101,324 80
Oil and waste, Passenger engines and tenders.....	28,696 62
Oil and waste, Freight engines and tenders.....	32,451 53
Oil and waste, Passenger and Baggage cars.....	13,889 91
Oil and waste, Freight cars.....	19,573 52

General Expenses.

Loss and damage of goods and baggage.....	43,517 53
Damages for injuries to persons.....	34,984 23
" to property.....	9,566 35
General superintendence.....	30,994 49
Contingencies.....	49,145 86

Repairs of Engines and Cars.

Engines and tenders, passenger.....	115,773 84
" " freight.....	117,696 69
Passenger and baggage cars.....	81,603 28
Freight cars.....	78,393 47
Tools and machinery in shops.....	24,479 30
Incidental expenses about shops....	16,947 30

Repairs of Track and Roadway.	
Roadbed.....	21,690 70
Track.....	346,724 31
Fences, Gates, etc.....	5,832 57

Repairs of Structures.	
Truss bridges.....	15,743 61
Passenger, wood and water stations...	19,882 22
Engine and car houses, machine and work shops.....	5,461 02
Rents, (dwellings.).....	523 78
Telegraph.....	3,012 70

Incidental.	
Superintendence and office expenses..	3,139 40
Taxes.....	41,372 25
Contingencies.....	11,099 33

Miscellaneous.	
Ferry.....	122,268 61
Expenses of operating Telegraph.....	26,092 84

Total.....\$2,407,373 13

TABLE (A) OF BRANCH AND TRIBUTARY ROADS.

Roads Built.		
From.	To.	Miles.
Sufferns.....	Piermont.....	18
Chester.....	Newburg.....	19
Great Bend.....	Scranton.....	50
Owego.....	Ithica.....	28
Elmira.....	Canandaigua.....	64
".....	Niagara Falls.....	98
Corning.....	Batavia.....	90
".....	Blossburg.....	40
Hornellsville.....	Buffalo.....	91
Dunkirk.....	Pennsylvania Line.....	28
		526

Roads not Completed.

Susquehanna, Pa.	Carbondale, Pa.	40
Binghamton.....	Albany.....	140
".....	Utica.....	85
".....	Syracuse and Oswego.....	109
".....	Auburn.....	75
Elmira.....	Williamsport, Pa.....	75
Corning.....	Buffalo.....	45
".....	Ceres and Pittsburg, Pa.....	75
Olean.....	Ceres and Pittsburg, Pa.....	187
Little Valley.....	Erie, Pa.....	82
		913

(C) CHARACTERISTICS OF THE ROAD, GRADES, ELEVATIONS, DISTANCES, ETC.

Names of Places.	Elevation above tide, in feet.	Distance from N. Y. via U. R. R. in miles.
Sufferns.....	281-86	32
Chester.....	455-65	55
Otisville Summit.....	895-78	75½
Delaware Station.....	436-42	88
Deposit.....	997-17	176½
Gulf Summit.....	1,366-38	184
Susquehanna.....	906-88	192
Owego.....	813-65	236½
Elmira.....	854-32	273
Corning.....	921-03	290½
Hornellsville.....	1,138-87	331½
Almond Summit.....	1,760-17	344½
Andover.....	1,576-25	349
Belvidere.....	1,369-38	365½
Cuba Summit.....	1,677-42	377½
Olean.....	1,418-52	394½
Great Valley.....	1,390-58	410½
Summit.....	1,595-58	436
Dunkirk.....	580-00	459

ALIGNMENT.

Curvature.		
Name of Division.	Whole No. of Degrees,	Average per Mile Deg.
Eastern.....	4,490	60
Delaware.....	9,244	88
Susquehanna.....	4,317	35
Western.....	4,201	32
Total.....	22,252	50

Line.	Line.	
	Curved, in feet.	Straight, in feet.
Eastern.....	138,870	250,530
Delaware.....	296,840	248,522
Susquehanna.....	221,095	512,620
Western.....	193,750	487,051
Total.....	850,555	1,498,723

Grades.	Grades.	
	Ascent West, in feet.	Descent West, in feet.
Eastern.....	1,625	1,189
Delaware.....	930	459
Susquehanna.....	486	214
Western.....	1,282	1,840
Total.....	4,323	3,702

Sum of both, in feet.	Average per Mile, in feet.	
	Sum of both, in feet.	Average per Mile, in feet.
Eastern.....	2,814	38
Delaware.....	1,389	13
Susquehanna.....	730	5
Western.....	3,123	24
Total.....	8,056	18

TABLE (D) OF BRIDGING.

Division.	Trestle, feet.		Farm and highway Bridging.
	Total bridg'g, feet.	Total bridg'g, feet.	
Newburg Branch.....	865	—	—
Eastern.....	1,184	3,430	14
Delaware.....	670	4,427	5
Susquehanna.....	1,299	12,262	10
Western.....	608	2,743	6
Union Railroad.....	3,761	23,727	35
Totals.....	3,949	25,337	70

Of the above, the bridging in feet on second track, is as follows:

Division.	Trestle, feet.		Farm and highway Bridging.
	Total bridg'g, feet.	Total bridg'g, feet.	
Eastern.....	442	1,308	00
Susquehanna.....	187	3,836	00
Union Railroad.....	—	334	00
Totals.....	629	5,478	00

Culverts.

Division.	Culverts.		to 12 feet.
	5 arch from 6	2 to 4	
Union Railroad.....	15 box	2 to 4	—
Newburg Branch.....	4 arch	6 to 15	—
Eastern Division.....	10 box	1½ to 3	—
Delaware.....	116 box	1 to 4	—
Susquehanna.....	26 arch	6 to 15	—
Western.....	186 box	1 to 4	—
Union Railroad.....	46 arch	3 to 15	—
Delaware.....	79 box	2 to 4	—
Susquehanna.....	68 open	6 to 20	—
Western.....	112 drains	2 to 6	—
Union Railroad.....	58 arch	4 to 30	—
Delaware.....	197 box	2 to 5	—
Susquehanna.....	73 open	6 to 12	—
Western.....	152 feet Viaduct, 3 Arches each 30 feet.	—	—
Union Railroad.....	35 " " 1 " " 15 "	—	—
Delaware.....	86 " " 3 " " 2,15; 1,20.	—	—

(D) WIDTH OF EXCAVATIONS AND EMBANKMENTS.
Excavations.—For 1st track, 20 feet in thorough cuts, and 17 feet in side cuts, including 4 feet ditches. For 2d track, 23 feet in thorough cuts, and 18 feet in side cuts, including 5 feet ditches.

Embankments.—For 1st track, 14 feet at grade. For 2d track, 13 feet at grade.

Slopes in Rock.—Usually from 1-5 to 1 to 1-2 to 1.

Slopes in Earth.—Usually from 1 1-2, to 1 to 2 to 1.

Cross-Ties.

Dimensions.—Generally 9 feet long, 6 inches thick, and not less than six inches on the face.

Number.—In old track about 2,200 per mile. In new track about 2,934 per mile.

Chairs.
Weight.—In old track about 17 lbs. each. In new track, and renewals, about 25 lbs. each.
Number.—About 600 per mile.

Spikes.
Weight.—About 9 ounces each.
Number.—About 13,498 per mile.

Iron Rails.		
Division.	Total tons.	Total miles.
Union Railroad.....	4,100	41
Newburg Branch.....	2,000	20
Eastern Division.....	13,700	137
Delaware.....	11,900	119
Susquehanna.....	23,163	244½
Western.....	14,420	153
Total.....	69,283	714½

Division.	First track..		Sidings and turnouts.
	track..	track..	
Union R. R., narrow.....	27	—	—
" " wide.....	11	—	3
Newburg Branch.....	18½	—	1½
Eastern.....	74	47	16
Delaware.....	104	—	15
Susquehanna.....	139	86½	19
Western.....	128½	—	24½
Total.....	502	133½	79

BALLASTING.

On the Union Railroad, 29½ miles of the first track are ballasted to a depth of 3 inches. Of the second track, 5 miles are ballasted 18 inches deep, and 7½ miles remain to be ballasted.

On the Newburg Branch, 9 miles are ballasted 12 inches deep; the remaining 9½ miles 6 inches deep.

On the Eastern Division, 42 miles of the first track are ballasted 18 inches deep; 12½ miles, 12 inches and 20 miles remain to be ballasted. Of the second track 44 miles are ballasted 24 inches deep, while 21½ miles remain to be ballasted.

The whole of the first track of the Delaware Division, 104 miles, is ballasted 18 inches deep, but of an inferior quality. Of the second track, 3 miles are ballasted 24 inches deep, and 11½ miles remain to be ballasted.

On the Susquehanna Division, 25 miles of the first track are ballasted 6 inches deep, and 116 miles remain to be ballasted. The whole of the second track, from Susquehanna to Corning, 86¾ miles, is ballasted 30 inches deep.

On the Western Division, 107 miles are ballasted 18 inches deep, and 21½ miles remain to be ballasted.

(E.) STATEMENT OF ENGINES COST OF REPAIRS AND PERFORMANCE IN MILES RUN.

Name of Division.	No. of Eng's on each Division.	Cost of	
		ord.	extra
		Repairs.	Repairs.
Union Railroad.....	9	\$12,717 34	\$3,078 62
Eastern Division....	42	51,429 95	22,227 09
Delaware do.....	31	23,463 66	49,205 45
Susquehanna Divis.	35	28,784 97	45,270 24
Western do.....	36	32,348 43	20,118 66
Totals.....	153	\$148,744 35	\$139,899 96

Name of Division.	Total Cost	Miles of run.	Cost per mile run, in cents.
Union Railroad.....	\$15,795 86	114,825	13.75
Eastern Division.....	73,657 04	746,627	9.87
Delaware do.....	72,669 11	569,448	12.76
Susquehanna Divis.....	74,055 21	703,384	10.53
Western do.....	52,467 09	656,225	8.00
Totals.....	\$288,644 31	2,790,509	10.34

TABLE (F.) OF PASSENGER BUSINESS FROM OCT. 1, 1851, TO SEPT. 30, 1853.

Giving the number of passengers entering and leaving the cars, and the tickets sold and taken up.

	Passeng's.	Receipts.	Passeng's.	Receipts.	Passeng's.	Receipts.	Passeng's.	Receipts.
New York and Jersey City.....	105,421	\$360,751 01	162,927	\$532,254 87	199,793	\$447,704 00	298,180	\$729,023 15
Bergen to Ramseys.....	.....	.....	10,381	3,616 84	102,276	36,087 48	133,781	48,083 70
Newburg..... (Branch)	14,612	17,670 71	17,989	20,651 51	15,583	16,866 76	18,776	18,887 61
Yall's Gate to Craigville Do.	9,813	4,446 69	31,102	36,231 02	12,071	4,212 83	13,213	4,899 74
Horseheads to Jefferson Do.	53,896	74,457 69	71,375	73,700 86	31,924	29,968 98	.....	.....
Piermont to Suffern.....	18,604	18,249 25	31,749	17,351 87	25,318	12,612 53	29,427	15,060 27
Ramapo to Oxford.....	10,079	5,715 81	15,188	8,977 28	17,021	9,718 34	18,263	9,833 07
Chester to Otisville.....	59,537	42,347 10	69,274	53,018 80	62,816	45,991 26	78,772	55,488 07
Delaware to Deposit.....	55,493	78,823 05	77,757	128,931 43	65,348	86,079 28	82,282	119,626 91
Susquehanna to Elmira.....	152,939	178,402 17	246,413	212,010 21	213,796	224,997 02	268,564	301,147 50
Big Flats to Canisteo.....	41,661	57,675 60	69,093	49,813 27	60,338	42,894 68	87,942	67,176 08
Almond to Forestville.....	87,625	78,960 38	83,880	99,065 63	90,000	80,478 91	156,131	107,658 17
Hornellville.....	15,572	24,044 81	27,018	35,853 79	24,080	44,917 53	63,550	131,168 09
Dunkirk.....	39,289	178,640 40	81,106	343,852 36	46,460	240,680 21	83,968	311,109 34
Various.....	.....	.....	.....	.....	3,000	5,722 40	5,672	5,374 31
Totals.....	668,302	\$1,110,184 60	916,163	\$1,634,361 24	970,404	\$1,834,922 30	1,338,471	\$1,927,026 24

Oct. 1, 1851, to April 1, 1852.

April 1, 1852, to September 30, 1853.

Oct. 1, 1852, to April 1, 1853.

April 1, 1853, to Sept. 30, 1853.

The business going and coming to the different offices for 1853, thus appears to be \$3,261,848 54, and, therefore, one-half of this, \$1,630,924 27 is the actual income from passenger transportation. This is \$29,714 56 more than the income credited from this source to the transportation account. The report does not appear to account for this discrepancy.—Ed. R. R. Journal.

That part of Table (F), of passenger business going and coming to the principal stations gives the same character of information as is contained in the preceding table.

TABLE (G) OF THE TONS OF FREIGHT AND RECEIPTS THEREOF, FORWARDED AND RECEIVED FROM OCT. 1, 1851, TO SEPT. 30, 1853.

Stations.	Forwarded.	Received.	Forwarded.	Received.
Eastern Terminal.....	49,493	327,958 65	70,207	408,999 23
Jersey Road.....	1,649	6,508 64	4,163	11,932 57
Piermont to Suffern.....	488	1,188 75	620	1,667 7
Newburg Branch.....	17,198	48,761 21	75,186	41,510 42
From Suffern to Delaware..	6,951	27,719 90	16,341	68,708 30
Delaware to Susquehanna...	49,893	131,751 57	43,794	129,075 43
Susquehanna to Hornellville..	17,718	93,888 75	4,592	23,787 37
Elmira.....	15,887	76,975 38	7,122	38,662 24
Hornellville to Forestville...	19,000	135,825 77	15,752	135,185 99
Dunkirk.....	177,777	849,528 62	177,777	849,528 62
Forwarded.....	.....	.....	.....	.....
Received.....	.....	.....	.....	.....
Forwarded.....	.....	.....	.....	.....
Received.....	.....	.....	.....	.....

The receipts for freight forwarded from Oct. 1st, 1852, to Sept. 30th, 1853, being \$2,459,743 58, are \$77,470 94 less than the amount credited to

Union Depot at Binghamton.

The Binghamton *Daily Republican* states that a large Union Depot, for the Erie, Albany and Syracuse Railroads, will soon be erected in Binghamton, worthy of these railroads, and of the village. Messrs. MINOT, KIRKWOOD and GILBERT, Superintendents of the Erie, Albany and Syracuse Railroads, and others, met at the Lewis House in this village on this subject. A beautiful, open iron bridge, will be erected over Chenango street for the trains—a structure which the safety and convenience of our citizens have long required. A large Union Depot for the mutual accommodation of the railroads and the people—a massive building which will be an ornament to the village, avoiding the fearful dangers, of which we have had

that source in the transportation account. On another page, \$74,043 78 are given as receipts for carrying *express freight*, but it is not stated where in that sum is included in the general account. \$21,904 85 was also received for *extra baggage*. The mail service performed in 1853 amounted to \$110,708 79. The balances due from station agents and conductors amounted, Sept. 30th, 1853, to \$123,638 18.

Stations.	Forwarded.	Received.	Forwarded.	Received.
Eastern Terminal.....	79,311	406,823 47	112,882	647,072 56
Jersey Road.....	7,829	11,983 78	16,135	17,889 57
Piermont to Suffern.....	3,302	5,324 29	6,295	13,616 82
Newburg Branch.....	310	672 14	1,363	2,792 50
From Suffern to Delaware..	21,502	64,512 85	23,867	48,168 33
Delaware to Susquehanna...	9,447	28,736 99	19,074	49,818 11
Susquehanna to Hornellville..	84,849	196,368 73	71,345	136,085 76
Elmira.....	21,118	93,848 73	6,619	44,123 01
Hornellville to Forestville...	15,131	65,565 68	8,611	48,486 42
Dunkirk.....	36,049	284,536 39	17,729	192,750 7
Buffalo.....	5,764	38,942 76	1,772	15,551 90
Forwarded.....	284,692	1,186,295 06	284,692	1,186,295 06
Received.....	.....	.....	.....	.....
Forwarded.....	.....	.....	.....	.....
Received.....	.....	.....	.....	.....

painful examples, of railroad crossings, is the only thing with which our citizens will be satisfied, and is alike demanded by the interests of the railroads and the people.

Wilmington and Manchester Railroad.

We learn from the *Marion Star* that the part of this Road West of the Great Pee Dee, was completed last week, so that the cars now run up to the river. The Eastern end of the road is also finished to within three miles of the Great Pee Dee. The cylinders at the Great Pee Dee Bridge are all sunk, and rest on a firm clay foundation, from sixteen to eighteen feet below the bed of the river, so that hereafter the construction of the bridge may proceed without impediment or delay.

Safety System of the New York and New Haven Railroad.

BY ZERAH COLBURN.

By a "system of safety," as applied to a railroad, we understand an elaboration and arrangement of precautions, designed for the observance of each and every one assisting in conducting the transportation of the road.

Railroad systems are different, depending incidentally upon the characteristics of the road, and of its traffic, but especially different according to the estimate placed by different managers on the value of safety, and the necessity of caution.

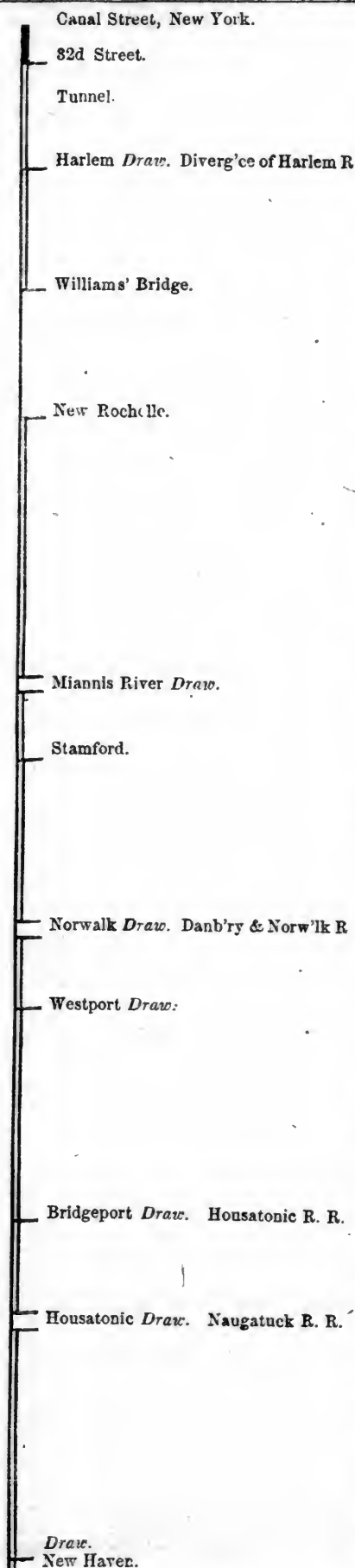
A safe system, well observed, is about the same thing as safe travelling. The feeling of security, which travellers can best appreciate, and which results in the preference, and to the revenue, of a safe road, is enhanced by a knowledge, on the part of travellers, of that system to which their lives are committed.

As an illustration of a safe system, possessing especial precautionary features; from its value as an example for imitation; and from its interesting character in inspiring the confidence of travellers over that line, the regulations adopted by the New York and New Haven Railroad Company will be presented.

The worst accidents which occur on railroads are the results of derailments and collisions. The former class of accidents may occur at draw-bridges or switches; at defective or obstructed points of the line; or at any point by defective machinery. Collisions may occur either from meeting or overtaking trains. To prevent derailments, (otherwise getting "off the track,") requires that all interruption or diversion of the continuity of the rails, at the time of the passage of the trains, be guarded against. This duty is entrusted to draw and switch tenders, track repairers and signal men. They protect the track, and communicate with the enginemen and conductors of the trains by signals. The movements of the trains, relative to each other, any irregularity in which would tend to produce collisions, are controlled by the enginemen and conductors.

It is principally against these most serious classes of accidents, and especially against front or rear collisions, that the peculiar features of the system of the New Haven Co. are made to apply.

Before describing their system in full, a brief description of the line of their railroad is necessary. This road, with a portion of the Harlem road, extends between the two points indicated in its name, and is 76 miles long between its extreme termini. It follows the general course of the north shore of Long Island Sound, crossing many of the rivers and creeks having their outlets thereon. Between most of these streams are elevated ridges, over which the road passes, often by considerably steep grades, being in some cases of from 40 to 50 feet to the mile. Some of the streams, being navigable, are crossed by draw-bridges, there being seven of these between the termini of the road. The New York and New Haven Railroad proper, extending east of Williams Bridge, has a double track, with the exception of 6 1-8 miles of single track between Williams Bridge and New Rochelle. Between Williams Bridge and New York, a distance of 13 1/2 miles, the trains are run over the double track of the Harlem Railroad; the last 2 1/4 miles, within the city of New York, being run by horse power.



The preceding diagram shows the position of the principal stations, lateral roads, draw-bridges, single track, etc.

There are three through express trains, each way, daily; also three through accommodation passenger, and two through freight trains, daily; besides special trains to Port Chester, Bridgeport, etc.

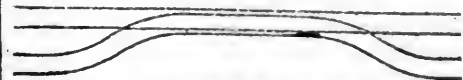
The most cautious regulations are made for the safety of trains on the single track. Passenger trains from New Haven or the east, reaching the single track, must wait *one hour behind the regular time* of any train which may be then due from New York. After waiting its time up, and acquiring the right to proceed, it must keep as much behind its time at each station as it was required to be at the regular passing place, until the expected train is passed.

Beyond this waiting time a further allowance of three minutes is made by trains from the east, for any possible variation of watches, an allowance upon which trains from the west have no right to encroach. Trains from New York have the right to the single track for one hour behind their regular time, except they should overtake delayed passenger trains running in the same direction. In the latter case the rear train has no right to pass the delayed train between 82d street and New Rochelle.

No train can enter and proceed upon the single track, from either end, without receiving from the agent at that end, (New Rochelle or Williams Bridge,) a written memorandum of the time of all trains due, or which are to pass that station in an opposite direction, during the remainder of the day. This list is given by the agent to the conductor of each passenger, freight, extra or gravel train entering the single track, and express trains which do not make a full stop are ordered to run so slow as to receive the list extended upon a stick to some one upon the train. No train can pass without receiving this list. This memorandum conveys no instructions to the conductor as to his right to proceed; he is expected from his own observation to know the truth of the list furnished him, and in any case the responsibility of running upon the single track rests entirely with the conductor and engineman. If the conductor or engineman should deem it imprudent to run upon the single track, *either* has authority of himself to hold the train.

All trains must enter and leave the single track at a slow rate of speed.

Besides the single track, already noticed, three of the large bridges of the road are crossed in such manner that two trains in opposite directions cannot pass the bridge at the same time. The track is properly *double*, but one rail of one track is laid *between* the rails of the other, so that the two occupy but little more width than a single track, for which the bridges were originally built. The following diagram shows the manner in which the tracks enter and leave the bridge, no switches being used.



Each of the single track bridges has a draw, but the signals for the right of precedence of trains, and for the position of the draw, are independent of each other. The indication of the draw-bridge

signal, is of course of the first consequence, as if the draw is off no trains can pass; while if it be on, one train can pass. The draw signal will be explained hereafter. The fact that the single track bridges have draws, for which all trains are brought to a full stop before passing, would tend to remove nearly all of the danger of collisions between opposite trains. But the company have gone farther. They have erected high towers, upon which are placed signal boards or targets; the latter capable of two adjustments, showing respectively the right to the bridge by trains in either direction. At night a large reflecting lamp, burning with a clear white light, is displayed from a high window on one or the other side of the tower, according to the position of the train to be signalled across. These towers are conspicuous objects, readily noticed by the passenger in the cars, and unavoidably in view of the engineer.

They are placed, one on the Housatonic River Bridge, five miles east of Bridgeport; one at the Norwalk Bridge; and one at the "Coscob" Bridge, across the Mianis River, 32½ miles from New York.

All the preceding regulations have been established to protect the trains from collisions by meeting on single track. Upon the double track no collisions can occur between oppositely bound trains, except one be on the wrong (left hand) track. When, from any cause, this becomes necessary, the rules of the company allow no conductor or engineer to receive instructions from any person as to the safety of such a course, but all trains on the wrong track are compelled to run slow, with a flag by day, or light by night, well in advance.

We then come to a class of accidents, serious in their nature, and far more liable of occurrence than most of the others. These are collisions between moving and standing trains, or between trains going in the same direction. Against these accidents the New Haven company have established the most effectual, and, in some cases the most ingenious precautions.

It is necessary that trains going in the same direction shall be separated by an interval of time, sufficient, in the event of unexpected stoppage of the forward train, to send back an efficient signal to warn and stop the following train. This interval is generally ten minutes for passenger trains, and this is the allowance adopted by the New Haven company. Extra trains, or engines following regular trains, are kept fifteen minutes behind. The observance of the "ten minutes" rule is at the foundation of safety; but how can an engineer know, at any point, the time at which a previous train has passed? It is this very information which the system of the road renders capable of being given.

On the outside of every station house, facing the track, is a blackboard, upon which the time of each train is registered as it passes. On the upper half of the board the time of the passage of the last train, going from New York, is placed; and on the lower half that of the last train going towards New York. The Station agent, at each station, makes the record of the time of each train from a written card given him by the Conductor just upon leaving. The time, given by the Conductor, the Station Agent also compares with

that of the Station clock. Express trains, which may pass without stopping, are observed and recorded by the Station Agent, from the station time. In place of the blackboard, a novel feature in a system of safety, the Company are now substituting projecting cases of a white color, and attached to the Station house; moveable figures of a full black face being arranged to indicate plainly, on either side of the case, the time of passing of the last train in the direction in which the figures are seen by following trains.

A red signal light is always to be kept at each station, ready lighted after sun-down, and upon the passage of any train after sun-down, within fifteen minutes of the time of the following train, the Station Agent must wave his light upon the track, for fifteen minutes after such first train has passed, provided the following train does not regularly stop at the Station; and he must inform the Conductor by written memorandum how many minutes the preceding train is in advance.

Upon the Harlem road, green lamps by night and green flags by day, are put out to show that trains have just passed in the same direction as that of the trains to which such signals are exhibited. The regulations of the Harlem road are entirely independent of, and beyond the control of the New York and New Haven Railroad.

By these precautions each train learns the time at which preceding trains have passed the same points, and leaves its own time for the government of following trains.

As the New Haven road has many curves, upon which trains cannot be seen for but a short distance in advance, it has been an object of earnest endeavor, on the part of the managers to devise and establish such apparatus as should make the record of the intervals between the passing of trains, within fifteen minutes, by automatic process; or self acting and independent of all attendance. To do this requires an apparatus for measuring and indicating a fixed interval of time, and also that the passage of each train shall restore the apparatus to its normal state and put it in adjustment for commencing its indications for following trains.

The plan which has been the nearest perfected, and which has already given encouragement of yielding the desired result, consists of a box of alcohol placed beneath the rail, the deflection produced by the weight of a passing train being employed to force the fluid through a tube entering a columnar stand beside the track, and within which it acts in winding a train of clock-work.— This clock-work is set to run fifteen minutes, in which time it moves the pointer on the dial through three-fourths of the circumference of the latter. The passage of a train at any position of the pointer releases it from its position, restoring it to its normal state and re-winding the wheel work for the next passage of a train.

The only indicator of this kind which has been put in successful use on the line of the road, is situated on the south track, near the eastern end of the Housatonic River bridge, at the Naugatuck Railroad Junction, five miles east of Bridgeport. Whatever may be its ultimate relation to the safety system of this road, it is an evidence of the estimate which the management of the line has placed upon the value of safety.

Besides the permanent signals established upon

the line, the trains, visible of themselves, by day, on the straight portions of the road, are provided, at night, with tail lights, of greater size of burner, and greater reflecting power, than are generally used upon railroads. The "tail lights" are of a deep red color, and are carried one on the rear platform of each train. On most roads the "tail light" is an ordinary red lantern. The red lights and red flag of the train are under the charge of the first brakeman, who, when the train is in motion, always rides outside of the last car; and no excuse is ever received for neglecting to have them on the trains, ready for immediate use. The train signals, employed to give warning of following extra trains, will be hereafter noticed.

The engine, of course, has its "head light" always trimmed and burning after dark. The head light is white, and has a reflector of 21 inches diameter.

No train is ever allowed to pass between a station and another train which is receiving or discharging passengers. This rule is always imperative. An Express train, approaching a station where a way train is due, must always moderate its speed so that it may be stopped before it passes the standing train.

These regulations are for the government of trains which are in motion, or which may be stopping at the usual stations. In the event of a train becoming disabled upon the road, where no other train would expect to meet or overtake it, signals must be sent both ways on single track and back on double track to apprise approaching trains of such stoppage. Upon the New Haven road especial caution is shown in this particular.— The signal either for day or night, is entrusted to the most reliable brakemen, and they must display it for the warning of approaching trains until their own train is in motion. They are not expected to return to their own train, but must show their signals, and wait to be taken up on the following train. The signal must always be shown on the unusual stoppage of any train, as a matter of course, the Conductor having no right to presume that no trains are approaching.

Extra trains are like comets, and as it is not to be supposed that regular trains can know when to expect them, they must of themselves keep out of the way of regular trains.

Upon the New Haven Road no extra train or extra engine is to be run over the line without the knowledge and consent of the Superintendent, Assistant Superintendent or the Superintendent of Motive Power, when the following rules will be observed.

Extra trains following regular trains, must keep out of the way of all trains on the time-table, keeping fifteen minutes behind the regular train in advance.

The regular train in advance must always show two signals for extra trains; one on the engine and one on the rear of the train. Men engaged in repairing the line may fail to notice a signal in front, while a signal behind is almost sure to be seen at the same time. The day signal is the red flag, the night signal the red light. The red light is carried on the engine just behind the smoke pipe. The ordinary "tail light" is not to be regarded as a signal for a following extra: two red lights on the hind end of the train make the proper signal.— Conductors and Engineers of Extra trains, or ex-

tra engines, must know of themselves, that proper signals are placed upon the train in advance.

Gravel trains must keep out of the way of Extras, and the Conductors of gravel trains must observe every passing train to see if signals are carried for extras. Gravel trains are allowed to operate only between specified points, and must not go beyond these without the permission of the Superintendent or his Assistant.

Signal posts are erected every 1500 ft. from each road crossing. On reaching these posts, when approaching a crossing, the whistle is blown for five seconds of time, and the bell afterwards rung till after the crossing is passed.

The second-class of accidents are those where the trains leave the rails, owing to interruption by displacement of drawbridges, switches, or by portions of the track under repair.

The New Haven road has seven draw-bridges between its termini, some of which are in situations where especial caution is demanded for approaching safely. Fully aware of the danger of any interruption of the line, immediately over a channel of navigable water, and with the remembrance of the most fearful calamities arising from this cause, not only on this but on other lines, the Legislature of Connecticut have compelled the stoppage of all trains before crossing draw-bridges. This practice involves a loss of time of from eight to fifteen minutes in the entire trip over the New Haven road. The regulations in regard to draw-bridges are principally as follows:

Signal posts, marked "Draw-bridge," are placed 3,500 feet from each end of each draw-bridge, to warn the engineman to moderate his speed.

Signal posts, with the full word "Stop" shown upon them in large letters, are erected at a distance of from 1000 to 1,500 feet from each end of each draw bridge, and trains on reaching these when approaching the draw are to be stopped.—The regular alarm signal, which is two puffs of the whistle is always given on reaching these posts, and before reaching them if the train is moving too fast, or from any cause is difficult to control.

The signal indicating the position of the draw, is a red ball of two and a half feet diameter, and this is raised to the top of a high mast when the draw is closed and the bridge prepared for the passage of trains. At night the ball, which is an iron frame covered with bright red cloth, is illuminated from within.

On stopping, the Engine man and Conductor of the train must both look for the signal, and the Engine man is not allowed to proceed until the Conductor has satisfied himself that the signal is right and has given the usual signal to start.

When the draw is to be moved from its place, for any purpose, the draw tender's duties are:

First. Unlock the draw.

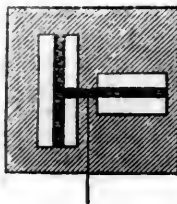
Second. Cast off the halyards from the draw crank, by which the signal is kept in its place at mast head, and lower the signal and place it out of sight in the box made for its reception.

Third. After the signal has been down *three minutes*, then the draw tender will remove the wedges from each end of the draw and turn the draw off, replacing the draw as soon as possible and securing the same by the wedges.

Fourth. The draw tender will then hoist the signal to mast head, and make fast the halyards to the crank by which the draw is moved.

Fifth. Secure the draw by locking it. Each draw tender is required to have two day and two night signals always on hand. As the day signal becomes torn and turned to a darker color by exposure, this is required to be renewed every month.

The care of switches is entrusted only to Station agents and to their appointed switchmen. At gravel pits special switchmen are stationed. No other persons are allowed to change the position of any switch of the road. At every switch a *white* flag by day, or *white* light after sun down, is to be shown for the passage of express or other trains which do not stop. These signals, when shown, must be moved slowly up and down. Enginemen about to pass a switch at high speed must be on the look out for these signals, and if they are not to be seen will whistle to brake up and report the same to the Conductor. The targets of the switches on the New Haven Road are made more conspicuous than is usual on other roads. The following diagram shows the double target, relieved against a large square black-board.



When the switch is right for the main track, the vertical part of the target is always next to the track.

Interruptions, or obstructions of any nature, caused by the operations of the track repair force, must always be signalled each way at a sufficient distance for the government of approaching trains, and these must run with great caution until such obstructions are passed.

The duties of track repairers are to make frequent and thorough examinations of every cut on their division, and see that all loose rock, boulders, or earth, in any way liable to wash, or fall down upon the track, is removed. They are to take all possible care to prevent cattle from getting upon the track; they must see that the fences are up, and that all doubtful or unguarded points are well watched.

In storms, or immediately after storms, engineers are to run without regard to making timetable time, and will make sure that the way is clear before passing any doubtful point. Track repairers at such times must be out in full force, and guard those points on the road liable to wash, or disturbance of any kind. They will have with them signals and men to stop any approaching train.

The organization of a complete service of enginemen, conductors, draw tenders, station, switch and signal men, repairers, etc., requires great care, for the observance of any system, however perfect it may be of itself.

Without being responsible for individual defaults, which can never be calculated upon until committed, it may be safely said that the present tone of the service of the New York and New Haven Road will compare favorably with that of

any other line in the country. The men are experienced and well trained, and believed to be every way temperate and safe; their conduct is regulated by exact discipline, while in the more responsible positions rewards are established for meritorious conduct.

The usual pay is quite as high as on any road similarly situated.

The enginemen, conductors, station agents nor draw tenders are never allowed to absent themselves from duty without the knowledge and consent of the General Superintendent or his Assistant.

Enginemen are never allowed to leave their engines in charge of their firemen, or other persons. No other persons than the regular enginemen and firemen are allowed to ride on the engine. The conductor of the train may ride on the engine if it be necessary.

Smoking, reading or conversation is strictly forbidden on the engine while the train is in motion.

Enginemen receive a bonus of twenty-five dollars per quarter for good conduct. The forfeiture of this bonus is the *least* punishment for any of the following offences.

1. The loss of life or injury to any person on the train, when such life is lost or injury inflicted, by a want of care and attention on the part of the engineman.

2. Running over horses, cattle or vehicles at any of the crossings, or other points on the road, when the greatest care has not been exercised.

3. Running off the track or a switch, if the same could have been prevented, or controlled in any degree, by the engineman.

4. Breaking down of the regular engine or tender of the engineman in charge, if any inspection of his could have prevented it in whole or part.

5. The disregard of any rule or regulation of the company.

Neglect to provide the engines with signals, neglect to have their engine in order, sandbox filled with sand, &c., is also fined by forfeiture of the bonus.

Conductors of trains are held responsible for the prompt action of their brakemen, and *particularly of all new men on their trains.*

Brakemen must always and immediately apply the brakes on signals from the engine, and not let them up until the proper signal is given. In approaching stations the brakemen must stop the train without requiring any signal from the engine. To look out from the platform before applying the brakes, when the alarm signal is given, is made punishable by immediate discharge. Brakemen are not allowed to remain in the cars when the train is in motion, but must always be at their posts, outside.

Neglects of duty have generally been promptly punished, on this road, by discharge.

We have therefore given what may be taken as a full exhibit of the safety system of the New York and New Haven road. It must be considered that this road has difficulties to meet, under which the best precautions may sometimes fail. The road is under a great disadvantage in being compelled to run over the Harlem road for 13½ miles, in 11 miles of which are two tunnels, two temporary bridges of great height, one draw bridge, and

upon which are always the trains of the Harlem Company.

Upon this road the regulations of the New Haven Company have no force, none of their employees acting east of Williams Bridge, except those men engaged on the trains. It is necessary that the best understanding should always exist between the managers and subordinates of the two roads to guard against accident on this portion. The road, also, immediately in the control of the New Haven Company, has the disadvantage of being liable to interruption by six draw bridges, some of which are very unfavorably situated for safe approach. A portion of the distance is as yet run upon a single track, heavy and severe rock cuttings having delayed the extension of the second track. Three of the long bridges are still of the width for a single track. The road has frequent and difficult grades, and many sharp curves. The business of the road is also heavy, and involves much night running.

The equipment of the road is especially safe. The greater part is nearly new and of the best construction, while it is kept in excellent working condition.

With the completion of a line of double track, and a telegraph, devoted to the use of the road, there cannot be found another road whose system is more guarded, or which promises greater security to travellers.

American Railroad Journal.

Saturday, January 21, 1854.

Share and Money Market.

The past week has shown but little change in the stock market. Prices continue pretty uniform from day to day and from week to week. All matters here remain in abeyance waiting for news from Europe, which it must be confessed does not present any very discouraging aspect. The fear of a war has become general, and business men are arranging their affairs accordingly, curtailing their operations, relieving themselves of their liabilities, and refusing to incur new ones. Our railroad companies are following this example as fast as the state of their matters will allow. A few months more must show a rapid curtailment of liabilities throughout the country. While such is the case with our railroad enterprises, and while there is no disposition to engage in new schemes; money is sufficiently abundant in the ordinary channels of business at fair rates. There is no disposition to speculate, and finances of all roads are dull. The prices of premium stocks are barely sustained with an inactive market.

The following Roads have declared Semi-annual Dividends since our last issue: Camden and Amboy 6 per cent.; Cleveland and Pittsburgh 5 per cent.; Cleveland and Columbus 5 per cent.; New Jersey Railroad 5 per cent. The following are additional reported earnings of Railroads for December.

	1853.	1852.
Cleveland and Pittsburgh.....	35,330	22,896
Norwich and Worcester.....	23,837	21,543
Michigan Southern.....	110,977	60,229
Bellefontaine and Indiana.....	25,351	

The following is the comparative statement of the condition of the banks in this city for the week ending Jan. 14.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	82
Androscoggin and Kennebec.. "	55	809,878	1,016,500	2,064,456	140,561	80,053	none	30
Kennebec and Portland..... "	72	952,621	291,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	96
York and Cumberland..... "	20	285,747	341,100	713,005	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	35
Concord	35	1,485,000	none.	.....	305,805	141,836	8	107
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	38
Northern	82	3,016,634	.....	.....	328,782	163,075	5	53
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	89
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	106
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	none	21
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	30
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,530	none	20
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	13
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	98
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	21	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7	90
Boston and Maine..... "	83	4,076,974	150,000	4,092,927	659,001	338,216	7	103
Boston and Providence..... "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	84
Boston and Worcester..... "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	100
Cape Cod branch..... "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River..... "	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern	75	2,850,000	500,000	3,120,391	488,793	241,017	7	86
Fall River..... "	42	1,050,000	none.	1,050,000	229,445	99,589	8	100
Fitchburg..... "	66	3,540,000	112,305	3,623,073	574,574	232,787	6	93
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County..... "	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony..... "	45	1,964,070	282,300	2,293,534	322,213	101,510	none	92
Taunton Branch..... "	12	250,000	none.	307,136	137,406	24,399	8	.....
Vermont and Massachusetts.. "	77	2,140,336	1,001,500	3,203,333	218,679	18,648	none	22
Worcester and Nashua..... "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	58
Western	155	5,150,000	5,319,520	9,953,759	1,339,873	683,194	6	97
Stonington..... R. I.	50	.....	467,700	.....	20,572	110,892	.....	66
Providence and Worcester... "	40	1,457,500	300,000	1,731,498	253,690	139,514	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	124
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	39
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	52
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	59
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	85
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira.... "	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	78
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	66
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	5	54
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	30
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	113
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	none	32
Oswego and Syracuse..... "	35	350,000	201,500	607,803	90,616	43,609	4	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	829,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	490,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	145
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	52
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	70
Philad., Wilmington and Balt. "	98	3,850,000	2,403,276	6,813,839	667,785	383,501	5	80

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97½
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	9,183,300	9,827,123	19,542,307	1,325,663	615,384	7	56-
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,592	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,400,100	446,036	In prog.	176,485	74,902	none	55
Virginia and Tennessee..... "	73	2,650,091	707,958	In prog.	.....	.....	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina..... S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	115
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,214,283	168,000	1,596,283	296,584	153,697	9	100
Muscogee..... "	71	.....	.....	In prog.	.....	.....	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River..... Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..... "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..... Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	70
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Cleveland and Pittsburgh..... Ohio.	100	1,239,450	1,371,000	2,963,756	194,429	123,306	6	86
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	91½
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	124
Columbus, Piqua and Indiana..... "	46	.....	.....	2,000,000	.....	.....	.....	80
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton..... "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	106
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	72
Dayton and Western..... "	40	310,000	550,000	925,000	.....	.....	.....	80
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	60
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,370,784	.....	2,634,157	526,746	314,670	10	113
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	95
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	90
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	87
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	.....	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	.....	.....	.....	.....
Xenia and Columbus..... "	54	1,092,137	119,500	1,257,714	.....	135,363	15	116
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	90
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	115
Indianapolis and Bellefontaine..... "	83	.....	.....	.....	.....	.....	.....	.....
Lawrenceburg and Ind..... "	90	.....	.....	In prog.	.....	.....	.....	77
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	.....	.....	82
Madison and Indianapolis..... "	88	1,650,000	750,000	2,400,000	516,414	268,075	10	70
Peru and Indianapolis..... "	40	.....	.....	In prog.	.....	.....	.....	65
Terre Haute and Indianapolis..... "	72	682,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	136
Galena and Chicago..... "	92	1,932,361	500,000	In prog.	473,548	286,152	.....	122
Michigan Southern..... Mich.	315	2,800,000	2,629,000	6,430,246	592,187	293,046	.....	117
Michigan Central..... "	282	4,856,700	3,977,568	8,618,505	1,145,598	582,816	8	99½
Pacific..... Mo.	38	1,000,000	none.	In progress	.....	.....	.....	.....

	Jan. 14.	Jan. 7.
Loans.....	90,010,012	90,138,887
Specie.....	11,791,453	11,506,121
Circulation.....	8,668,344	9,075,120
Deposits.....	58,396,956	60,885,363

Providence and Worcester Railroad.—The following is an abstract of the annual report of the Providence and Worcester Railroad Co.:

Total expenditures for construction and equipment to 30th Nov., 1852, inclusive...	\$1,731,498 18
Total expenditures for construction and equipment from 1st. Dec., 1852, to the 30th Nov., 1853...	74,557 58

Total cost of road and equipments..... \$1,806,075 76

From which deduct net earnings from Nov. 30, 1852, to Nov. 30, 1853..... \$120,891 76

Less interest on funded debt.... \$16,590 23

Also, div. declared in 1853 90,225 00 106,815 23 14,076 53

Total cost of road and equipments..... \$1,791,999 23

Receipts from 30th Nov., 1852, to 30th Nov. 1853, are:

For transportation of passengers....	\$147,888 42
For transportation of merchandise....	139,286 43
For mail service.....	2,427 66
For rents.....	2,315 02

Total..... \$291,417 58

Expenses..... \$170,625 77

Net earnings..... \$120,891 76

Chicago and St. Louis Railroad.

We are gratified to learn that the work upon the Chicago and St. Louis Railroad, the progress of which was interrupted for a short time by pecuniary embarrassment of some of the leading parties connected with it, is again being pushed forward with a renewed energy, sufficient means having been provided for that purpose. The project had merits too great not to secure its construction in any state of the Money Market, and was one of that character which could not be discredited by pecuniary difficulties. It is a route which strikes every person as of general, or national importance, and is as coincident with a great line of travel, as is the New York Central, or Michigan Southern, roads, connecting as it does by an almost straight line the cities of Chicago and St. Louis. We presume that no party formerly connected with the road has suffered any great losses, except such as are incident upon delay in a progress of a work of great magnitude.

There has been a change in the management of the company; the following gentlemen having been elected Directors: George Bliss, Springfield, Mass.; Henry Hotchkiss, New Haven, Ct.; and Chas. Gould, Edwin C. Litchfield, and John Cleveland of New York. Mr. Bliss has been chosen President of the Company. The above names will be taken as a good guaranty, for the prompt completion of the road. It is already completed and in operation from Alton on the Mississippi river to Bloomington, 130 miles, and is earning a handsome income upon its cost. The remainder of the line from Bloomington to Joliet on the Rock Island and Chicago Roads, is far advanced, and may be finished at an early day the coming Spring. That por-

tion of the line between Bloomington and Alton already forms a portion of a *straight*, though somewhat circuitous route, between Alton and Chicago, in connection with the Illinois Central Railroad. The through line will shorten the distance as present travelled, some 30 miles.

Little Miami Railroad.

At the annual election of the Directors of this Company the following gentlemen were chosen Directors for the ensuing year; all being members of the old Board, viz:—Jacob Strader, John Kilgour, R. C. Springer, Griffin Taylor, J. H. Groesbeck, Nat. Wright, John Bacon, Wm. McCammon, Abraham Hivling, James Hicks, Jr. Larz Anderson, and Alphonso Taft. We learn, that it is the purpose of the Company to commence the construction of the Lebanon Side Track early in the spring. The road will be let to contractors on the 23d of January.

Pennsylvania.

Lebanon Valley Railroad Company.—At an election of the Stockholders of this Company held on the 9th inst., the following gentlemen were elected to serve for the ensuing year, viz:

President.—Gen. Simon Cameron.

Treasurer & Secretary.—H. H. Muhlenberg.

Directors.—Simon Cameron, John Tucker, Isaac Eckert, Samuel Bell, John W. Killinger, William Streng, Gustavus A. Nicolls.

The Milwaukee and Mississippi Railroad.

The trains on the Milwaukee and Mississippi railroad have commenced running to Stoughton, within sixteen miles of Madison, where depots of produce have been for some time established awaiting the arrival of the cars, and the receipts in consequence, may be expected to exhibit an immediate increase.

Anthracite Coal and Iron Ore in Virginia.

The Dora Coal and Iron Manufacturing Company, of Augusta County, Virginia, have discovered specimens of fine anthracite coal upon their property. It is believed to be the only coal of the anthracite character in Virginia. Specimens of Iron ore, also, of a rich quality, have been discovered, and as they have been found to contain a large per centage of carbonate of lime, which is expected to furnish a large proportion of the flux necessary for their manufacture, a large saving in expense is anticipated.

Chicago, Sterling and Mississippi Railroad.

On Thursday, the 15th ult., a meeting of the stockholders of Chicago, Sterling and Mississippi Railroad Company, was held at Aurora, and the following persons unanimously elected Directors: Horatio G. Loomis, Hiram A. Tucker, Chicago; Walter Blanchard, John Collins, Lewis Ellsworth, Aylmer Keith, Henry L. Peaslee, Adiel S. Jones, Willard Scott, Joseph Naper, Davis Hess, Naperville; Edward R. Allen, Wm. H. Hawkins Aurora.

Nashville and Chattanooga Railroad.

The recent election for Directors of this Company resulted as follows: V. K. Stevenson, Alexander Allison, John M. Bass, Jeremiah Cleveland, P. S. Decherd, F. B. Fogg, Lewis Garner, Samuel D. Morgan, John T. Neil, E. H. Ewing, J. B. Knowles, A. M. Rutledge, W. Spence, Thomas Powers, and Jas. A. Whitesides.

The bridge across the Tennessee River, from accounts lately received, must be now fully completed, and cars running uninterruptedly between Nashville, Charleston and Savannah.

Consolidation of Railroads in Indiana.

The stockholders of the Madison and Indianapolis railroad voted recently, almost unanimously, in favor of consolidation with the Peru and Indianapolis railroad. The two roads will constitute one entire line from and after January 1st, 1854, from Madison to Peru, passing through the county seats of Jennings, Bartholomew, Johnson, Marion, Hamilton, Tinton and Howard counties, and terminating in the county town of Miami.

The Peru *Sentinel*, says that a line of good covered spring wagons connect that place with the cars of the Peru and Indianapolis Railroad which run to Kokomo, or within a short distance. Also that the side track from the Canal to the main track of the Peru and Indianapolis Road is finished, and the track layers having come, the laying down of the main track is being pushed vigorously. The locomotive is now engaged at work upon the track.

Genesee and Oakland Railroad.

This road is projected to run from Pontiac to Saginaw, in Michigan. Pontiac is within 25 miles of Detroit, with which it is already connected by a railroad. Pontiac is also the eastern terminus of the proposed Oakland and Ottawa railroad. From here to Saginaw, in a direct line, is about 70 miles. The latter point is the natural harbor of Saginaw Bay, although lying 10 or 15 miles distant on the river of the same name. The country about Saginaw is very productive in the best kinds of pine lumber, a product of great value in the present and prospective trade of Michigan. The distance from Detroit to Saginaw by the railroad will be about 100 miles; time 4 hours; by water 225 to 250 miles, and time, by propellers, from 1 to 1½ days, and by sailing vessels in the lumber trade from 2 to 6 days.

The organization of this road being completed a choice of directors was made at Detroit, on the 7th inst., with the following result:

H. K. Sanger, of Detroit.

David Smart, "

H. H. Brown, "

N. P. Stewart, of Pontiac.

N. W. Clark, of Clarkston.

Enos Goodrich, of Goodrichville.

J. M. Fenton, of Flint.

Jacksonville and Carrollton Railroad.

The organization of a company has been completed for the construction of a railroad between the above named points, the former in Sangamon, the latter in Greene County, Illinois. The length, in a direct line, is about 35 miles. Jacksonville is an important point on the Great Western, Illinois, Railroad, while Carrollton is in the line of trade and travel which may diverge therefrom, destined for Alton and St. Louis.

The route lies nearly parallel with, and at an average distance of 15 miles from the Illinois River, traversing a country of great fertility, and whose productions and general business must naturally be attracted to St. Louis. This road promises to be a judicious and profitable investment.

The officers are—Judge D. M. Woodson, of Greene County, President, and Geo. T. Brown, of Alton, Secretary. A preliminary survey has been commenced by Joseph T. Hunt, Esq., late Chief Engineer of the Terre Haute and Alton railroad company.

Syracuse and Binghamton Railroad.

The objects of the above road are two fold—to supply Railroad accommodations to an important section of the State, now without such, and to open an avenue from the Coal fields of Pennsylvania to Central New York and Lake Ontario.

We have taken frequent occasions to refer to the above as one of the most promising of our new works. It traverses a rich and densely settled agricultural district, destitute of Railroads, so that it must command *all* the business of the section of country traversed. In addition, it runs in such a direction that it cannot affect injuriously any other road, while its opening must prove most advantageous to connecting lines.

The length of the road will be 80 miles. Its total estimated cost is as follows:

Grading, Masonry and Bridging.....	625,427 27
Superstructure, (including Iron).....	677,050 00
Equipment.....	236,600 00
Depots, etc.....	60,000 00
Land, Land Surveys and Fencing....	176,000 00
Engineering and Agencies.....	40,000 00

Total.....\$1,809,077 27
Or about \$22,500 per mile.

There has been expended upon the work \$509,732 88. The work of graduation upon *all* the lighter part of the line has been completed, and such progress has been made with the heavy sections as to leave no doubt that the whole road will be in readiness for the rails by the opening of spring. There is probably no route for a Railroad in the State, of equal length, more favorable for the construction of a Railroad.

The local capital that is subscribed already amounts to \$823,000, a large portion of which has been paid in and expended on the road. This subscription is of the best kind, and very nearly the whole amount will be called in, before the *credit* of the Company is resorted to. It is believed that the entire graduation of the road made will be completed from assessments on *Stocks*, leaving the money to be raised on *Bonds*, to be applied to the superstructure and equipment.

To raise the necessary sum for these objects the Company propose to issue a first and only mortgage upon their road, to the amount of \$1,000,000. Such further demands as may arise, can be provided for by additional subscriptions of *Stock*.

The road as before stated, will traverse one or the best portions of the State of New York, and will not have any portion of its appropriate business competed for by a rival work, either Railroad or Canal. This district is capable of supplying a lucrative traffic to a Railroad. There is no portion of the State devoted to agriculture, more densely settled, nor possessing greater resources. In addition, there is no road in the State that has the prospect of an equally *through* tonnage. One leading object is that the road was to reach the Coal field of Pennsylvania for the purpose of supplying the indispensable article of *fuel* to the cities of Syracuse and Oswego, and to the shipping on the Lakes. Syracuse has a population of nearly 30,000, and is the great seat of the manufacture of Salt, in the interior. Her Salt works now consume over 300,000 cords of wood per annum. This immense consumption diminished the supply, and increased the price, to such an extent as to threaten a rapid reduction in the amount of salt produced, unless a new source of supply of *fuel* is obtained, which can only be had from the coal mines of northern

Pennsylvania. To reach this coal was one great reason for undertaking this work. In addition to the demand for the Salt works, a very large amount of coal is wanted in that city for the ordinary purposes of consumption.

A still wider market for the article would probably be at Oswego. This is the great Port of Lake Ontario, and no town in the country is rising faster in importance, or whose commerce is increasing more rapidly. The city contains 15,000 inhabitants, the wants of which would require a large amount of coal. The introduction of coal upon Lake Ontario would lead to its immediate use by every variety of steam craft navigating the Lake; and by the numerous thriving cities upon its shores, in Canada as well as in this State.

In addition to the local importance of the above works, and as an avenue between the Coal fields, Syracuse, and Lake Ontario, the above road cannot fail to become a part of a most important *through* route between the Great Lakes and New York.—In connection with other roads now in progress or operation it will form a continuous line of unbroken gauge, between the Great Lakes and New York. From Binghamton a road is already in operation to Scranton, the centre of the northern Coal field. From Scranton to New York, a Railroad upon the wide gauge is in progress. Upon the completion of the line from Oswego to Scranton, a distance of 177 miles, the coal car can always have a return freight, carrying full loads both ways, which would either reduce the cost of transportation to a low figure, or would add largely to the receipts of the roads. To show the magnitude of the Lake imports at Oswego we give the importations of a few leading articles into that place for the past three years:

	1851	1852	1853
Bbls Flour....	272,343	389,929	275,105
Bush Wheat...	4,231,899	6,525,309	4,353,699
Feet of Lumber,	83,823,417	98,144,855	119,762,233

All the above articles are taken to New York.—A Railroad capable of transporting at cheap rates would command a very considerable amount of the above freight, particularly such as would be moved in the winter months. The distance between Oswego and New York over the above route would be some 30 miles shorter than by any other line. On the whole, we know of no line of road occupying a better route for a lucrative traffic, and hardly any more important to the interests of the country.

In another number, we shall give a portion of the recent report of the Company.

Chicago and Rock Island Railroad.

Messrs. Sheffield and Farnham have completed another link in the Chicago and Rock Island Railroad, and the cars are now running to Genesee, 156 miles from Chicago. The rails have to be laid on only 23 miles more, when the road will be completed.

Bellefontaine and Indiana Railroad.

The net earnings of the Bellefontaine and Indiana Railroad Co., (in Ohio), for the year ending the 1st November, 1853, after paying the interest on her debt, amounts to 8 per cent. on the capital stock. This road was not completed through from Gallion to the Indiana State line, 118 miles, until the 1st March last. There has been a steady increase in the monthly receipts, which will no doubt continue.

Improvements in Communication by Highways.

By ZERAH COLBURN.

The necessities of business and social intercourse have created various means of communication. Upon the land, railroads, highways and canals for *matter*, and the telegraph for *thought*, are among the facilities in our reach. Railroads afford the most expeditious, and at their working velotical capacity, the most economical application of locomotive power. Railroads, however, require a concentration of business for their creation and support; they are the product of society and not of the individual. They are in all cases the *trunks* of which common highways are the *branches*, and so long as railroads are used so long will highways be occupied in both the primary and the ultimate stages of transportation. However important the movement effected upon the railroad, it can be only *intermediate*, the traffic being *supplied* and *distributed* by the common highway. Railroads may occupy the route and supplant the business of *coincident* highways, but *lateral* roads will be built, of an extent more than sufficient to restore the relation previously existing.

The engrossing interests of our railways, almost precludes a calm comparison between them and the ordinary carriage roads of our country; but so soon as we perceive the principle by which the latter must always exceed, in extent, the former, we cannot fail to be impressed with the importance of any improvement, having for its object the application of the most efficient and economical power on highways.

We must look upon the railway and the highway systems of the country as mutually dependent;—neither can supplant the other.

The object of the railway and of the highway is the same,—to facilitate carriage. The former, requiring greater economy to develop its value, has been made operable by inanimate power. The latter is still worked in the most primitive manner. There has been no important application of industry, or process of production, in which the service of inanimate power has not been sought. Travelling by highway remains, however, essentially the same, as at the invention of carriages. Animals still furnish the locomotive power. Without regard to the purpose of its *application*, the *quality* of power sought in modern times, is in all other cases inanimate; involving less first cost, less subsequent depreciation and expense of maintenance; being more efficient, more controllable, less in opposition to the impulses of humanity and affording employment to a higher grade of labor.

We must therefore apply steam power to common roads, not that such application of power is as economical as upon a railroad, it being but about one-eighth as efficient at the best, but that common roads must exist by the very existence of railroads; and that they must also be worked *with some power*, and that steam power is better, for every reason, than any other.

There were many reasons which prevented the adoption of the early steam carriages. The motive for the use of steam carriages was different then from what it would be now. The contest was then between the *railroad*, operated by *horse* or *stationary engine power*, and the *highway* operated by *steam power*. The steam carriage had been

tried, well matured, and had become successful, when modern railroad locomotives existed only as a *suggestion*. The fortunate idea which afterward determined the application of steam to the railway, and the gigantic enterprise offered in its development, the latter not yet completed, arrested at once all further efforts in the introduction of steam upon highways. The results given by the use of steam on railways induced a belief that *such* was soon to be the universal means of locomotion upon the land. The necessary relation between the two systems was forgotten. The engineering energy and financial patronage of the country sought only one channel.

There were other reasons which kept steam carriages from general use. While the locomotive was provided with its appropriate track, the one being made expressly for the other, the steam carriage could only run upon the public thoroughfares, already occupied by the ordinary means of conveyance, and in the success of which the proprietors of turnpikes were immediately interested. Hence prohibitory tolls were imposed upon the intrusive steamers, and it soon became a question with their owners, not if they would prove practicable, but if they would become profitable. The influence opposed to them soon settled that point, and established the fact, not that they *could not*, but that they *should not pay*.

We have already said that steam carriages proved successful as a mechanical application. While the question was debating whether steam locomotives or stationary engines should be adopted for the Liverpool and Manchester railroad (the pioneer in English railroad enterprise) there had been built a large number of steam carriages; and by the time the "Rocket" had proved its capacity for speed at 22 miles per hour, on the railroad, steam had been used on common roads at speeds of *thirty miles per hour*. In 1829, Goldsworthy Gurney had gone from London to Bath with his steam carriage, and in returning made a distance of 84 miles, including several stops, in ten hours. He afterwards made from twenty to thirty miles per hour, while Summers and Ogle's carriage, built soon after, was run over portions of the distance between London and Southampton at a speed of from thirty two to thirty five miles per hour.

In the third volume of the Executive Documents of the 22d Congress is given a reprint of the evidence upon steam carriages, given in to a select Committee of the British House of Commons, and first published Oct. 12th 1831. Most of the inventors and proprietors of steam carriages were examined before this committee, in the summer of 1831, besides a number of prominent engineers, whose opinions were asked as to the ultimate value of such modes of conveyance, and especially as to their effect upon highways.

Not wishing to base any estimation of what may yet be done upon the achievements of a period so long passed, we should not have alluded to this document in any terms, but for the fact that it contains reliable information upon the point, important to succeeding experimentalists, and such as is not generally accessible.

At the time of the examination by the select committee, Gurney, Hancock, Summers and Ogle, and James Stone, the latter now of New York City, had operated steam carriages upon high-

ways. All of these men contended against the greatest of difficulties. Discriminating and burdensome tolls had been placed by the turnpike proprietors upon the passage of all steam carriages, a disposition being evinced to obstruct their success; while a wide misapprehension existed as to their effect on roads. To these were added the great expense of such trials, undertaken by men looking solely to their own interests, and who were not theorists, attempting the perfection of ingenious models. And what was worse, the absence of those guides, which experience had given to other branches of engineering, was an ever present difficulty, requiring repeated and costly trials for the determination of each proportion and arrangement.

The results elicited were that carriages of from 53 to 80 cwt. had been built; that each 10 cwt. was equal to one horse power, while in some cases with better arrangement and construction, 5 cwt. yielded the same power; that the boilers were safe from explosion, the machinery safe from fracture, the engine not liable to frighten horses, being free from smoke and having no escaping steam. That a speed of ten to twelve miles per hour was an ordinary performance, while Summers and Ogle's carriage had gone at a slow speed, up a hill of 1 in 6, and 24½ miles per hour, loaded with passengers, over the London road. The same engine had gone, with 19 passengers, up a hill of 1 in 12, at 15 miles per hour. It had gone 4½ consecutive miles on a level in 9 minutes, or at thirty miles an hour.

These engines could be stopped, when going at eight miles per hour, within 21 feet. Hancock's carriage could turn around, on the inner circle of only 4 feet diameter, or could turn from one street to another at right angles, and each of ten feet width, at six miles per hour.

It was proved that there was no slipping of the wheels at 22 miles an hour.

McNeil, McAdam and Telford, all eminent road engineers, agreed that the wear produced by horses' feet was much greater than that by the wheels of wagons. One estimate of the proportionate wear by wheels and horses' feet was 1 to 8 on common roads, and 1 to 7 on the London pavements.

With such results actually attained during periods of several months, and in some cases for one to two years, there could be no doubt of the practicability of steam carriages. As to their economy it was estimated that they could save two-fifths in first cost, and in wear and tear, over horses doing the same work, and five-sixths of the expense of feed and attendance.

Independent of these results, which have been given merely to replace them on record, the question of the adaptation of steam to good common roads, appears of easy solution.

The power that usurps the place of animals, in mills, in mines, and on railroads, ought to do so with the same economy on common roads. The crowded streets of our cities give the best test of such a plan. The objections to tracks, being very serious where these are laid through streets occupied by carriages of nearly all kinds, and the bulk, danger, noise and expense of horse omnibuses, would be essentially reduced by the substitution of a good system of steam carriages.

In connection with this subject it may be said that J. K. Fisher of New York, has on exhibition at the Crystal Palace, a working steam carriage of about 1200 lbs. weight and of the power of four horses. Besides some improvements in the details of the engine, such as would be equally applicable to other steam engines, Mr. Fisher's general plan of carriage and connection of engine thereto, contains some very decided improvements over anything that has been devised heretofore. The elongation of the wheel base of the engine gives greater facility for steering; the connection of the piston rod with the crank through an intermediate crank upon a separate cross shaft, the intermediate cranks being connected like two pairs of driving wheels, reduces materially the oscillating motion of the carriage at high speeds. The "outside connection" also removes obvious difficulties in the way of the success of former carriages, inasmuch as the weight and breakage of crank shafts is avoided.

The great inducement to the use of horses is in the employment of their value. The animal servitude is sustained for the same reason that human bondage exists; it is a matter of property, which, except it be employed, will depreciate in value, and entail loss upon the owners. Those already identified with the horse coach interest oppose the introduction of steam as likely to injure the value of their property. While those interested only in roads must naturally feel an interest in the success of their patrons.

There will be no difficulty in a supply of educated labor, appropriate to the operation of steam coaches. The triumphs of steam have always enlisted and instructed recruits. When it was demonstrated that cotton could be manufactured by machinery, a community of mere laborers became a community of manufacturers. When steam was applied to navigation engineers became as plenty as sailors. There has been no improved application of physical means to physical ends which has been long retarded from being beyond the capacity of the age to develop.

Pacific Railroad.

Governor Stevens' Route.—We copy from the *Washington Union* the following letter, from Governor Stevens, to a friend in Washington:—

OLYMPIA, Dec. 5, 1853.

"After a long and arduous journey across the country, my party has at length reached Fort Vancouver in good health and spirits, having made a thorough survey of the route, and being convinced of its entire practicability. Our success has been greater than we anticipated. The country throughout is well wooded and watered, and admirably adapted to settlement and cultivation. I furnish inexhaustible supplies of wood and stone for building materials. The rivers and streams are such as can be easily bridged. In each of the mountain ranges we have discovered two passes, presenting no serious obstructions, and through which a railroad can easily be conducted. The amount of tunnelling is small, not probably exceeding in the whole route two miles. No untoward accident has occurred during the whole journey to interrupt or throw a shade over our labors.

"Besides these important results, much interesting and valuable information has been gathered in relation to the Indian tribes, and the geological features of the country, which will appear in the detailed report of the operations of the survey.

"This report, however, I shall not be able to prepare in time to reach Washington by the 1st of February. I shall send by the mail to-day, to the Secretary of War, a report of our operations since

leaving Fort Benton, which in connection with the reports made previous to that time, will I hope be sufficient for the purposes of Congress until a detailed report can be furnished.

Yours, &c.,

ISAAC P. STEVENS.

The above letter shows that one good route for a Railroad to the Pacific exists; "well wooded and watered, and admirably adapted to settlement and cultivation throughout," with easy passes through the mountains; advantages which are not even claimed for the other roads proposed.

Our conviction is that before three years have elapsed, the right to construct a Railroad over the northern route, unaccompanied by any particular privileges, will be regarded as the most valuable gift the Government can bestow.

Pacific Railroad.

We give the following correspondence, which has taken place between Mr. Chatfield, President of the Atlantic and Pacific Railroad, and Mr. Bartlett, of the Mexican Boundary Survey.

SIR:—Your duties as Commissioner on the part of the United States, for running the boundary between this country and Mexico, carried you over the route between El Paso on the Rio Grande and San Diego on the Pacific. You also traversed considerable portions of the northerly part of Texas. Will you oblige me by stating your opinion of the practicability of this route for a railroad from the Mississippi to the Pacific?

Very respectfully, yours,

LEVI S. CHATFIELD,

President A. & P. R. R. Co.

JOHN R. BARTLETT, Esq., &c., &c.

NEW YORK, Dec. 21st. 1853.

LEVI S. CHATFIELD, Esq.,

President of the Atlantic and Pacific R. R. Co.

SIR,—Your note asking me to state to you the result of my observations as to the practicability of the route between El Paso on the Rio Grande and the Pacific, for the construction of a Railroad has been received. In reply I beg to make the following statement:

During my connection with the survey of the Mexican Boundary, as Commissioner, my duties led me at various times across the district west of the Rio Grande, embraced between the parallels of 31 and 32 deg. 40 min. North latitude, within which is a belt of country, the geographical features of which have never been properly made known. This region had never been traversed by any scientific party before it was explored by the U. S. Boundary Commission, and the result, as I shall show, will have a most important bearing on the question of the most favorable route for a great national railway from the Atlantic to the Pacific.

Until recently, the maps of the interior portion of our continent have exhibited the great chain known as the Rocky Mountains as continuous from a high northern latitude to the Isthmus of Panama; thereby presenting a barrier to the construction of a great public highway, whether for a wagon road or a railway, except through a few well known passes. But such does not convey an accurate idea of the geographical features of this region.

These mountains exhibit the character given them by travellers, except between the parallels of 31 deg. 20 min. and 32 deg. 32 min. north latitude, where they do not appear. Both to the north and south of this district, they rise up in elevated peaks, separated by narrow and intricate valleys, forming an almost continuous chain.

About the parallel of 32 deg. 32 min. the Rocky Mountains suddenly drop off about eight miles south of the Copper Mines of New Mexico, (now Fort Webster,) and, with the exception of a few spurs, seem to disappear entirely. Here we emerge into the great plateau or table-land, which, with scarcely an interruption, extends more than a thousand miles to the south. The elevation of

this plateau varies from 4000 to 5000 feet above the level of the sea, and is crossed by no continuous range of mountains for the distance stated. Short isolated mountains and hills, alone appear at intervals, and these are sometimes separated by fifty or a hundred miles of plain. Through the State of Chihuahua this plateau is limited on the west by the Sierra Madre, but on the east it crosses the Rio Grande and extends across the northern portion of Texas.

The great mountain chain which so abruptly terminates near the Copper Mines as stated, again begins to appear in about the parallel of 31 deg. 20 min., a few miles north of the Guadalupe Pass, through which runs Colonel Cook's road. The range is here called the Sierra Madre, and forms an almost unbroken chain through the entire length of Mexico. Within fifty miles to the south there is another pass for mules, but beyond this, none for more than 500 miles.

Guadalupe Pass, which I have been through three times on foot, and each time taken a bird's-eye view from the most elevated peaks, is through and across a spur of the Sierra Madre, the termination of which is within ten miles to the north.—From this spur, the country is open to the mountains which encompass the Gila, as well as to the line where the Rocky Mountains terminate near the Copper Mines.

The Gila is closely hemmed in by elevated mountains for about one-half its length; or to a point about 50 miles below the mouth of the San Pedro river. Some of these mountains extend ten or more miles into the plain, so that it is an absolute impossibility to construct a highway near that river.

The district or belt of country which lies between the northern spur of the Sierra Madre, and the southern spurs of the Rocky Mountains, may be safely set down at from 80 to 100 miles in width, and extends entirely across the continent from the Rio Grande to the coast range of mountains on the Pacific. In it are no continuous chains of mountains, such as will present an impassable, or even a serious barrier to the construction of a railway. This plain is crossed at intervals of from 15 to 30 miles with short and isolated ridges of mountains, having an elevation of from 1000 to 2000 feet above the plain, and running from north-west to south-east. These mountains when seen at a distance, appear like a continuous chain, but on approaching them, they are found to be in short ridges from five to ten miles in length, overlapping each other, with broad defiles or open spaces between, and affording easy passages through.

In my journey west from the Rio Grande, with a train of heavily laden wagons and pack-mules, I travelled more than 80 miles a day across this district, near the parallel of 32 deg. 22 min., without locking the wheels of my wagons. This, too, where there was no road. Every mountain range was passed through without difficulty, and in some instances, so gradual was the ascent and descent, that it was scarcely perceptible. I have also traversed the district, or have seen it from eminences over which the 32d parallel would pass, for about three hundred miles west of the Rio Grande.

The first barrier of consequence, of which I cannot speak with certainty, is a range of mountains beyond the San Pedro river, bounding the Santa Cruz valley on the east. They terminate in latitude 31 deg. 15 min. where I passed them. Between 32 deg. and 32 deg. 22 min. they are passed by wagons, but I cannot state with what facility. But if they can be passed any where between the 32d parallel and the Gila the last obstacle is overcome to reach the plateau near that river. It would be desirable to find an opening to the Tucson Desert, when we reach an open level plain from 100 to 120 miles across, to the river mentioned.—In fact, it may be asserted that when the San Pedro Mountains are passed, we shall have an uninterrupted plain of about 250 miles to the Colorado.

It will thus appear, that the entire district from the Rio Grande to the Colorado, which may be

put in round numbers at 500 miles, consists of broad, open gravelly plains, from 15 to 25 miles in width, with scarcely an undulation, and for long distances, requiring but slight excavations and embankments; nature having already graded them. The mountains may be passed through open defiles of easy ascent and descent. When the Gila is reached, the bottom, or the table-land may be followed, though the latter will doubtless have the preference, as it presents a perfectly hard and level surface. In a few instances, ranges of mountains approach the bottom land of the Gila. Openings may doubtless be found through these, or they may be passed by cutting away near the river.

The Colorado river presents no difficulties for bridging. At Fort Yuma, where the Gila joins it, it is about 600 feet wide, but above and below the junction it expands to 800 and 1200 feet. In dry seasons there is between 4 and 5 feet of water at Fort Yuma.

After this river is passed, we reach the great California Desert about one hundred miles across, which increases in width towards the north. This is destitute of wood, water and grass, and presents a hard level surface with slight undulations, and seems almost graded by nature for a railway.—After leaving the bottom, or valley of the Colorado, and before the table-land, or desert is reached, there is a belt of moving sand. Its southern extremity is now about 12 miles below Fort Yuma, where I passed it without crossing it. Its breadth I could not ascertain, never having seen any one who had crossed it, though it was supposed to be from 3 to 5 miles in breadth. Nor could I learn how far it extended up the Colorado. This is the only belt of moving sand that I know of within the district referred to, west of the Rio Grande.

On passing this desert we reach the Sierra Nevada, where a pass must be sought; but I have no doubt that several may be found, which will be practicable. The object should be to seek one that will take us to the streams which lead to the San Joachin; for, when this is reached, we shall be in one of the most luxuriant valleys in the world, with an uninterrupted course to the future metropolis of the Pacific world.

All the great plains, plateaus and deserts to which I have alluded, are without wood. They are also nearly destitute of water and grass. Water is found at long intervals, though experience has shown me that it may be found at a short distance below the surface, in particular spots, even on the most arid deserts.

Pine timber abounds in the regions of the Copper Mines, in latitude 32 deg. 35 min., together with small oaks and cedars. Other mountain ranges on the route are similarly wooded, and there are some valleys thickly covered with mesquite.—But I will not undertake to point out the localities of the wood and water, the arable and the grazing lands, the fertile valleys and the deserts. I have noted all these in my diary, and, to be understood, should be accompanied by maps and drawings.

I have besides a large number of sketches and drawings, taken in the field, exhibiting the characteristic features of the country from the Rio Grande to the Pacific, the various mountain passes, the plains, the deserts, the wooded regions, etc., etc., which convey a better idea of the country in question than any written description.

My notes also extend across the northern portion of Texas, near the parallel of 32 deg., for the distance of five hundred miles, on which country I possess the same information as on that west of the Rio Grande, and will only remark that it is quite practicable for the purposes of a railway.

I have omitted to speak of the capacities of the Colorado and Gila rivers, to which you call my attention. The former, although it has from 4 to 5 feet of water near the junction when lowest, is somewhat obstructed by sand-bars towards its mouth; but I have no doubt that steamers with a light draught of water, may ascend the greater portion of the year, even for a distance an hundred miles above Fort Yuma. The Gila can never be navigated except in time of floods or high water, when flat bottomed boats might possibly pass

up to the Salinas, 180 miles above its mouth.—Supplies might be sent, as it is now proposed to supply Fort Yuma, by sailing vessels to the head of the Gulf of California, and thence by a small steamer up the Colorado.

I have spoken of desert, woodless plains on the line near the parallel of 32 deg. It is proper to remark that any route south of the parallel of 34 deg. 30 min. must cross the great *llano Estacado*, east of the Rocky Mountains which increases much in width above the 32d parallel. I crossed it about 31 deg. 30 min., or from the head waters of the Concho to the Horse Head crossing on the Pecos, a distance of 70 miles without water; but a degree farther north its width is more than doubled. Then the region between the Pecos and the Rio Grande is equally barren, (as far as known) and must also be crossed by any route south of the 34th parallel.

So with the great California desert west of the Colorado; all routes south of the 36th parallel must cross this, even though the Mohavi river be followed, unless the explorations now being made should discover some valley or stream not yet known.

In conclusion I should state, that to take the route south of the Gila, we must pass through Mexican territory; although the portion necessary to reach the Gila is much less than it is generally supposed will be required. No line claimed by any one for the boundary would give us a route here, since it is found that we cannot approach the Gila for half its length. Even had the line struck the San Pedro, we have more than a hundred miles of mountainous region to traverse to reach the open plateau near the Gila.

My opinion, from what I heard from the Mexicans, and what I myself saw on the ground is, that the pass through the San Pedro mountains lies north of 32 deg. 22 min. Should this supposition prove correct, we require but a small strip from Mexico, and this strip of a worthless character for agricultural purposes, to give us a route south of the Gila.

I beg leave to add a few more words in support of what I have said of this route. It is an extract from the official report of Lieutenant Whipple, who made the survey of the Gila: "From what precedes," says Lieut. W. "it may be inferred that it would hardly be practicable to construct a road, canal, or railway to run wholly upon the river Gila. The canon of the Pinal Lleno mountains is a complete barrier. The pass below the junction of the San Pedro is equally impracticable. Between the Pimo settlements and the junction of the Gila with the Colorado, nature imposes no serious obstacle to the construction of a way of communication such as the travelling public may demand. But from the Pimo village to the Rio del Norte, I know of no practicable route, even for a wagon road, except by entering the State of Sonora to avoid the Pinal Lleno Mountains."

I am very respectfully,

your obed't. serv't.

JOHN R. BARTLETT.

Suspended Track Scales for weighing Cars and Freight.

At the Galena and Chicago Union Railroad Freight Depot, in Chicago, a set of Fairbank's scales is being placed in the track within the building, so that cars and their contents can be weighed together; and the beam will navigate from five lbs. to thirty tons. It was impossible to procure sufficient depth under the track for the necessary combination of levers and bearings, without being troubled with water in the vault; Mr. B. H. Chatbourne, the enterprising agent of the manufacturers, has therefore undertaken to construct the scales in the following method: The platform upon which the car runs is suspended by heavy iron rods passing up to the second floor of the building where the requisite space is easily afforded. Another rod forms the required connection to have the weighing beam upon the lower floor. The work is now so far completed that the success of the arrangement is beyond question.

American Geographical Society. Pacific Railroad.

At a recent meeting of the American Geographical Society, Messrs. Poor, Russell, Waddell, Leavitt, and Smith, were appointed a committee to take measures to prepare a map of that portion of the country embracing the several proposed routes for Railroads to the Pacific. We are able to state that said Committee have acted promptly in the matter, and already have such a map in preparation. It is to be drawn to a scale of 6 inches to the degree, and will embrace a section of the Continent, extending from Ocean to Ocean and from the south shore of Hudson's Bay, to the mouth of the Rio Grande. It will be about 25 feet long and 13 wide. It is intended to show, as far as possible, the topography, flora, climate, hydrography, minerals, particularly the coal measures, varieties of soil, etc., etc., of the country, and the relations that the several lines bear to the routes and interest of the commerce of the Eastern States.

At the same meeting, the Society adopted a report instructing a committee to memorialize Congress upon the expediency of taking some steps towards securing a uniform system of *Weights and Measures* throughout the Commercial World.—Another Committee was also appointed to devise a more perfect system for taking the next census of this State.

Cincinnati and Chicago Railroad.

Important Railroad Connections.—The Cincinnati, Hamilton and Dayton, the Eaton and Hamilton, the Richmond and Miami, the Cincinnati, Logansport and Chicago, and the Logansport and Chicago Railway Companies, have associated themselves in a permanent connection making one line of uniform gauge from this city to Chicago.—The road is now finished to New Castle, 100 miles, and is doing an excellent business both in passengers and freight. The balance of the line from New Castle to Logansport, 80 miles, requires an expenditure of one hundred thousand dollars to prepare it for the iron.—The portion between Logansport and Kokomo, the crossing of the Peru road, 22 miles, is entirely finished with the ties on the road bed, ready for the iron, which is now lying at Toledo, awaiting the opening of the canal in the spring.

The line from Logansport to Chicago is in efficient hands, and is being pressed forward with an energy which will soon open a direct route to Chicago. The distance, 276 miles, can be run ordinarily in nine hours, but from the low grades, freedom from curves, and long levels, one of which is 72 miles, the line can be run ordinarily in seven hours. By reference to the map of Indiana, it will be seen that New Castle lies in a direct line between this city and the south-western extremity of Lake Michigan, and that the route of this line of road is as direct as possible; indeed we understand, that the exact length of the road between New Castle and Chicago, 180 miles, is but 3 or 4 miles longer than an air line from New Castle to that city. The line deviates from a direct one, owing to the very rough character of the country between New Castle and Cincinnati, and passes through Richmond, Eaton and Hamilton, so as to follow the valleys in descending from the table lands to the valley of Ohio.

Considering the vast amount of freight that must pass over this line of road, we are satisfied that a better approach to our city could scarcely be secured than is afforded by such favorable descending grades. This freedom from curves, and entire absence of any short ones, the unusually low grades, and the fact that a considerable portion (27 miles) of the distance, is to be laid immediately with a double track will cause this line to be the shortest, even in time, between this

city and New Castle; and between the two extremes, Cincinnati and Chicago, it is so far better and shorter than any other, as to fear no competition.—*Cin. Railroad Record.*

Journal of Railroad Law.

RAILROAD INJURIES IN CONNECTION WITH SURGICAL MALPRACTICE.

The Milwaukee Sentinel of the 6th instant reports the verdict of the jury in the case of *Silkman vs. Davis and Moore* in the U. S. District Court. The plaintiff is a merchant of this City and the defendants are proprietors of a line of stage coaches in one of which the plaintiff was injured in 1850 by being upset at Vernon, Wis. A verdict was rendered for plaintiff in the sum of \$6,400. The Sentinel understands that an unsuccessful attempt was made at the trial to reduce the amount of damages claimed by the plaintiff, on the ground that his injury was increased by the unskilful treatment which he received from his surgeon. It is no wonder that such a ground of defense proved unavailing. For it is to be presumed that a man in want of surgical attention will procure the best in his power. If the surgeon employed proves unskilful, as must of necessity sometimes happen, the damage which he inflicts is a direct consequence of the patient's original disaster. The malpractice of the surgeon instead of lessening enhances the patient's legal claim for damages.

Yet true it is that in estimating the actual amount of damages to which an injured party is legally entitled to claim at the hands of a jury, the *remote and contingent* consequences of the original injury must be excluded from consideration.

The only damages for which a party can legally claim compensation from a wrong-doer are those which flow beyond all question from the original injury. As, for example, in the case, above supposed, the injured party would not have needed a surgeon if he had not been hurt; hence the unskilful surgery resulted from the hurt.

One of the grounds of recovery often relied on in the case of personal injuries is the loss sustained in respect to the *business* of the party aggrieved. And in this case a strong effort is sometimes made to introduce as evidence for the claimant the hypothetical *opinions* of witnesses as to the detriment suffered. Sympathy and friendship sometimes clothe mere shadowy chances in a garb of reality. But these fancies will not form a legal foundation for a verdict. The mere *opinions* of witnesses as to the loss sustained by an aggrieved party in respect to his business are not admissible evidence. The nature of the plaintiff's business should be shown, its extent, and the importance of his personal superintendence in conducting it. From these premises the jury are to infer the probable loss of profits sustained. Under such circumstances the damage is less a matter of opinion than of computation.

But although in estimating damages a jury must base their conclusions upon established facts, yet they are not always rigidly chained down to the consideration of what actually exists and operates. Where the immediate injury, for example, is the breaking of a leg, a witness may be examined in an action for damages, as to the then and probably *future* condition of the limb. Otherwise the aggrieved party could not obtain compensation without bringing a series of actions, a result

which is wholly at war with the genius of the Common law. If a fracture will probably cause life-long lameness, the jury should know this and should award an aggregate of damages meet for the occasion.

The physical consequences of bodily injuries can be prognosticated by men of science with reasonable certainty. Not so in respect to matters dependent on human will. Nature is uniform but man's will is capricious and changeable. Hence in estimating damage a jury would not be justified in relying upon the probable future acts of an individual. It would not be right to give a party enhanced damages in view of the probability that his case would be carried into a higher Court and new Counsel fees and expenses there be required.

Yet Courts abstain carefully from interfering with verdicts unless they are so large or so small as to force on every mind familiar with the case, the conviction that the Jury have erred.

See for authorities sustaining these positions *Lincoln vs. Sar. and S. R. R. Co.* 23 Wend. 425. *Collins vs. A. and S. R. R. Co.* 12 Barb. 492.

Bellefontaine and Indiana Railroad.

MARION, Ohio, Jan. 12, 1854.

Mr. Editor: An election was held yesterday in this place, for officers for the present year, when the following gentlemen were elected:

James H. Godman, President.
Levi Houston, of Honston,
John Mills, of Sidney,
Orren Patten, of Marion,
Wm. A. Otis, Cleveland,
T. P. Handy, do.

At a meeting of the Board, James H. Godman, was re-elected President; N. Townsend, Secretary; and W. W. Conklin, Treasurer. The other officers, are J. Nottingham, Superintendent, and Charles Sellers, Superintendent of motive power and Master Machinist; W. Milnor Roberts, Chief Engineer; J. P. Harper, Resident Engineer.

No change has been made in the Board, except that T. P. Handy was elected to fill the vacancy occasioned by the death of Wm. L. Kendrick, which occurred on the 3d inst.

Mr. Kendrick had been associated with the road from its commencement, and at his decease, was the Secretary and Treasurer.

The reports of the Chief Engineer and Superintendents, were read, and will be published as soon as the late Treasurer's accounts are settled.

Mr. Nottingham reports the receipts for the month of December, at over \$25,000, exclusive of several thousand more to come in on settlement with the other roads running in connection. This, for a road 118 miles long, only opened through on the 12th of July last, with inadequate supplies of engines and cars on the connecting roads, argues well for its future business. The Superintendent estimates the receipts for 1854 at \$450,000. The cost of the road, fully equipped for such a business, including everything, will not exceed 2½ millions.

Its business this fall has been limited only by the ability of the Ohio and Pennsylvania, and Cleveland and Columbus roads to take from it the trade offered. The latter company are actively engaged in grading the second track between Cleveland and Gallon, 79 miles; 25 of which, between Cleveland

and Grafton, are to be opened this spring, and the residue during 1854.

The Legislature of Illinois is just about convening at an extra session, during which it is hoped that the long pending question respecting the rights of the direct route railroad between Terre Haute and St. Louis, will be favorably terminated for the company. The travelling public are largely interested in it, as every thing is ready to push the work on with the utmost vigor so soon as the Legislative sanction is obtained. The great chains of roads leading from Boston, New York, Philadelphia and Baltimore, will all be beneficially affected by the opening of this valuable link across Illinois.

Yours truly,
OHIO.

Census of Chicago.

The census of Chicago recently completed is as follows: 1st ward, 6,588; 2d ward, 7,557; 3d ward, 6,277; 4th ward, 5,687; 5th ward, 8,097; 6th ward, 6,577; 7th ward, 6,355; 8th ward, 5,776; 9th ward, 5,631. Total white population 58,538. Colored do., 588. On vessels in port 1,531. Total population of Chicago, 60,652; an increase of 57 per cent. over the population at the end of the previous year.

Rock Island and Chicago Railroad.

The following gentlemen have been elected officers of this road—viz:

Mr. J. B. Jarvis, President, and Mr. A. C. Flagg, Treasurer. The Directors are: John B. Jarvis, New York; Azariah C. Flagg, New York; William Walcott, Utica; Rufus H. King, Albany; George Bliss, Springfield, Mass.; John Stryker, Rome; N. D. Elwood, Joliet; Isaac Cook, Chicago; N. B. Judd, Chicago; T. D. Brewster, Peru; Lemuel Andrews, Rock Island; James Grant, Davenport; E. Cook, Davenport. I. Cook, Assistant Treasurer; N. D. Elwood, Secretary.

Michigan Central Railroad Company.

OFFICE OF THE M. C. R. R. Co.,
Boston, Dec. 28, 1853.

At a meeting of the Board of Directors, held this day, it was

Voted, "That a dividend of eight per cent. be declared, payable in cash, on the 25th of January, to holders of stock at the close of business this day; payment to be made to stockholders residing in Michigan at the office of the local treasurer in Detroit; to holders of stock registered in the city of New York, at the office of the "Farmers' Loan and Trust Company," and to all others at the office of the Treasurer in the city of Boston."

The usual financial statement is herewith submitted; the balance of the income account being

\$415,011
Eight per cent. on the capital is..... 388,536

\$26,475
and leaving the sum of \$26,475 undivided.

The Great Western road is announced to be opened on the first proximo, which will then make a perfect railroad communication with Chicago and the west, over the road of this company, and will also connect with various lines now in progress or nearly completed, as follows:

By the New Albany and Salem railroad from Michigan City to Crawfordville, a distance of 125 miles, and which will be opened to the Ohio River, 283 miles, on the 1st of April.

By the Aurora railroad, a connected line of railroad from Chicago to St. Louis.

By the Illinois Central railroad, now running southwest 80 miles from Chicago, which will be

completed as represented, during the next season its entire length to Cairo and the mouth of the Ohio at its junction with the Mississippi River.

Two magnificent steamers of the largest class, to be ready in the course of the next spring, are now in process of construction, to run between Buffalo and Detroit in connection with the road of our company.

All of which is respectfully submitted.

GEORGE B. UPTON,
Treasurer.

Michigan Central Railroad Company in General Account, Dec. 1, 1853.

1853.	Dr.
Dec-1. To Capital Stock.....	\$4,856,700 00
" Bond account, viz:	
6 per c't. sterling bonds not convertible.....	463,613.33
7 per c't. bonds not convertible.....	38,000.00
8 per c't. bonds not convertible.....	1,113,450.00
8 per c't. bonds convertible.....	2,362,500.00
	3,977,563 33
" Bills payable and receivable—balance of this account.....	93,937 88
" Income account—balance of this account.....	415,011 00
	\$9,343,712 21
1853.	Cr.
Dec. 1. By Construction, purchase of road.....	\$2,000,000 00
" Construction, No. 2, expenditures since purchase.....	6,558,388 32
" Cash in hand of Edwin Noyes, Supt.....	212,403 97
" Cash in hand of U. Tracy Howe, local Treasurer,	119,284 59
" New Albany and Salem R. Co.....	378,010 00
" Steamboats now building.....	60,166 68
" Cash on hand.....	15,008 65
	\$9,343,712 21

RECEIPTS OF THE ROAD.
Income Account.

1853.	Dr.
June 30, To Receipts.....	\$ 88,880 20
July 31, " ".....	116,942 97
Aug. 31, " ".....	122,968 87
Sept. 30, " ".....	137,260 64
Oct. 31, " ".....	177,662 58
Nov. 30, " ".....	258,205 68
	\$901,870 94

Dec. 1, To balance of this account... \$415,011 00

CONTRA.

1853.	Cr.
June 1, By balance of account per report this day.....	\$ 14,335 45
June 30, " Operating expenses.....	41,939 01
July 31, " ".....	53,875 16
Aug. 31, " ".....	54,738 32
Sept. 30, " ".....	49,689 91
Oct. 31, " ".....	58,540 80
Nov. 30, " ".....	104,153 67
" Interest and Miscellaneous,	109,587 62
" Balance.....	415,011 00
	\$901,870 94

E. E. GEO. B. UPTON,
Treasurer.

Boston, Dec. 1, 1853.

New Car Seat.

We were shown recently at Bridges & Brother's, 64 Courtland Street, an invention by one of that firm, intended to make the common car seat adjustable for night and day riding. By pressing a single knob in the seat-back, the latter is elevated or depressed, and with the important advantage of obtaining greater inclination when raised for a night seat. The position of the back is controlled by bent rods, working through eyes in the forked ends of the ordinary rocker which carries the back. The whole cost of the application of this improvement to the common double seat, will not exceed two dollars, or say \$60 for a car. Several forms of adjustable seats have been proposed, and among those in use are some wherein the back is thrown forward when elevated, giving anything but the position desirable for repose. The simplicity, cheapness, and above all, the comfort and manageability of Mr. Bridges' improved seat, make it worthy of adoption by railroad companies, and the approval of all night bound travellers.

Wilmington and Manchester Railroad.—Important Connection formed.

The Wilmington and Manchester Railroad, connecting the roads of South Carolina and Georgia with those of the Northern States, and obviating the sea route between Wilmington and Charleston, has been completed, with the exception of the Bridge over the Peedee River, and is open for travel. There is no more important connecting link between the railroad systems of different portions of the country than the above, and none that will contribute more to the convenience and comfort of the travelling public. The road has been constructed at very low cost and has sources of lucrative business both in a through and local traffic. Travellers can now go from New York to any part of South Carolina and Georgia upon a continuous line of railroad, avoiding all the delays, annoyances, and dangers of the outside route.

Large Consumption of Coal.

A Correspondent of the Philadelphia Register, writing from Pittsburgh, makes the following estimate of the amount of coal annually used in, and exported from that city:

Amount of coal consumed in and about the city of Pittsburgh..... 22,205,000 bushels
Amount of coal exported from Pittsburgh to other places. 14,408,921
Total..... 36,708,921 bushels

Ohio.

Scioto and Hocking Valley Railroad.—Forty four miles of this road, from Portsmouth to Jackson were completed, and trains run through on Oct. 1st, 1853. Since then the earnings of that portion have been from eight to ten thousand dollars per month. The rolling stock is small as yet, comprising but three locomotives, two passenger and forty freight and platform cars. This will be soon increased to meet the increasing business of the road. On that portion of the road already in use there are seven blast furnaces and one forge in operation, and four new furnaces are building. There is also a large rolling mill at Portsmouth for which these furnaces supply the pig metal.

The balance of the road from Jackson to Newark, 91 miles, is under construction by the con-

tracting firm of Seymour, Moore & Co. More than one half of this distance is already graded and the rest is in rapid progress. It is expected that the whole will be opened in July, 1855.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with

their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Rail Road Letting.

PROPOSALS will be received at the Office of the Company in the City of Evansville, Indiana, until 6 o'clock, P. M., of Wednesday, 15th day of February, 1854, for the Grubbing, Grading and Bridging of that part of the 1st Division of the EVANSVILLE, INDIANAPOLIS, AND CLEVELAND STRAIGHT-LINE RAIL ROAD, Extending from Evansville to the Crossing of the Ohio and Mississippi Rail Road, in Daviess County, a distance of fifty-four miles.

The work will be divided into sections of about one mile each, and proposals will be received for one or more sections, or for the whole line.

Maps, Profiles and Specifications will be ready for the examination of bidders on and after the 1st of February, and all necessary information given on application to W. C. MOORE, Chief Engineer.

O. H. SMITH, PRESIDENT,
W. CARPENTER, VICE PRES.

Evansville, Jan. 2, 1854.

NEW YORK & ERIE RAILROAD.

New York, December 31, 1853.

THE NEW YORK & ERIE RAILROAD COMPANY, have for sale on favorable terms, the following Schedule of Rolling Stock of the Gauge of

FOUR FEET, TEN INCHES,

all of which can be delivered immediately.

It can be seen at Paterson, and is the entire stock of the Union Railroad, the Paterson & Ramapo Railroad, and the Paterson & Hudson River Railroad.

Reasonable credit will be given on the above, on satisfactory security.

CHAS MINOT, Sup't.

SCHEDULE.

ENGINES.	MAKER.	CYLINDER.	STROKE.	WHEEL.	CONDITION.
R. L. Colt...	New Jersey Locomotive Co.	16	20	5 feet	Good.
Union.....	Rogers, Ketchum, & Grosvenor.	15	20	6 "	Good.
New York...	do. do.	14½	18	6 "	Good.
Ramapo.....	do. do.	14½	18	6 "	Wants painting & small repairs.
Passaic.....	do. do.	14½	22	5½ "	do. do. do.
Paterson.....	do. do.	12	22	5 "	do. do. do.
Whistler.....	Made in Baltimore	11	16	5 "	Wants much repairs.
McNeil.....	Made in Liverpool.....	9½	16	4 "	In bad order.
CARS.	DESCRIPTION.	BY WHOM MADE.		CONDITION.	
2.....	Passenger, 8 wheels.....	Cummings & James, Jersey City.	Good.		
2.....	do. 8 do.	Wm. Cummings, Jersey City.....	Good, but wants painting.		
2.....	do. 8 do.	Tracy & Fales, Hartford.....	Very good.		
4.....	do. 8 do.	Springfield Car & Engine Co.	Good, but three want painting.		
2.....	do. 8 do.	A. T. Pearce, Norwich.....	Good.		
2.....	do. 8 do.	Eaton & Gilbert, Troy.....	Want repairs.		
1.....	do. 8 do.	New York & Erie R. R. Co.	Good, new.		
1.....	Baggage, 8 do.	do. do.	Good.		
6.....	do. 8 do.	Unknown	Want small repairs.		
1.....	do. 6 do.	do.	do. do.		
8.....	Box freight, 8 do.	New York & Erie R. R. Co.	Good.		
18.....	do. 4 do.	Unknown	Want small repairs.		
16.....	Platform, 8 do.	New York & Erie R. R. Co.	Good.		
9.....	do. 4 do.	Unknown	Want considerable repairs.		
1.....	do. 6 do.	do.	do. do. do.		
2.....	do. 8 do.	do.	do. do. do.		

Notice to Contractors.

WARSAW & ROCKFORD RAILROAD.

THE preliminary Surveys are now complete for the First Division, (about 120 miles) from Warsaw, through Nauvoo, Oquawka, Keithsburg, Rock Island and to Port Byron, including both Rapids of the Mississippi, and the location progressing. The character of the country is such, and the surveys so near to any location that will be made, that Contractors can satisfy themselves of the value of the work as well now as hereafter. Proposals are asked at the Office of the Company in Warsaw, Hancock County, Illinois, for the construction of the whole or part of the road, either by quantities or by the mile. Contract will not be made before the 1st of January, 1854, and only so soon thereafter as advantageous offers can be made. The Company are willing to make general contract, for cash or for cash and securities.

The route of the road is generally in the valley and second bottoms of the Mississippi, and the work can be completed very rapidly. The road is important as one of the improvements of the navigation of the Rapids, and also from its several (two at least) connections with other railroads.

WM. H. ROOSEVELT,
President.
W. R. KINGSLEY,
Engineer.

T. S. O'SULLIVAN,
Consulting Engineer.
Warsaw, Nov. 17, 1853.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Norfolk, Va., Jan. 8, 1854.

SEALED PROPOSALS will be received by the undersigned at this Office, from the 1st until the 20th day of March next, at sundown, for the "clearing" and "Graduation" on the line of the "Norfolk and Petersburg Railroad," between that portion of said road now under contract, and its terminus at Petersburg—covering a distance of about eighteen miles; also, for the "Culvert" and "Bridge" Masonry of the last section of said work.

At the same time, sealed proposals are invited for the "Abutment" Masonry of "Bridges" over the Eastern and Southern branches of Elizabeth River.

The work will be divided into sections of about three miles, and bids may be made for one or more of said sections.

The line, plan, profiles and quantities of work will be ready for examination on and after the 1st of March.

Specifications with forms of contract and proposal may be had of the undersigned after date.

Payments will be made in current funds during the progress of the work, in proportion of four-fifths of the amount due.

Of bidders personally unknown to the undersigned, evidence of their responsibility will be necessary; and of those to whom work shall be allotted, will be required bond and approved security in an amount not exceeding one-twentieth of the amount of their contract, for the timely and faithful execution of the same.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

The line is easy of access, the country through which it passes abundant in supplies and of a climate highly favorable for the prosecution of work at all seasons.

The work here offered for contract is of a character well worthy the consideration of the most responsible contractors.

W. MAHONE,
Chief Engineer.

January 19.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 4.]

SATURDAY, JANUARY 28, 1854.

[WHOLE No. 928, VOL. XXVII.

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Erie Riots.....	49
Mechanical and Financial Disadvantage of Grades upon Railroads.....	50
State Finances.....	52
New York and Erie Railroad.....	56, 55
Blake's Fire Proof Paint.....	60, 58
Indiana Central Railroad.....	58
Greenville and Miami Railroad.....	58
Railroad Competition in the West.....	58
Journal of Railroad Law.....	59
Buffalo and New York City Railroad.....	60
Boston and Providence Railroad.....	61
Western Railroad.....	61
Testing Railway Axles.....	61
Sunbury and Erie Railroad.....	62
Macon and Western Railroad.....	62
Philadelphia, Wilmington and Baltimore R. R.....	62

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, January 28, 1854.

The Erie Riots.

The Hon. Mr. Darsie, representing the city of Pittsburgh in the Senate of Pennsylvania, has reported a bill, which has passed that body unanimously, repealing the charter of the Franklin Canal Company.

Pennsylvania has made herself the prominent party in the Erie affair. The Erie rioters attacked and destroyed only portions of a road, the State aims a blow at a whole line.

It is difficult yet to say whether the State intend to destroy the road, or to seize it, and its franchises, as so much spoil to turn into its own coffers. We have no doubt a majority of the State are in favor of breaking up the road as a measure of cutting of New York and the New England States from the West altogether; or at best, of compelling all communication between the above sections of the country to be subordinate to the supposed interests of the State, and of Philadelphia.

Whatever may be the result, there can be no doubt that the right to build or operate a railroad through Northwestern Pennsylvania over the line of the Lake Shore road, will be coupled with con-

ditions, onerous in the highest degree to the stockholders and the public.

What are the real grounds upon which the above road is to be seized, or heavy burdens imposed upon the right to operate it? Precisely the same that lead Pennsylvania to impose an annual tax of \$10,000 upon the Erie Company for the privilege of entering that State with their road. The taxable property of Pennsylvania is to-day, \$25,000,000 greater for the Erie road, which is compelled to pay a severe penalty for benefitting those that impose it. The Franklin Canal Company's road has also added very largely, though in a less degree to the taxable property of the State. Not a soul has been aggrieved by its construction. Not an interest but what has been benefitted, the borough of Erie particularly. The Company believed they had legal authority for their acts. If they erred, it was under misapprehension. In no other State would such a misapprehension have been taken advantage of. So anxious are our people for railroads that they are eager to make valid any mistakes of companies committed without any improper intent, and whereby no one is injured; and in many cases would gladly allow companies to build railroads without any charter at all.

Pennsylvania, by interposing herself between the two extremes of the country claims the right to levy toll upon all passing through her territory. This right she has already exercised in the case of the Erie road, and claims to extend it so far as to destroy a railroad running through her soil.

Having stated the grounds of the controversy, it may be well to inquire who are the real parties to it. Those who are most to be injured are the people of the Western States, and the owners of railroad property.

New York and the New England States, being manufacturing and commercial communities, constitute the great markets for the agricultural portions of the country. For those reasons, they are better markets for the West than either Pennsylvania or Maryland. But in seeking to send his products to the former, the Western farmer and merchant is told that he cannot pass through Pennsylvania without being subject to a heavy local taxation. Upon reaching Erie he is compelled to pay a certain sum upon every barrel of

four and bushel of corn, upon all kinds of stock, in fact upon everything moved, as a local tax to that place. This tax has two objects;—to wring something out of the forwarder for the benefit of a particular locality, and as a means of forcing him to trade to Philadelphia, against his interests and his inclination. This tax is in violation of his rights as a citizen, in violation of the spirit of the Constitution, and may be so excessive as to cut him off from his markets altogether. According to Gov. Bigler's doctrine, every little town may insist upon a break of gauge for the plunder it can gather out of it. The whole State in this way may be converted into a community of wreckers, living upon the misfortunes of their fellows. A caravan traversing the barbarous tribes of Asia or Africa is not more exposed to insults, to vexatious delays, to personal inconvenience, or to the danger of having their property destroyed than will be a person passing through Northern Eastern Pennsylvania, when the policy advocated by Gov. Bigler shall be practically applied.

Will the Western people submit to the degrading conditions imposed for the right to pass through Pennsylvania on the way to market? Can they be forced to take Philadelphia in their route in going from East to West? Will they not, at every cost, seek to do defeat the object for which they are taxed? Such is human nature. The whole State of Pennsylvania, if she sustains the doctrines of Governor Bigler, will literally stink in the nostrils of the Western people. We think we know enough of West States to say that for every dollar spunged out of them, the State of Pennsylvania will lose ten, by the withdrawal of a hitherto profitable intercourse.

As it is, the Western people must have suffered severe losses by the interruptions suffered thus far at Erie. The forwarding of Western produce to market has been annihilated. The earnings of Western as well as Eastern roads, have been largely reduced. The former have particularly suffered in consequence of the detention, East of Erie, of a large number of locomotives ordered by them and almost indispensable to their daily wants.

The next class of sufferers are the owners of railroad property. The general application of Governor Bigler's doctrine would destroy its value

throughout the country. At the very announcement of such extraordinary doctrines, it is natural that capitalists should take alarm. It is well known that in this city the holders of Pennsylvania securities of all kinds are running them off quietly, but as rapidly as possible. Correspondents of foreign houses are taking the same views that we have expressed, and are advising their principles not to touch a security issued on account of a Pennsylvania Road. This distrust is the natural result of what has taken place, and will soon become general throughout the moneyed circles both of this country and Europe.

In this view of the case, we are astonished at the move made by Mr. Darsie. Of the plunder to be gained by taxing Western commerce, Pittsburgh could only expect to reap a small share. But she has a great interest at stake in the numerous and important lines of railroad which she is proposing to construct, and in the success of which she is deeply involved. Except for the money they can get within their own State, these projects are as dead as a herring. As far as the general markets are concerned, the Pittsburgh companies might as well come before the public with projects for railroad to the moon. Mr. Darsie undoubtedly thinks he has put a feather in his cap. If he has, it is one purchased at the expense of the Pennsylvania railroads. If he has any doubt as to the correctness of our opinions, we advise him to make a trial of the market. If in the end, he does not come to the conclusion, that Pennsylvania is to be the great sufferer by the Erie riots, we will confess that our own opinions are entitled to but very little consideration.

Mechanical and Financial Disadvantage of Grades upon Railroads.

BY ZERAH COLBURN.

Resistance is inseparable from locomotion.—Without resistance, locomotive power would not be required on Roads nor Railroads. Improvements in the means of communication consist in the reduction of resistance. If the resistance be diminished, less power is required, and the carriage is performed with less cost. The result is economy of transportation.

It is by its reduction of resistance that the level Railway is superior to the level Highway, the relative power of operation being as about eight to one. There is one kind of resistance, however, often incurred, and which is always the same in amount whether developed upon a railroad or highway. That is the resistance of gravity upon inclinations. A rise of eighty feet in one mile *always, upon any description of road*, requires an amount of power for its ascension, equal to one *sixty-sixth* part of the weight of the load elevated. So also of other grades; each involves its corresponding and immutable relation being weight raised and opposing gravity.

The most important consideration of grades is their *relative resistance*, compared with the *whole resistance* of the load moved. Suppose the resistance of a load moved on a level railroad to be 1-240 of the weight; a rise of 22 feet per mile would involve an equal resistance, so that the power required would be *doubled* on a grade of 22 feet per mile, *trebled* at 44 feet, *quadrupled* at 66 feet, *quintupled* at 88 feet, *sextupled* at 110 feet, *septupled* at 132 feet and *octupled* at 154 feet; so that the number of engines of equal power, re-

quired to do the same work on the respective level and grades would be 1, 2, 3, 4, 5, 6, 7 and 8.

On a Highway the resistance on a level would be, say 8-240 or 1-30th of the load, and the power required, would be *doubled* only upon a grade of 176 per mile, or 1 in 30. The relative resistances of levels, and grades of 22 feet per mile, would therefore be as 1 to 2 on railroads, and 8 to 9 on common roads.

It is owing to the greater *relative* resistance of grades on railroads, that only low grades are admissible where economy is sought in their operation.

The relative resistance of grades is influenced by the speed of the trains run. The resistances of friction, concussion and of the atmosphere are not the same at different speeds. The sum of these resistances are found to *increase* in a higher ratio than the speed; some engineers allowing that they increase as the *squares* of the speed. If we assume that the resistance of gravity in any period of time, is directly as the velocity and other resistances as the square of the velocity, it is evident that the relative resistance of gravity on any given inclination, is much less at the speeds of accommodation and express passenger trains than at that of ordinary freight trains. Hence the importance of the consideration of grades with reference to freight transportation.

The mechanical disadvantage of grades is proportional to their elevation. Their financial disadvantage is influenced by their disposition, in relation to the road and to the direction of movement of the heavy business. It depends also upon the capacity of the motive power, or otherwise upon the weight of the trains. In respect to the disposition of grades, the greatest economy of operation is had by grouping them into the shortest limit practicable for the working of locomotives. Lines with steep ascents, surmounting a single summit, and otherwise nearly level, are more cheaply worked than lines having much lower grades but of a generally undulating character.

The disposition of grades has been the subject of much discussion among Engineers, although Stephenson, and others of nearly equal celebrity, long since adopted the principle of grouping the gradients, in preference to distributing them over the line of road. Had not practice exhibited the economy of the application of this principle, its defence might be a matter requiring much more than a brief assertion. As it is, I conceive that the practical operation of roads, having both grouped and distributed grades, affords the best general illustration of the case. It may be specially illustrated by a supposition as follows:

A railroad of 100 miles length overcomes a rise and fall of 1050 feet. By an uniform grade the inclination will be $10\frac{1}{2}$ feet per mile; or, 85 miles may be preserved level and the remainder may incline 70 feet per mile. If the resistance of freight trains be 8 lbs. per ton on a level, it will be $12\frac{1}{2}$ lbs. on a grade of $10\frac{1}{2}$ feet per mile. An engine capable of drawing a train of 500 tons on a level could draw but 320 tons on the uniform grade.—Were there to be 1,000 tons of cars and freight moved each way, daily, four engines would do it in one case and six in the other. Each engine would cost \$30 daily for running besides its proportion of depreciation of track. If four engines, however were allowed to run 85 miles each with full trains,

and one heavy engine would suffice to work as assistant engine each way on grades, \$30 would be saved daily. But a grade engine would be much cheaper to maintain than the others, costing less for repairs and attendance, while in the situations where grades are most likely to be encountered, fuel is generally much cheaper than at the business termini of a road.

The saving however does not stop here. The trains being reduced in number, the wages of two conductors, and of two brakemen who must always ride, one on the *last car*, are saved. The repairs of track being very much proportional to the mileage of engines, are reduced, as only 460 miles are run daily in one case against 600 in the other. Another consideration of great importance is that of reducing the number of trains and consequently their frequency of arrival and departure. Where it is necessary, on account of a grade, to run two trains on one division to make up a single train on an adjoining division, the interval of time between the trains cannot be great, and accidents are more likely to occur. The "ten minutes rule", the observance of which is at the foundation of safety, is likely to be disregarded where two trains are dispatched within 10 minutes of each other, and are expected to unite at the other end of the division.

The Delaware Division of the Erie Railroad is 104 miles long, and has a total rise and fall of 1,389 feet, equal to 13 feet per mile of uniform grade. 829 feet of this rise and fall occur in $15\frac{1}{4}$ miles, giving an average of 5 4-10 feet grade per mile for the remainder of the distance. Allowing the resistance on a level to be 10 lbs. per ton, that on the 5 4-10 feet grade is 12 3-10 lbs., while that on the 13 feet uniform grade would be $15\frac{1}{2}$ lbs. Compared with 500 tons on a level, the same power would draw 407 tons on the 5 4-10 feet grade and 322 tons on the 13 feet grade.

Two engines of powerful model, but of plain and cheap construction, are employed on the steep grades (60 feet per mile) between Deposit and Susquehanna. These engines ran an average of 41 miles each, per day, for 313 days, during the year ending Sept. 30th, 1853. The cost of repairs of these engines, during the same time, averaged \$880 each, while the average of the 29 other engines employed on the Delaware Division was \$2,445.

The comparisons I have made, however, assume that any other route giving a system of uniform grades shall have the same total amount of rise and fall. Such a case, however, could not always occur in practice. In tampering with routes to secure a lower ruling grade, the *total rise and fall* is almost always increased. In the case of the Erie road; extending the Delaware Division $22\frac{3}{4}$ miles to Binghamton, there are about 1,435 feet of rise and fall in $126\frac{3}{4}$ miles, or 11 3-10 feet per mile. Any other route between Binghamton and Deposit, which, at the time of the location of the road, was deemed available, would have been $4\frac{1}{4}$ miles longer, and would have involved 1,148 feet more rise and fall; or, the whole line, from Binghamton through Ninevah, Deposit, and down the Delaware valley to Delaware, would have been 131 miles long, and would have had 2,583 feet of total rise and fall; equal to nearly 20 feet per mile, in place of 11 3-10 feet.

The financial disadvantage of grades is in-

fluenced by their disposition, for the reason that the latter governs the *disposition* of the motive power. *Concentration* of power is more economical than *distribution*. If one arrangement of grades will allow of a given work being done by 2 engines, in place of 4, working over a different arrangement, a saving is made of nearly 50 per ct. of the cost of power. The cost of locomotive power is made up principally of two elements: the *number* of engines and their *mileage*. The items of expenditure are mostly for fuel, attendance and repairs, together with interest on motive power.

To illustrate this principle more plainly we will compare the standard freight engines of the Baltimore and Ohio and of the Erie Roads. The former are of the following dimensions: 20 by 22 inch cylinders; 43 inch drivers: whole weight 57,400 lbs.; all on drivers. The Erie engines have 18 by 20 inch cylinders; 5 feet drivers; whole weight 63,000 lbs.; of which about 42,000 lbs. are on drivers. At any assumed pressure of steam, the Baltimore engines exert 90 per ct. more power than the Erie engines: and taking the diminished friction of the outside connection, and the mechanical advantage of a narrow over a wide gauge, they may be assumed to exert *twice* the power of the Erie engines. Their *practical operation* shows that they fully attain to this standard.

Now the first cost of the two engines is \$10,000 each. The repairs of all of the Baltimore engines (on "main stem") averaged for 1853, \$1,254; and for all of the engines of the Erie road, \$1,924; showing that the repairs were certainly *no more* with the more powerful engines used on the Baltimore road. The attendance was the same for both engines. The cost of fuel cannot be exactly compared, but there are reasons why it should not be in the same proportion as the difference in tractive power. It would not, probably, under the same circumstances as on the Erie road require over \$1,500 worth more of fuel for the Baltimore than for the Erie engine;—allowing the cost for the latter to be \$3,500 yearly.

Suppose the Erie engine to be loaded for a level, a load, we will suppose, equal to two-thirds of the ultimate power. Attaching another engine of twice the power of the Erie engine, the expenditure of the ultimate power of both would carry the train over 60 feet grades. If the proportion of length of grades to whole length of line was as one to six, the corresponding uniform grade would be 10 feet per mile, requiring 3 engines to do the same work as 2 engines on a level. The result of this case is the same as the one previously assumed; 4 engines and a "pusher" by one system would do the work of 6 engines by the other.

But the economy of heavy engines is most apparent where they are employed on grades of between 20 and 30 feet per mile, to do the business, which, upon a level would work to their full capacity other engines of but half the power. Here, the number of trains required is diminished *one half*.

The direction in which grades present themselves to the heavy business of a road is important in its influence upon their financial disadvantage; but in the case of roads which overcome "summits", to reach which grades of nearly equal pitch must be adopted on each side, the direction of the preponderating freight is immaterial.

The problem of the equation of grades depends

then not only upon the disposition of grades and their direction with reference to the heavy business, but also to the capacity of motive power employed.

As a practical illustration of the equation of grades, the line and business of the Erie road may be taken.

The following is a table of the maximum grades of the Erie road, in both directions, between the stations named.

Stations.	Distance at art. miles.	Distance of latter from Pier- mont Pier. miles.	Grade West. feet.	Grade East. feet.
EASTERN DIVISION.				
Piermont to Blauvelt- ville.....	3.46	4.51	50	—
Blauveltville to Suff- erns.....	13.41	17.92	60	59
Sufferns to Chester....	23.22	41.14	50	58
Chester to Otisville....	20.36	61.50	60	56
Otisville to Delaware..	12.69	74.19	—	45
DELAWARE DIVISION.				
Delaware to Deposit....	88.47	162.66	15	—
Deposit to Gulf Sum- mit.....	7.28	169.94	58	—
Gulf Summit to Sus- quehanna.....	8.24	178.18	—	60
SUSQUEHANNA DIVIS-ON.				
Susquehanna to Corn- ing.....	98.60	276.78	10	5
Corning to Hornells- ville.....	40.79	317.57	10	—
WESTERN DIVISION.				
Hornellsville to Almond Summit.....	12 $\frac{3}{4}$	330 $\frac{1}{4}$	50	—
Almond to Andover... 4 $\frac{3}{4}$		335	—	40
Andover to Phillips- ville.....	16 $\frac{1}{2}$	351 $\frac{1}{2}$	—	40
Phillipsville to Belvi- dere.....	3 $\frac{1}{2}$	355	23	—
Belvidere to Cuba Sum- mit.....	8 $\frac{3}{4}$	363 $\frac{3}{4}$	49	—
Cuba to Olean.....	17	380 $\frac{3}{4}$	35	39
Olean to Great Valley..	16	396 $\frac{3}{4}$	25	15
Great Valley to Dayton Summit.....	25 $\frac{1}{4}$	422	30	40
Dayton Summit to Dun- kirk.....	23	445	35	40

The total rise and fall in 445 miles is 8,056 feet. Equating this to a level, by the use of Latrobe and Knight's rule (8,056÷52.8) gives 151 miles additional length of line, or 445+151=596 miles total length.

It must be recollected, however, that the practical application of Latrobe and Knight's rule is the nearest correct where the ascent is equal in amount and in rate, and the business equal in extent, and to the power, in both directions. It is framed, also, only for trains whose friction and concussion resistance on a level is 11 2-10 lbs. per ton; about the resistance of freight trains at slow speed. It is based on an assumption that nothing is gained by descending a grade; and which is true in all except in the consumption of fuel. One mile of road, rising 52.8 feet, is by this rule equal to two miles of level; and by analysis, if it cost \$100 to move a given weight on the mile level, it will cost \$300 one way and \$100 the other on the grade of 52.8 feet; the gravity on which is twice the resistance on a level. The average is of course \$200, or twice the cost, or equivalent in cost, twice the length of the level. It is equivalent to twice the cost if three engines and three trains are run one

way and one the other way to take the load, but it is not twice the length in point of time.

The practical operation of the Erie road shows it to be *longer*, in point of cost of transportation, than the whole distance which an equation by the preceding rule would assign it. The recent report of the Directors of the Erie company says that "the same engine will haul, with the same case, sixteen cars on the Western Division, forty on the Susquehanna Division, twenty-five over the Delaware Division, (with the exception of a short distance where an assisting engine is used,) and fourteen over the Eastern Division."

The ruling grade of the Susquehanna Division is 10 feet, equal to at least one-third of the resistance on a level, so that the same power that now draws forty cars would draw 40×4-3=53 cars on a level. The Susquehanna Division is therefore equal to 140×53-40=185 miles of level; the Delaware 104×53-25=220 $\frac{1}{2}$ miles; the Eastern 74×53-14=280 miles, and the Western 127×52-16=420 $\frac{1}{2}$ miles, or in all 1,106 miles, or 661 miles more than the real distance.

Allowing that the trains now drawn over the Susquehanna Division are as heavy as could be taken over a level road, then the relative expense of transportation would make the Eastern Division 211 miles long, the Delaware 166 $\frac{1}{2}$ miles, and the Western 317 $\frac{1}{2}$ miles; 835 miles in all, or 390 miles more than the actual distance.

The practical working of freight trains upon the Erie road shows it to be at *least* 87 $\frac{1}{2}$ per cent. longer by equated than by actual distance.

It has been already shown why the passenger transportation is not affected in the same proportion. The Erie road is, however, a *freight* road the preponderance of freight over passenger earnings, for 1853, being about 50 per cent. The freight business fulfils all the conditions required for the practical equation of the length of the road, inasmuch as the freight is about equal to the capacity of the engines on the Delaware and Susquehanna Divisions, while it is such that on the Eastern Division the trains are divided and taken over by two or three engines instead of one. As the ruling grades of the Eastern Division meet the heavy business *either way* there is nothing in that to effect the results of an equation.

The next consideration affecting the financial disadvantage of grades is the *capacity of motive power*. Having shown that the items in the cost of motive power are nearly proportional to the *number* and *mileage of engines*; (and it may be said also that *train expenses* are nearly proportional to the number of trains run) it appears that trains could be taken much cheaper over an undulating portion of road, by an engine specially adapted thereto, than by dividing the train and using two or three engines which are intended only for levels. A freight engine suitable for moving 600 tons on a level cannot run regularly, 80 miles per day, for much if any less than \$33, daily; wood being \$4 per cord, prepared for the engine. Two engines would cost \$66, while an engine of twice the steam power could be run for \$45, equal to a gain of \$21 per day. Adding gain in train expenses, say \$4, \$25 daily is saved. A heavy engine, if the weight is properly *distributed*, will not wear the track any more than a much lighter one, while there are means of materially increasing the power of an engine where power alone is

wanted, without proportional increase of weight.— Upon these considerations it may be assumed that the use of one heavy in place of two lighter engines will save very considerably in track repairs, so that the whole saving by the use of a single engine cannot be estimated at less than \$30 daily.— There is always, in addition, the far greater safety of a single train, compared with two separate trains, one immediately behind the other.

The results, presented in the working of the Erie Railroad, agree so exactly with the deductions from the principles laid down, that the case of that road must be used as an illustration. The great length and business of that line, its variety both of extent and character, of grades, and their influence on the freight transportation, are all so conclusive in the consideration of grades that any discussion is incomplete until their practical results are known.

The power of the freight engines used on the Eastern Division of the Erie road, encountering 60 feet grades, does not average but a very little greater than that of the engines on the Delaware Division, the latter having 15 feet grades. Consequently two or three trains have to be despatched over the Eastern to make up one train at Delaware, for the Delaware Division. The Eastern has 20 freight engines for 74 miles, the Delaware 20 freight engines for 104 miles. The number of miles run by freight engines on the Eastern Division; for the year ending Sept. 30, 1853, was 315,742, equal to 15 trips over the road every day for 313 days. The miles run by freight engines on the Delaware Division were 291,955; equal to 9 trips over the road every day for 313 days. There are six trips run over the Eastern Division, every day, more than over the Delaware Division the latter receiving and giving the business of the Eastern. Allowing \$30 extra is expended on each of these six trips, over the expense incurred where these trips are saved by using more powerful engines, the daily loss is \$180 or \$56,340 yearly.— The want of engines, adapted to do the same work upon the Eastern, Delaware and Western Divisions of the Erie road, as other engines now in use can perform on the Susquehanna Division, costs that Company, there is no doubt, \$100,000 per annum.

What this adaptation should be can be inferred from the comparison which has been given of the Erie with the Baltimore and Ohio engines. The Erie has every advantage for increasing the power of its engines within the increased room offered by its gauge, and it is a matter of some surprise that in an equipment so extensive as is now under construction, a better adaptation has not been secured.

Prizes to Engineers.

The Little Miami and Columbus and Xenia Railroad Company offered a series of prizes for competition among the engineers on that road, in January last. Yesterday the prizes were awarded, and the following is a list of the successful competitors, together with objects of the company's prizes:

1. To Mr. Albert Watts, for having run the greatest number of miles without accident, a silver pitcher.
2. To Jeremiah Cloman, the second prize for same, a silver goblet.
3. To Reuben Watts, for having run his engines at the least cost for repairs, a silver pitcher.
4. To Charles Bronnell, the second prize for same, a silver goblet.

5. To Richard Bromley, for care, skill, and good conduct, a silver pitcher.
6. To Charles C. Bemy, the second prize for same, a silver goblet.
7. To Edwin Thurston, the third prize for same, a silver goblet.—*Cincinnati Times.*

State Finances.

PENNSYLVANIA.

Gov. Bigler's message, read before the two Houses at Harrisburg, January 4th, gives the following statements:

The receipts at the treasury for the year 1853, exclusive of loans, and including the actual balance in the treasury on the first day of December, 1852, (being \$671,037 72,) amounted to the sum of \$5,952,474 47.

The payments for the same period, exclusive of loans and other extraordinary expenditures, make a total sum of \$4,134,048 47, being \$1,818,326 10 less than the receipts. Of this excess, \$505,057 55 was paid to the Commissioners of the sinking fund, and \$589,000 towards the payment of old debts and the construction of new work on the North Branch canal and Portage railroad, which, together with the balance in the treasury applicable to the redemption of outstanding loans, reduces the actual balance on the first day of December last, to the sum of about six hundred and twenty-five thousand dollars, to be used in the payment of the February interest.

Estimated receipts for 1854, including balance on hand, \$5,846,417 34.

The expenditures for the same period, including \$250,000 for the payment of old debts on the public works, and \$300,000 for the sinking fund, should not, and if proper care be taken, will not exceed the sum of \$4,500,000, leaving a balance in the treasury on the first of December, 1854, of \$1,340,417 34. Deducting from this \$625,000, the amount that should remain in the treasury to meet the interest due February 1, 1855, and we have a surplus revenue of over \$700,000.

Total funded debt Jan. 4th, 1854. \$40,272,235 01
Increase of same over Dec 1st, 1851. 117,777 53

It should be observed that, by the cancellation of six per cent. bonds, we have a saving of \$20,000 annually to the treasury, which is equivalent to a virtual payment of 400,000 dollars of the 5 per cent. bonds. The amount thus saved will be a permanent resource, without making any exaction from the people, and constitute a substantial addition to the sinking fund. It will be a virtual reduction of the public debt to the amount of \$282,222 47.

The floating liabilities of the Commonwealth, and current demands upon the treasury at this time, are:

Railroad and canal debts	\$327,734 00
Temporary loans	590,000 00
Unpaid appropriations	305,695 00
	1,223,429 00

Diminution of floating liabilities since Dec. 1851..... \$177,661 15

During the years 1852 and 1853, the following appropriations and payments have been made, towards the construction of new improvements:

For re-laying the north track of the Columbia railroad	\$355,500 00
For the construction of a new road to avoid the inclined planes on the Alleghany mountains	656,034 90
For the completion of the Western reservoir	52,880 41
For the North Branch canal	1,000,000 00
For the new locks on the Delaware Division	80,000 00
Total	\$2,143,915 31

OHIO.

Gov. Medill's message of January 2d, has the following statements.

It appears from the Auditor's Report, that the receipts into the State Treasury for the fiscal year ending November 15, 1853, have been as follows—

General revenue for State purposes, collected upon the duplicate of 1852	\$1,687,798 39
Canal tolls and water rents	606,165 62
Dividends on turnpike, canal, and railroad stocks	73,835 90
Sales of canal lands	9,402 21
Sale of lands by Board of Public Works	7,897 44
Surplus revenue, principal and interest	134,187 19
Tolls on National Road	35,354 40
Tolls on Maumee Road	10,462 96
Re-payment of railroad loans	145,810 00
Sales of school and ministerial lands	149,390 73
Rents on Virginia military school lands	3,105 09
For use of Commercial Hospital	464 00
Miscellaneous	3,265 67
Total	\$2,866,139 61
Balance in Treasury, Nov. 15, 1852	593,041 77

Total amount applicable to disbursement of 1853..... \$3,459,181 38

The disbursements, during the same period, have been—

For expenses of the State Government	\$538,995 86
Repairs upon public works	449,871 26
Interest on foreign public debt	\$896,457 62
Domestic debt	19,019 21
School and trust funds—being irreducible debt and rents on Virginia military school lands	109,770 98—1,025,247 71
Redemption of Domestic debt	104,679 00
Redemption of foreign debt	219,791 47—324,470 47

Investments by fund Commissioner in United States stock	123,408 53
Common school fund paid to counties	200,002 00
Repairs on National Road	36,520 46
Ohio canal tolls, paid Sandy and Beaver canal	2,602 54

Total disbursements during the year	\$2,696,118 83
Balance in the Treasury, Nov. 15, 1853	763,062 55

The various amounts assessed on the duplicate of 1853, were as follows:

For State purposes 5 1-10 mills	\$3,022,586 72
County, township, poor, bridges and building	2,004,263 49
Roads	269,788 89
School, and school houses, special	982,811 80
Other special taxes	118,083 16
Cities, towns and boroughs	984,149 07
Railroad Taxes	226,378 92
Delinquencies of the preceding year, with forfeiture and penalty	246,104 46
Total	\$7,801,166 54

The entire debt of the State, outstanding Nov. 15th, 1853, was as follows:

Foreign.

Five per cent. stock payable Jan. 1st, 1857	\$150,000 00
Five per cent. stock payable Jan. 1st, 1866	1,025,000 00

Total of five per cent. stock... \$1,175,000 00

Six per cent. stock payable Jan. 1st, 1857.....	3,292,132 24
Six per cent. stock payable Jan. 1st, 1861.....	6,666,335 53
Six per cent. stock payable Jan. 1st, 1871.....	2,183,531 93
Six per cent. stock payable Jan. 1st, 1876.....	1,600,000 00

Total six per cent. stock.....\$13,742,000 70

Total.....\$14,917,000 70

Domestic.

Ohio Canal stock, Faith and Credit Bonds, loan of 1842.....	839 00
Miami Extension Loan Bonds, loan of 1842.....	926 00
Canal, School and ministerial Bonds, loan of 1846.....	100 02
National Road stock.....	578 68

Total, over due.....\$2,443 70

Miami Extension Canal Stock, Faith and Credit Bonds payable after 1863.....	\$224,500 00
Miami Extension Land Bonds, payable after 1863.....	74,185 00

298,685 00

Total.....\$301,128 70

Amount of irreducible debt, arising from school and trust funds, held by the State upon which six per cent interest is payable, annually forever.....\$1,988,323 29-2

Recapitulation.

Foreign debt.....	\$14,917,000 70
Domestic debt.....	301,128 70
Irreducible debt.....	1,988,323 29-2

Total.....\$17,206,452 69-2

The following statement exhibits the value of the entire property of the State, at the several periods indicated, and affords gratifying evidence of the rapid growth of our people in all the elements of prosperity and wealth:

Year.	Value of real estate.	Value of personal prop'ty.	Total value on Grand Dupli- cate.
1841—	\$100,551,837	\$ 27,501,820	\$128,353,657
1847—	324,396,008	79,151,765	403,547,773
1854—	565,000,000	235,000,000	800,000,000

INDIANA

The Treasurer's statement is as follows:

A general statement of the receipts and expenditures during the fiscal year from November 1st 1852, to October 31st, 1853.

Total receipts into the Treasury from all sources during the year	\$1,620,943 74
Add balance on hand, Nov. 1, 1852	402,719 48

Grand Total.....\$2,023,663 22

Total amount of warrants paid at Treasury during the fiscal year,	\$1,509,305 82
---	----------------

Balance on hand November 1, 1853 \$514,357 90

Of the receipts \$660,473 99 were on account of the Wabash and Erie Canal, while \$628,118 41 of the payments were on the same account.

With the means in the Treasury belonging to other funds, the interest upon the State Debt due last July was promptly paid; the interest falling due on the first of January next, amounting to \$163,000, will be paid without a resort to loans for that purpose.

KENTUCKY.

Governor Powell's Message, of Dec. 31, 1853 has the following statements:

Receipts into the Treasury from 11th

October, 1852, to the 10th day of October, 1853.....	\$652,454 23
Add balance in Treasury 10th October, 1852.....	59,190 80

Making.....	\$711,645 03
Amount of expenses from 11th October, 1852, to 10th October, 1853..	524,012 80

Leaving in the Treasury, Revenue Department, on 10th October, 1853, 187,632 23

Of this belongs to—Revenue Fund, (of which the sum of \$60,000 has been transferred to the Sinking Fund,).....	\$96,505 11
School Fund.....	77,757 67
Sinking Fund.....	13,369 45

Making.....\$187,632 23

The sinking fund, Oct. 10th, 1852, was \$118,275 05

On the 31st of December, 1851, the public debt of the State of Kentucky amounted to.....\$5,726,307 82

Since that time, bonds have been issued to the Southern Bank of Ky. on account of stock.....450,000 00

Making.....	\$6,176,307 82
Bonds redeemed.....	29,024 00

Total debt, Dec. 31st, 1853.....\$6,147,283 82

To pay the public debt the State has the following resources, if they could be applied to that purpose: \$939,000 of stock in the Bank of Kentucky; \$290,000 of stock in the Northern Bank of Kentucky; \$40,600 of stock in the Bank of Louisville; and \$600,000 of stock in the Southern Bank of Kentucky; to which may be added \$150,000 of stock in the Lexington and Frankfort Railroad, and \$79,519 50 bonds on the Louisville and Frankfort Railroad Company—making in all the sum of \$2,094,110 50. The State has, in addition, \$2,694,239 98 stock in turnpike roads—supposed to be worth about twenty-five or thirty cents to the dollar—besides her investments in rivers, &c.,

MARYLAND.

Governor Lowe's Message has the following statements:

The fiscal year has been made to end upon the 30th of September instead of the 30th of November, as formerly. Statements are therefore given for the years ending at each of these periods.

The whole amount in the treasury, during the new fiscal year ending the 30th of September last, (exclusive of \$243,519 27, received for and credited to the several funds,) \$1,170,505 47; of which \$1,000,053 19 were the actual receipts of the year. The expenditures for the same period were \$825,147 67; and the balance in the treasury, at the close of the fiscal year, was \$345,357 80, subject to charges (inclusive of current interest on the public debt) amounting to \$342,650 98, and payable on and after the first day of October.

The whole amount in the treasury, during the year estimated to the 30th of November, (exclusive of \$299,005 56 received for and credited to the several funds) was \$1,387,972 19. of which \$1,217,519 91 were the actual receipts to that date, showing a decrease of \$62,433 36 as compared with the receipts of the year 1852.

The expenditures amounted to \$1,193,569 59; and the balance in the treasury on the 30th of November was \$194,402 60. During the same period \$55,030 68 were disbursed in aid of the Sinking Fund, and \$112,990 37 to the redemption of State Stock. If we add the two amounts last stated to the balance remaining in the treasury on the 30th of November, (\$194,402 60) it will show an actual surplus revenue for the year of \$362,429 65, after paying \$673,371 73 for interest on the public debt, and \$352,170 81 for all other purposes.

The gross amount of the new taxable basis is

\$261,243,660; which would appear to exhibit an increase of \$68,462,081 over the assessment of 1852. The actual increase, however, (making allowance for that part upon which the tax is payable directly into the treasury,) amounts to \$49,667,825.

At the close of the fiscal year, 1852, the sinking fund amounted to \$2,728,076 01; and on the 30th of November last, to \$2,922,750 87; showing an increase for the year of \$194,674 86. It is now a little over three millions of dollars.

The report of the comptroller, Henry E. Bateman, shows the State debt of Maryland to be as follows:

Contracted on account of Balt. and Ohio Railroad.....	\$3,616,043 44
Contracted on acct. of Washington Branch.....	500,000 00
Contracted on acct. of Balt. and Susquehanna Railroad.....	2,232,045 31
Contracted on acct. of Chesapeake and Ohio Canal.....	7,194,222 22
Contracted on acct. of Tide Water Canal.....	1,000,000 00
Other debts.....	590,598 03

\$15,132,909 00

Capital and credits of the State, Sept. 30, 1853:

Productive Bank Stock.....	\$518,466 66
" Railroad and Turnpike Stock.....	1,197,691 00
Productive Railroad and other Bonds and small debts.....	3,906,924 97

\$5,623,082 63

Unproductive Bonds and Stock, Interests, &c.....	17,172,634 16
--	---------------

\$22,795,716 79

Of the unproductive resources of the State, \$2,000,000 are Chesapeake and Ohio Canal Bonds; \$5,000,000 ditto Stock, and \$5,138,971 33 for interest due from that work; \$3,000,000 is Stock of the Baltimore and Ohio Railroad Company.

TENNESSEE.

Governor Johnson's message states the public debt to be as follows:

State debt proper.....	\$3,801,856
Bonds issued to Railroads....	1,945,000
U. S. surplus revenue and school fund.....	1,520,326

\$7,267,181

The prospective liabilities authorized by internal improvement bills already passed, amount to \$8,000,000, and if the internal improvement bill now before the Legislature should become a law, it will add an additional \$6,400,000 to the sum, making a total state liability of \$21,667,181 including its present and prospective debt. The amount of county and city indebtedness by the issue of bonds, is estimated at about \$5,000,000.

CALIFORNIA.

A committee of the California Legislature, appointed to ascertain the state debt, report as follows:

Bonds of 1851, payable in 1855,	\$156,500
Do. " " " 1860,	229,500
Do. " 1852, " " 1870,	1,420,000
Other debts.....	1,451,492

\$3,257,492

This is exclusive of civil warrants issued and not redeemed since July 1, 1853.

The income of the State for the year ending June 30th, 1853 was \$454,985 84, expenditures in same time were \$1,367,598 35 or \$912,607 51 greater than the receipts.

The funded debt of the city of San Francisco,

on the 22d of October, 1853, was \$1,500,000. Other debts were \$490,191 90, making a total debt of \$1,990,191 90.

The funded debt of the city of Sacramento on the 15th of November, was \$693,507 47. Add estimated deficit, April 8th, 1854, in the receipts for the current expenses of the city, \$55,856 96. Total, \$749,364 43.

TEXAS.

The report of the Controller states the receipts for the last year at \$5,701,205 17, and expenditures \$1,735,903 23. The estimated receipts of 1854, amount to (including balance in treasury) \$4,841,910 27, and the expenditures to \$726,012 35. The taxable property of the State is \$99,155,114, showing an increase of \$18,500,000 within one year.

NEW JERSEY.

Governor Fort's message presents the following exhibit of the affairs of the State.

The receipts of the treasury during the year ending December 31, 1853, were \$159,576 73. Of this sum, it appears that \$117,667 60 was from transit duties and taxes on the Camden and Amboy, Delaware and Raritan and New Jersey Railroad Companies. The disbursements of the year were \$150,760 48—balance in the treasury \$8,816 25. The estimated receipts and disbursements of this year are about the same. The State debt is only \$65,000, to defray which there are available means amounting to \$66,808. The Free School Fund is \$993,994; an increase since last year of \$17,203.

The whole receipts from public works since 1833 have been \$1,579,558; of which \$1,339,765 have been from the joint companies; \$217,883 from the New Jersey Railroad Co., and \$21,910 from the Paterson Railroad.

MASSACHUSETTS.

The report of the State Auditor shows the total receipts into the treasury, for the year 1853, were..... \$2,118,205 07

Of the above there was from bank tax and other sources of ordinary revenue..... 595,684 32
State tax of 1853, in part..... 286,605 00

The total payments for the year were..... \$2,181,379 95
Viz: Ordinary expenditures for Legislature, Salaries, &c..... 679,752 87
Expenses of Convention of 1853, in part..... 154,184 82
On account of State Prison..... 40,551 01

\$874,488 70

The balance was on loans, expenses, funds, &c., as above.

Deducting the state tax, convention and prison expenses, the deficit in the revenue for the year is \$84,068 55

The estimated revenue for the year 1854, including \$13,000 for balance of state tax and \$16,485 for cash on hand, is..... 752,380 00

The expenditures, including \$10,000 for balance of convention expenses and \$42,500 for the State Reform School, are estimated at... 764,600 00—and this sum, it is supposed, may be increased by appropriations during the session of the Legislature.

The entire debt and liabilities of the Commonwealth, including over five millions of scrip loaned to aid in the construction of sundry railroads from 1837 to 1841, is..... \$6,853,730 56

Increase during the year..... 168,000 00

The amount loaned to the several roads is amply secured, and a fund has been created to meet the payment of over \$1,100,000 of the balance.

There remains of the funded debt unprovided for..... \$475,000
And temporary or floating debt, proposed to be paid by state tax..... 220,000
\$695,000

The property of the Commonwealth, including the security held for its loan to railroad and real estate, &c., valued at \$2,079,796 amounts to..... \$11,092,457 61

Surplus resources..... \$4,238,727 05
The various productive securities in the hands of the Treasurer, including those in the Western Railroad Loan Sinking Fund, amount to \$4,421,714 27—all well secured, and averaging over six per cent. per annum.

The public lands in Maine, valued last year at \$616,000, have been sold for \$646,000, and the proceeds divided between the Western Railroad Stock Sinking Fund and the School Fund, which last amounts now to..... \$1,244,284 05

In addition to the property already noticed, the Commonwealth has a claim upon the general government, for balance of expenses during the last war, of..... \$181,000

ALABAMA.

The Comptroller's report for 1852 and 1853 gives the following exhibit.

The last biennial report exhibited a balance in the Treasury on the first of November 1851, of..... \$823,741 05

The receipts since that report have been for the fiscal year 1852..... \$599,587 35
And for the fiscal year 1853..... 664,230 82 1,263,818 17

Making total balance and receipts to 30th September, 1853..... \$2,087,559 22

The disbursements have been for the fiscal year 1852..... 665,215 08
And for the fiscal year 1853..... 186,274 46 851,489 34

Leaving a balance in the Treasury, at the close of the fiscal year, September 30th, 1853, of..... \$1,236,069 88

The expenses proper of the government have been, for the two years..... 233,048 64
Or an average annual expenditure of..... 116,524 32

The "balance" herein noted as being in the Treasury is principally composed of notes of the old State Bank withdrawn from circulation. One million of dollars may be deducted of this account. "These notes," says the report, "when in circulation are a liability against the State; when in the Treasury, only so many redeemed bonds, or evidences of debt paid. Taking this view of the subject, the real balance in the Treasury is reduced to a very small sum."

SOUTH CAROLINA.

The Governor's message presents the following statement of the debt of South Carolina.

The funded debt due by the State, on the 1st October, consisted of:

5 per cent. fire loan bonds, payable in London, 1858 and 1868..... \$937,777 78
6 per cent. fire loan stock, payable 1860 and 1870..... 805,590 15
6 per cent. of 1839, (balance past due not bearing interest)..... 8,418 30
5 per cent. 1838, balance..... 45,214 34
3 per cent. at nominal value, \$117,438 40, but at market price would amount to..... 73,986 19

\$1,870,986 76

The Treasury has paid from the Sinking Fund since 1st October, \$6,032 50 of the 6 per cents, of 1839, reducing the balance to \$2,385 80. The bank also holds of the 5 per cent. stock of 1838 the sum of \$6,679 11, and also \$7,441 53 of the 3 per cents., which was purchased with the sum of \$4,668 16. The amount of indebtedness is diminished by these several payments and purchases.

The assets of the State consist of the bank and various railroad stocks. The assets under the charge of the bank may be summarily set down as follows:

Total funds in the bank, as exhibited by the annual statement, 1st October..... \$7,919,932 49
Deduct bank liabilities, issues, deposits, &c..... 4,086,590 22

Balance, being assets, the property of the State..... \$3,833,342 27
South Carolina Railroad and bank stock..... 641,000 00
Greenville Railroad Company..... 348,000 00
Wilmington and Manchester Railroad Company..... 200,000 00
Charlotte and Columbia Railroad Company..... 69,200 00
King's Mountain Railroad Company..... 50,000 00
Laurens Railroad Company..... 34,000 00

\$5,175,542 27

In addition to the funded debt due by the State, there is due to the bank the sum of \$177,691 22 for cash paid to the South Carolina Railroad Company, when \$25 per share on the stock of that Company was called in. As the whole par value of the stock is set down among the assets of the State, it is necessary to notice this debt in an estimate of her finances.

MICHIGAN.

The report of the Auditor gives the following statements:

The balance in the hands of the State Treasurer on Nov. 30, 1852, exclusive of amounts to meet outstanding warrants upon the General and Primary School Interest Funds, was..... \$116,407 23

Receipts for the year ending November 30th, 1853..... 655,667 86

Expenditures in the same period.... 396,449 39

Balance, Nov. 30th, 1853..... \$375,625 70

The amount of funded and fundable debts not yet due, but owing by the State, is given as follows:

State Indebtedness.

The funded and fundable debt not yet due is as follows:

General Fund bonds, due May, 1856..... \$100,000 00
University bonds, due July, 1858..... 99,000 00
Detroit and Pontiac Railroad bonds, due July, 1858..... 97,000 00
Penitentiary bonds, due January, 1859..... 20,000 00
Penitentiary bonds, due January, 1860..... 40,000 00
Full paid \$5,000,000 loan bonds, due January, 1863..... 177,000 00
Adjusted bonds, due January, 1863..... 342,391 00

Total..... \$875,391 00

The part paid \$5,000,000 loan bonds outstanding, will, if funded previous to January 1, 1861, amount to..... \$1,457,001 07
Bonds issuable for outstanding I. L. warrants, say..... 7,000 00

Making the total funded and fundable debt not yet due, and for the payment of which no provision is made..... \$2,839,892 07

The Auditor General also gives notice that the interest on the several bonds of the State will be paid when due, on the presentation of the coupons at the Phoenix Bank in the city of New York.

The recent election, for officers of the above road, resulted as follows :

President—H. B. Payne,
Secretary—M. J. Williamson,
Treasurer—T. P. Handy,
Directors—H. B. Payne, J. Gillett, Leoanard
Case, Richie Hilliard, A. Stone, Jr., Stillman Witt,
Cleveland; J. M. Woolsey, New Haven; Hosea
Williams, Delaware; Alfred Kelley, Columbus,
John Miller, Columbus; E. T. Prosser, Albany.

Abstract of Schedules and Tables appended to the New York and Erie Railroad Report. (Concluded.)

That part of Table (G), giving the tonnage and earnings of freight received and forwarded from various stations, gives information of a similar character to that contained in the first part of the table, already copied in the *Journal*.

TABLE (H) PROPORTION OF WAY TO THROUGH BUSINESS.

For the year ending Sept. 30th, 1852.

Passengers.	Receipts.	Per ct. of Whole.
Through.....	\$409,735 42	30
Between Way Stations and Ter- mini.....	323,011 93	23
Between Way Stations only.....	639,525 57	47
	<u>\$1,372,272 92</u>	<u>100</u>

Freight.

Through	\$544,605	53	30
Between Way Stations and Termini.....	528,538	20	29
Between Way Stations only	739,116	26	41
	<u>\$1,812,259</u>	<u>99</u>	<u>100</u>

For the year ending Sept. 30th, 1853.

Passengers.

Through	\$474,291	58	29
Between Way Stations and Ter- minl.....	418,476	16	26
Between Way Stations only....	738,156	53	45
	<u>\$1,630,924</u>	<u>27</u>	<u>100</u>

Freight.

Through	\$916,669	69	37
Between Way Stations and Ter- mini.....	587,010	99	24
Between Way Stations only....	956,062	90	39
	<u>\$2,459,743</u>	58	100

(1) CLASSIFICATION AND DIRECTION OF PASSENGER BUSINESS.

Through passengers <i>Eastward</i>	27,485½
Receipts therefrom.....	\$193,668 51
Way passengers <i>Eastward</i>	514,949½
Receipts therefrom.....	\$642,432 32
Through and Way, <i>Eastward</i>	512,135
Receipts therefrom.....	\$736,100 87
Through passengers <i>Westward</i>	51,214½
Receipts therefrom.....	\$273,789 83
Way passengers <i>Westward</i>	660,788
Receipts therefrom.....	\$621,033 57
Through and Way <i>Westward</i>	612,002½
Receipts therefrom.....	\$894,823 40

Average miles by each passenger.....	74,295
Miles travelled westward.....	57,891,631
Average miles by each passenger.....	94,591
Miles travelled both ways.....	98,432,361
Average miles by each passenger.....	85,264

(J) CLASSIFICATION AND DIRECTION OF FREIGHT BUSINESS.

Eastward bound.

	Tons.	Receipts.
Products of the Forest.....	111,834	\$362,498 31
Products of Animals.....	90,660	596,527 05
Vegetable Food.....	72,092	355,240 85
Other Agricultural Products.....	3,570	26,948 29
Manufactures.....	42,738	104,185 08
Merchandise.....	6,144	18,071 21
Miscellaneous.....	32,993	27,583 86

Westward bound.

Products of the Forest.....	12,253	11,227 92
Products of Animals.....	9,095	42,518 48
Vegetable Food	8,776	32,665 73
Other Agricultural Products	6,279	17,859 19
Manufactures.....	69,543	233,014 35
Merchandise.....	62,598	558,706 58
Miscellaneous.....	103,494	72,696 68

Freight both ways.

Products of the Forest.....	124,087	373,726	23
Products of Animals.....	99,755	639,051	53
Vegetable Food.....	80,865	387,906	58
Other Agricultural Products.....	9,849	44,806	71
Manufactures.....	112,281	337,199	43
Merchandise.....	68,742	576,777	79
Miscellaneous.....	136,487	100,280	54

Total Tons carried East	360,031
" " West.....	272,038
Receipts both ways.....	\$2,459,743 58
Tons carried one mile	101,626,518

Table (K), giving the relative proportion of each description of freight to the whole amount received and shipped at each station is quite interesting but too long to be copied into our columns.

TABLE (L) OF LUMBER SHIPPED.

Shows the whole amount of lumber shipped to Piermont pier, from January 1st, 1853, to Sept. 30th, 1853, to be 22,744,771 feet; to Newburg, 12,882,577 feet; to Elmira, 12,060,992 feet; and to all stations on the road, 60,665,704 feet. Including estimated lumber carried from Sept. 30th, 1852, to January 1st, 1853, the whole amount is 81,223,718 feet. Number of shingles carried 5,092,000.

COMPARISON (O) OF THE RUNNING EXPENSES OF
THE NEW YORK AND ERIE RAILROAD, WITH THOSE
OF THE PREVIOUS YEAR.

	Years ending Sept. 30th	
	1852.	1853.
Number of Passengers carried in cars.....	864,330	1,154,437
Number of Tons of freight	456,460	631,039
Number of Passengers carried one mile....	81,179,554	98,432,361
Number of Tons of freight	96,697,695	101,626,522
Number of Miles run by passenger engines	1,062,424	1,357,889
Number of Miles run by freight engines...	1,326,846	1,476,380
Earnings from passengers, freight and mails, during the year.....	\$3,171,354 83	4,122,338 40

Expenses of running, repairs of stock, track, buildings, of- fices, taxes, damages, superintendence and contingencies.....	1,661,767 74	2,259,011 88
Expenses on per cen- tage of earnings....	52.4	54.8

COMPARISON OF THE EXPENSES PER MILE RUN.

	Years ending Sept. 30th.	
	1852.	1853.
	Cents.	Cents.
Repairs of track, buildings and taxes.	12.40	16.23
„ engines, cars and shop ex- penses	15.84	15.34
Expenses of operating, stations, of- fices and cont'g.....	41.31	48.12
Total cost.....	69.55	79.69

Details of the above :

Repairs of passenger engines.....	10.0	8.5
" " cars.....	5.9	6.0
" freight engines.....	7.3	8.0
" " cars.....	5.2	5.3
" tools and machinery of machine shops	1.0	0.9
All other expenses of machine shops..	0.8	0.6
Office expenses and stationery	1.2	1.4
Agents and clerks.....	3.3	3.8
Labor loading and unloading freight..	3.7	4.3
Porters, watchmen and switchmen... ..	0.9	1.8
Wood and water station attendance... ..	0.2	0.3

Conductors, baggage and brakemen,		
Passenger trains.....	7.7	6.8
Do. do. Freight trains.....	7.3	8.0
Engine and firemen, Passenger trains.	4.8	5.8
" Freight "	6.0	6.8
Fuel.....	10.9	13.2
Oil and waste, Passenger engines.....	2.3	2.1
" Freight "	2.2	2.2
" Passenger cars.....	1.1	1.0
" Freight "	1.6	1.5
Loss and damage, goods and baggage	1.5	1.5
" persons.....	1.7	2.6
" property.....	0.2	0.3
General superintendence.....	0.8	0.8
Contingencies.....	0.8	1.7

COMPARISON PER PASSENGER AND TON OF FREIGHT
CARRIED ONE MILE.

	Years ending	
	Sept. 30th.	
	1852.	1853.
	Cents.	Cents.
Repairs of road-bed, track, buildings and taxes	0.166	0.230
Repairs of engines, cars, and shop expenses.....	0.213	0.217
Operating stations, offices, and contingencies.....	0.554	0.681
Total cost per passenger and per ton per mile	0.933	1.128

Details of operating.

Office and stationery	0.017	0.014
Agents and clerks	0.045	0.054
Barrel loading and unloading freight	0.093	0.124
Porters, watchmen, and switchmen	0.012	0.024
Wood and water station attendance	0.003	0.004
Conductors, brake and baggage men, Passenger trains	0.101	0.067
Do. do. Freight trains	0.100	0.117
Engine and firemen, Passenger trains	0.063	0.080
Freight "	0.082	0.100
Fuel	0.148	0.186
Oil and waste, Passenger engines	0.030	0.029
Freight "	0.031	0.032
Passenger cars	0.014	0.014
Freight "	0.022	0.019
Loss and damage, goods and baggage	0.021	0.021
persons	0.023	0.035
property	0.005	0.005
General superintendence	0.012	0.015
Contingencies	0.012	0.024

TABLE (P) OF MILEAGE OF ENGINES.

On passenger trains, for year.....	1,357,869	miles.
" freight " " "	1,249,594	"
" gravel " " "	208,028	"
" wood " " "	18,756	"
Total.....	2,834,268	miles.

The remainder of the report is devoted to comparisons of the expense of transportation upon the New York and Erie with that upon other railroads; and also to the business for the year 1852, of the canals intersecting the New York and Erie road. The room occupied by the latter statements prevents their being copied into our columns; while from the approaching completion of competing railroads the past business of these canals will not afford correct inferences of their future relation to the business of the Erie Road.

American Railroad Journal.

Saturday, January 28, 1854.

Erie Railroad.

We conclude this week, the publication of the Erie Railroad report, which we have given at no small inconvenience to ourselves, and to the exclusion of much other matter. In publishing the report, we have acted upon our uniform rule of giving both sides of every case that is made a matter of controversy.

The report is a great improvement upon the previous silence of the company. In many respects it is an excellent one. The tables showing the working economy of the road, are well prepared, and contain a great amount of valuable information, and will help to throw much light upon the cost of working, not only the Erie, but of other roads.

Notwithstanding these favorable features, the report is faulty in many important particulars. Its general tone is decidedly objectionable. It is the argument of counsel, rather than a plain statement of facts. Its partizan tone must weaken its authority. The Directors do not speak as we expect persons to do who are telling the manner in which they have discharged certain trusts, but as persons who are vindicating themselves from real, or imaginary charges.

One of its most important deficiencies, is the entire omission to give the cost of the double track, and the probable amount necessary to complete it. So long as the construction account is kept open, statements as to the cost of operating a road can never be relied on. In such cases it is almost impossible but that items, chargeable to the operating of the road, should be placed to construction. Such we feel convinced is the fact with the present case. We believe that the expenses exceed the amount reported. We may attempt to show such to be the fact at some future time.

Whenever a road commences the construction of a double track, it is manifestly proper, that a separate account should be opened for the new expenditure. Of the propriety of such a course, the history of the Erie road furnishes full evidence. It will be remembered that Mr. Loder in his report, under date of Dec. 20, 1851, states that the cost of the double track then proposed to be built, would not exceed \$10,000 per mile. He subsequently corrected this statement by saying he meant the graduation for a double track. Since Sept. 30, 1851, 153 miles of double track and sidings have been constructed. In the meantime the amount charged to graduation has increased \$2,584,677, or an excess of \$2,004,677 over Mr. Loder's estimate. If his estimate were a correct one, then there is a large expenditure unaccount-

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Total cost of road and equip't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	809,878	1,016,500	2,064,458	140,561	80,053	none	80
Kennebec and Portland..... "	72	952,621	29,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	96
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	35
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	107
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	38
Northern	82	3,016,634	.....	.....	328,782	163,075	5	57
Manchester and Lawrence....	24	717,543	.....	.....	.....	.....	6	89
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	106
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan.....	26	.....	.....	673,500	.....	.....	none	21
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	29
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	11
Vermont Central	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	18
Vermont and Canada.....	47	1,500,000	.....	1,500,000	.....	.....	Leased to the Vt. C.	98
Western Vermont.....	51	392,000	700,000	.....	.....	.....	Recently opened.	.....
Vermont Valley	24	.....	.....	.....	.....	.....	.....	.....
Boston and Lowell..... Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7	91
Boston and Maine.....	83	4,076,974	150,000	4,092,927	659,001	338,215	7	103
Boston and Providence.....	53	3,160,390	390,000	3,546,214	469,656	227,434	6	84
Boston and Worcester.....	69	4,500,000	425,000	4,845,967	758,819	331,296	7	102
Cape Cod branch.....	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River.....	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern.....	75	2,850,000	500,000	3,120,391	488,793	241,017	7	90
Fall River.....	42	1,050,000	none.	1,050,000	229,445	99,589	8	100
Fitchburg.....	66	2,540,000	112,305	3,623,073	574,574	232,787	6	92
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County.....	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony.....	45	1,964,070	282,300	2,293,534	322,213	101,510	none	92
Taunton Branch.....	12	250,000	.....	307,136	137,406	24,399	8	.....
Vermont and Massachusetts.. "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	22
Worcester and Nashua.....	45	1,134,000	171,210	1,321,945	162,109	66,900	4	58
Western	155	5,150,000	5,319,520	9,953,759	1,339,873	683,194	6	101
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	66
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	391,418	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	639,529	294,269	10	124
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven....	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	98
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.. "	55	750,500	650,000	1,380,610	.....	.....	Recently opened.	none
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	55
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	.....	.....	Recently opened.	none
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	.....	none
Buffalo and State Line.....	69	879,636	872,000	1,921,270	.....	.....	Recently opened.	130
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira.....	47	425,500	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna.....	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)....	164	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	76
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	66
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	5	53
Long Island	95	1,875,148	516,246	2,446,391	205,068	44,070	none	30
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	108
Ogdensburg (Northern).....	118	1,579,969	2,969,760	5,123,894	480,137	195,847	none	30
Oswego and Syracuse.....	35	350,000	201,500	607,803	90,616	43,609	4	70
Plattsburg and Montreal....	23	174,042	131,000	349,775	.....	.....	Recently opened.	none
Rensselaer and Saratoga.....	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington....	60	850,000	400,000	1,250,000	.....	.....	Recently opened.	.....
Saratoga and Washington....	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	.....	.....	Recently opened.	33
Troy and Boston.....	39	430,936	700,000	1,043,357	.....	.....	Recently opened.	none
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,382,385	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey	21	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central.....	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	20	600,000	.....	750,000	.....	.....	Recently opened.	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,827	106,320	8	52
Philadelphia and Reading....	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	71
Philad., Wilmington and Balt.	98	3,850,000	2,403,276	6,813,839	667,735	383,501	5	80

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97½
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	9,188,300	9,827,123	19,542,307	1,325,563	615,384	7	56
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,400,100	446,036	In prog.	176,485	74,902	none	50
Virginia and Tennessee..... "	73	2,650,091	707,958	In prog.	.....	.....	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	413,187	3,465,879	986,074	535,608	8	115
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	....
Macon and Western..... "	101	1,228,370	163,000	1,555,214	280,516	151,737	9	100
Muscogee..... "	71	.....	.....	In prog.	.....	.....	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	683,611	.....	1,330,960	173,542	76,079	8	....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga. "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	70
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Cleveland and Pittsburgh..... Ohio.	100	1,239,450	1,371,000	2,963,756	194,429	123,306	6	86
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	91½
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,464	12	124
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	80
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton. "	60	2,100,000	500,000	2,659,653	321,793	200,967	....	105
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	72
Dayton and Western..... "	40	310,000	550,000	925,000	Recently	opened.	....	80
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	60
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,370,784	.....	2,634,157	526,746	314,670	10	117
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	....	95
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	90
Ohio and Mississippi..... "	.....	.....	.....	"	.....	.....	.....	87
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently	opened.	....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	Recently	opened.	....	.....
Xenia and Columbus..... "	54	1,092,137	119,500	1,257,714	Recently	135,363	15	116
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	"	.....	.....	.....	90
Indiana Northern..... "	131	.....	.....	"	.....	.....	opened.	115
Indianapolis and Bellefontaine. "	83	.....	.....	"	Recently	.....	.....	.....
Lawrenceburg and Ind..... "	90	.....	.....	In prog.	.....	.....	.....	77
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	opened.	.....	82
Madison and Indianapolis..... "	88	1,650,000	750,000	2,400,000	516,414	268,075	10	70
Peru and Indianapolis..... "	40	.....	.....	In prog.	.....	.....	.....	65
Terre Haute and Indianapolis. "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	136
Galea and Chicago..... "	92	1,932,361	500,000	In prog.	473,548	286,152	.....	122
Michigan Southern..... Mich.	315	2,800,000	2,629,000	6,430,246	592,187	293,046	8	117
Michigan Central..... "	282	4,856,700	3,977,563	8,618,505	1,145,598	582,816	8	99½
Pacific..... Mo.	88	1,000,000	none.	In progress	Recently	opened.	....	.....

ed for. We cannot well see how the graduation for the double track could even cost \$10,000 per mile. At any rate, there can be no pretence that \$3,531,677 have been expended for the graduation for a double track within the past two years. A portion of this sum must have gone to other objects. We think too, that the report should have presented an estimate of the probable amount necessary to complete the double track, as a standard for future expenditures. Certainly the public have a right to know what the plans of the Directors are, and what amount of expenditure is involved in their execution.

A large item in the cost of operating the road for the past two years, has been for the maintenance of a line of Lake Steamers, upon which, as we understand the Company has lost large sums. We think an additional schedule should have been annexed to the report, showing the terms upon which these steamers were employed, and the sums lost or made by the operation. If we are rightly informed, here has been one of the great leaks in the finances of the company.

We think too that the company should have said something about the contract for the use of the Union Railroad in New Jersey. It strikes us that when a Railroad company go into another State and purchase or take a lease of an independent road, the whole transaction should be made public. The stockholders may take a view of the matter entirely different from that entertained by the directors. The former may wish to see whether the contract be advantageous or otherwise. It does not appear that the stockholders were ever consulted at all in the matter. The latter are certainly entitled to know the terms of the lease, as well as the expediency of making it.

There are some portions of Mr. McAlpine's report that are calculated to convey a very erroneous impression in reference to the route occupied by the road. From reading the report a person would naturally infer that it occupied the best route between New York City and the Lakes; and that, by the configuration of the country, its line was neither 'susceptible of improvement, nor in a position to be injured by competing roads. Such are not the facts. The line is capable of being materially improved, and is also exposed to the competition of other roads. The description of the route in the report shows it to be an unfavourable one for cheap transportation. The disadvantages of its grades are shown in another part of our present issue. The road crosses four distinct and elevated spurs of the Allegheny Mountains, from which it descends into deep gorges, or vales. These spurs subside into an uniform plain as they approach the line of the Erie Canal, and Central Railroads, presenting of course the best route to the Lakes.

But well managed, the road, we think, has a sufficient local business to make it fair property; at any rate to render its bonds perfectly secure. The value of its stock may be more problematical. We do not regard the management of the road by any means what it should be. There is a field for great improvement here, and one to which the particular attention of the stockholders and bondholders should be directed. However, the whole report is before the public for its examination and judgment.

We shall, on future occasions, refer to the above tables, in connection with articles upon the general subject of the management of railroads

Blake's Fire Proof Paint.

This extraordinary substance has now been in use over eight years, and we see by the testimony of persons who have recently examined the first used, that it remains as perfect to all appearance as on the day applied. The action of the weather for that great length of time, had no other effect than to turn it to stone. He states that the coating is still so perfect that even the brush marks upon the surface are yet plainly to be seen. No paint in this country has been so universally used upon railroad cars, bridges and depots, and we believe to the satisfaction of all, as it is just the article to protect them, not only from the weather but from fire.

In another column it will be seen that Mr. Blake's patent has been tried in the United States Court, and decided to be good and valid. Every person, therefore, who has been selling or using the fire proof paint, not of his manufacture, is liable to him for all damages he has sustained, together with costs of suit.

In consequence of this decision, Mr. Blake has the exclusive right to the market, but instead of raising the price of the article, or even keeping it at its present prices, we understand he intends reducing it very materially, as he can manufacture a large amount cheaper, proportionally, than a small quantity, as his mills are capable of turning out three times the quantity they now do. We would therefore advise officers of railroads, as well as others, to send their orders directly to Mr. Blake, No. 119 Pearl-st., where they can not only depend upon getting the genuine and original article, but would secure themselves against the liability of a prosecution for infringing his patent.

The "Hilled Tire."

Bush and Lobdell, of Wilmington, Del., have sent us drawings of an elegant pattern of double plate driving wheel and hollow tire, which they have got up for the New York and Erie railroad. For beauty and strength of form, and security of the attachment of tire, this pattern exceeds any thing we have seen. The tires are of 48 inches outside diameter, and their whole depth is 7 inches. The solid thickness of the tire is however no more than sufficient for the necessary strength. The side plates of the center are $\frac{1}{2}$ inch thick and those of the tire 1 inch. These tires are to be used on engines of thirty-seven tons weight, upon four wheels of which the weight will average nearly six tons to each single wheel.

Indiana Central Railway.

At the election of Directors held at Centerville on the 3d inst., it was decided by vote to reduce the number to eight. The following is the new Board and its organization:

John S. Newman, Samuel Hannah, David Commons, Caleb B. Jackson, of Centerville; Solomon Meredith, William Petty, Cambridge City; Wm. Butler, Dublin; Charles Parry, Indianapolis.

John S. Newman, President; Samuel Hannah, Treasurer; John M. Commons, Secretary.

Richmond and Miami Railroad of Indiana.

The election for Directors of this company, held Jan. 2d, 1854, resulted as follows:

William Edwards, James Neil, Daniel P. Wiggins, James L. Morrison, Cornelius Ratliff, Benj. Stratton, S. R. Wiggins, W. W. Lynde, J. H. Hutson, J. Woods, G. T. Steadman, Lewis Burk, Caleb Shearon.

Greenville and Miami Railroad of Ohio.

The recent election, held at Greenville, for Directors of this company, resulted as follows:

H. Gebhart, W. S. Westerman, D. Beckal, Jas. McDaniel, Alfred Kitchen, D. Studybaker, W. A. Weston, F. Warring, John Wharry, W. M. Wilson, H. Arnold, E. B. Taylor, and J. R. Knox.

Railroad Competition in the West.

The Cincinnati Railroad Record has a long article for the purpose of showing, that were all the proposed railroads in the west carried out, "there would be neither too many roads, nor too much competition." To a person familiar with the history and value of railroad property in this country, no reply would be needed, as the article would carry on its face its own refutation; but for the benefit of such as are not, we will refer to the article for the purpose of correcting some of the more important errors it contains.

The Record commences by stating, that "the cost of a railroad in Ohio, with a double track, and equipment complete, cannot exceed \$35,000 per mile."

There are now two railroads running into Cincinnati, the Cincinnati, Hamilton and Dayton, and the Little Miami, the former has already cost \$43,000, and the latter \$38,000; neither of which have double tracks, and neither of which can have double tracks, without carrying their cost up to \$50,000 per mile. The cost of these roads, with single tracks and limited equipment, already far exceeds what the Record states is to be their ultimate cost with double tracks and corresponding equipment! So much for the first premise of the Record.

The Record states, that "the experience of American railroads, does not show any danger of competition, or that the country is overstocked with railroads, or is likely to be," and cites the railroads of Massachusetts in confirmation.

This will be very good news to the people of that State, who are laboring under the conviction that they have lost some \$20,000,000 by building competing roads. Under a railway mania similar to that which is prevailing in some portions of the west, they have built numerous roads that do not pay; so that the direct loss sustained from this cause alone cannot be less than \$20,000,000!

Again: the Record says—"Let us now proceed to draw a parallel with New England. In Massachusetts, Connecticut, Rhode Island, Vermont and New Hampshire, (we exclude Maine, because so much of that State is unoccupied and barren)—there are 2,552 miles of railway, on 30,116 square miles of surface, and a population of 2,144,916. There is, then, 1 mile of railway to 12 square miles, and a density of 70 persons to a square mile. Now, here again, the advantages for railroads in New England are much inferior to those in the Central West. The population is but little greater per square mile; while the surplusses to be carried off, are comparatively but very little. Three-fourths of Ohio, (excluding the north-west quarter,) has a population of 54 to a square mile; and the Miami country, has 80 to a square mile. The New England roads, however, average 6 per cent. dividends, or about the same with their Banks."

The New England roads do not pay six nor even five per cent. upon their cost. The railroads of New England through agricultural districts have

invariably proved unproductive. We admit there is a cause for this, which exists only to a limited extent in the West, but when an illustration is used, its legitimate consequences must be applied. If \$20,000,000 have been lost upon the New England roads, an equal extravagance in the West, might be followed by similar results.

The Record also claims, that as 7,200 miles of railroad have been constructed in Great Britain, that an equal number may be properly constructed in Ohio, Indiana and Kentucky, as the latter have in the aggregate an equal area, and have greater agricultural capacities. It forgets, however, that \$350,000,000 have been sunk in competing lines in England. To make the parallel good, the construction of 7,200 miles of road in the above named States, would be attended with a proportionate loss! Again, Great Britain contains 27,000,000 of people, while Ohio, Indiana, and Kentucky contain only 4,000,000; and as far as the business developed for railroads is concerned, the former contains twenty times the population of said States. The labor performed by the steam engines in Great Britain represents the labor of 250,000,000 of men! In that country 20,000,000 of tons of coal are mined annually, and distributed to the consumers; 4,000,000 tons of iron are annually smelted, and the whole nation is one vast workshop and counting house, which renders travelling much more necessary than in the States named. The soil of the former is made to produce much more bountifully in proportion to its area, and that the greater variety of pursuits renders a much larger aggregate internal commerce necessary. The idea therefore that the State of Ohio will sustain an equal number of miles of railroad in proportion to its area, as England, is utterly preposterous.

To prove that the construction of railroads cannot be over-done in the West, the Record argues as follows:

"The experience of our American railways does not show any danger of competition; or that the country is overstocked with railroads, or likely to be. Massachusetts has a mile of railway to every seven square miles. If this proportion were carried through the five north-western States, Ohio, Indiana, Illinois, Michigan and Wisconsin, it would give 33,000 miles of railway to these States, at least four times as much as all that are made, contracted for and planned."

But let us bring this to the test, which the money holder demands, the test of dividends. Let us take a district of country, where the competition is greatest, and look at it sharply. Between Newport, R. I., and the Hudson river, there are eight lines of railway, running parallel to one another, a distance of 140 miles, and which do not average 20 miles apart. The roads, and the distance from each other, are as follows:

	Miles.
Stonington and Providence.....	26
Norwich and Worcester.....	16
New London and Palmer.....	7
New Haven, Hartford and Springfield..	11
New Haven Canal.....	20
Naugatuck.....	10
Housatonic.....	
Harlem.....	

Now let us apply this to the geography of Ohio, and see how it looks. It is just as if there were eight railroads, starting between the north-west corner of Ohio and Sandusky city, whose general tendency was towards Cincinnati!

In fact, we have only the Mad River railroad, the Dayton and Michigan and the Cincinnati and Mackinaw proposed, and who can doubt they will all pay? Let us examine the cost, and dividends

of the above eight lines of competing roads. We give below the cost of these roads and the market value of the stock:

Stonington Railroad.....	\$2,000,000	65 pr ct.
Norwich and Worcester.....	2,596,488	56 "
New London and Palmer....	1,511,111	60 "
Hartford and New Haven...	3,472,000	120 "
New Haven Canal.....	1,600,000	50 "
Naugatuck.....	1,366,000	117 "
Housatonic.....	2,500,000	33 "
Harlem.....	6,102,935	102 "

Here is the greatest railroad competition that does or can exist in the United States, and as compared with the West, in a very unproductive country. Now let us make an analysis of the whole.

The total amount of cost of the above roads was \$21,148,534, and the market value of the same is \$18,092,834, or 85 per cent. of the cost. Independent of the Housatonic and Norwich roads; (both of which were really isolated inland tracks, terminating in steam-boats on the sound.) The whole investment was at par. Looking to the recent increase of the Housatonic and Norwich, there is no doubt that in another year, the whole eight competitors, (taken together,) will be at par.

Let us now look at the comparative cost and receipts. The elements of these roads were thus:

Number of miles made.....	579
Total cost.....	\$21,148,534
Gross receipts.....	2,561,786
Expenses.....	1,387,046
Net income.....	1,174,740
Net per cent.....	5½
Cost per mile.....	37,000

Here then are eight railroads, on a breadth of 140 miles, running in the same direction, through a very poor country, in an agricultural aspect, yielding, (under generally bad management,) 5½ per cent. net income, with a moral certainty, that if no more are made, they will pay 6 or 7 per cent. Even there, then, there are not too many railroads.

Now, let us try to get a parallel in Ohio. If we were to make eight railroads, between the State line of Indiana and the Scioto river, all of them running to the Ohio river, with a sort of twist towards Cincinnati, it would be a similar case. Let us imagine, (if they were made,) what they would cost and yield:

Cost of 8 such roads in Ohio....	\$17,000,000
Gross receipts.....	5,000,000
Gross expenses.....	3,000,000
Net income.....	2,000,000
Net per cent.....	11½

Under all the competition which exists in Connecticut and Rhode Island, we affirm that Ohio railroads would pay 10 per cent. net dividends. So they will in Indiana, and we have time and experience to furnish the demonstration, as they will do.

But we have no such competition as that, and will not have in this great nation. We shall have twenty railroads entering Cincinnati, but what is the country through which they pass! An empire, extending for three hundred to five hundred miles in every direction, to all of which Cincinnati is central."

Eight, ten per cent. paying roads, between the Indiana State line and the Scioto! At present there are two, paying ten per cent. each. These two roads accommodate three-fourths of the business of the district described. Now we will hazard the opinion that the receipts of the 8 roads, provided they were constructed, would not exceed 50 per cent. of the aggregate receipts of the companies named; and further, that should they all be constructed, that they would not more than pay running expenses. We are willing, too, that the correctness of our opinion should be tried by a jury of Cincinnatians.

It must be borne in mind too, that no future

roads can be constructed, running into Cincinnati, except at a cost vastly exceeding those already existing, which occupy the natural approaches to the city, and which secured the necessary rights of way, lands for stations, depots, etc., at mere nominal sums, compared with their present value. Mr. Strader, President of the Little Miami Railroad, stated to us, when recently in Cincinnati that were his company now compelled to construct that portion of their road lying within the city and its environs, the first five miles would cost, (we think we remember correctly,) \$2,000,000, which would leave the balance of the road, of some 80 miles, at about \$1,000,000. Roads to be built will have to pay at somewhat the same rate for entering the city, while the other portions of the lines will also be much more expensive than those built at an earlier day.

The first step toward correct reasoning, are correct data. The Record's quotation of Stocks for the purpose of showing the value of Railway property in New England is incorrect in very important particulars. We give the quotations as ruling in this market.

Stonington.....	65
Norwich and Worcester.....	56
*New London Wilmatic and Palmer.....	
†New Haven Canal.....	
Naugatuck.....	100
Housatonic.....	1½
Harlem.....	52
*No sales, worth perhaps 20 per cent.	
† " " Probably worth 50 per cent.	

The market value of the above stocks is no where near 85, neither is it correct to say that the above roads run through a poor country. They are managed as well, probably, as are Western roads. The district they traverse will supply as much business to Railroads, as will an equal area in any portion of Ohio. The parallel drawn, only goes to prove, that Railroadng carried to an equal extent in Ohio would be attended with similar results.

We have great faith in Western Railroads. The readers of the Journal understand well, the grounds upon which it is based. We have done what we could to secure to them the confidence of the public. The result that have since been achieved, so far, shows that this confidence has not been misplaced. But in the very success of Western roads lies the danger we are seeking to avoid. A good business is much more likely to be over done than a bad one. There is therefore much greater danger, that railroadng will be carried to excess in Ohio, than in Massachusetts. This danger is greatly aggravated by the extraordinary success of the roads just constructed. Ohio is going through precisely the same phase that Massachusetts did a few years since. The large dividends paid by the early roads of the latter State, was the direct cause of all the misfortunes that followed.

The success of such roads as the Boston and Worcester, Boston and Maine, Boston and Lowell and Fitchburgh was quite as extraordinary under the circumstances as has been that of the Cleveland and Columbus, Little Miami, Michigan Central and Michigan Southern. The Massachusetts roads declared dividends greater than the ordinary rates of interest. This fact led to the construction of rival works, so that the dividends of the former

have been gradually growing less for the past 6 years. Such will be the result in Ohio, unless the people of that State profit by the numerous examples set them by their Eastern neighbors.

There is one fact however that will check the undue construction of Western Roads. The means for the Massachusetts roads were raised by local stock subscriptions. As those immediately interested in the roads, furnished the means for their construction, there was nothing to check the extravagance which prevailed, but the disasters that were the necessary consequence. The Western people cannot at present construct their roads without aid of foreign capitalists, who are supposed to be unaffected by personal interests, or local feeling, and act without the bias of prejudice.—These are the judges of the necessity of Western roads, whether they shall be constructed or not.—This act should at once put to rest to a considerable extent, the fears that exist upon the subject of rival lines. If the work of railroadng is to be overdone in the West, the eastern people will have to thank themselves for their folly. Upon them rests the responsibility

With these general remarks, we would state there is hardly a State in the Union where important lines of Railroad do not remain to be built. Such is particularly the case with New York, Ohio, and Indiana. There is yet wide room in those for well directed effort. But there is none for competing lines. We desire to do what we can to prevent the construction of such.

Journal of Railroad Law.

THE ERIE RIOTERS.—The following intelligence communicated by Telegraph on the 21st inst., shows that the heroes of Erie, to use an Hibernianism, "have a right" to be indicted and punished criminally instead of being summarily dealt with for contempt of Court.

Judge Irwin has just decided that as the offence charged against Mayor King and Morrow B. Lowry, is made subject to indictment by the second section of the act of October, 1831, they cannot be held under the present process, and must be discharged with costs.

By the 1st section of Act referred to, it was provided by Congress that the power of the United States' Courts to punish summarily for contempt of Court shall only apply to misbehaviour in presence of the Courts, or so near to them as to obstruct the administration of justice, or to the official misbehaviour of any officer of such Courts, or the disturbance or resistance of any officer, judge, juror, witness, or any other person, to any order of said Courts. (The words "any other person," probably means any other person sustaining some special relation to said Courts)

By the 2d section of the said Act it is provided that any persons who shall corruptly or by threats or force endeavour to obstruct the administration of justice in the Courts of the United States shall be liable to indictment, and shall on conviction thereof be punished by fine, not exceeding \$500, or by imprisonment not exceeding three months, or both, according to the circumstances of the offence.

REPEALING RAILROAD CHARTERS.—The Supreme Court of the United States, in the Dartmouth College case, 4 Wheaton, 318, a case of most deserved celebrity, decided that no Charter could be repealed, altered or modified without the consent of the Corporators to whom it belongs and with-

out their default legally ascertained and declared.

Recent legislation, however, has sought to abolish this restriction on the popular will. And of late years acts of incorporation and the General Railroads of most States which have adopted them contain reservations of the right "to alter, modify and repeal Charters at pleasure."

In Pennsylvania it is provided by the act, entitled An Act regulating railroad companies, passed on the nineteenth day of February, Anno Domini one thousand eight hundred and forty-nine, that if any company, incorporated by special act of Assembly thereafter to be passed, shall at any time misuse or abuse the privileges granted by the said act or by its own special act of incorporation, the Legislature may revoke all and singular the rights and privileges so granted to such company.

And this legislative artillery is now brought to bear on the Franklin Canal Company—which was incorporated in 1844—5 years before the foregoing Act was passed—although its charter was not amended so as to authorize the construction of a Railroad from Pittsburg to Erie, until April 1849.

Supposing that the right to annul a charter in any given case be clear and unquestionable, it may in some cases, as is well observed by Chancellor Kent, be very doubtful how far the exercise of such a right would be consistent with justice or policy.

A private Charter is a *contract* between the State and the contractors concerned. And an honest Legislature will not annul its contracts, even under a reserved right so to do, unless a Court of Law has adjudged the Corporation to be in fault or the public interest can admit of no delay and imperatively requires such a proceeding. It would be superfluous in this place to dwell on the disastrous consequences which would result from an arbitrary repeal of the Charters of Corporations, especially of moneyed Corporations to which class Railroads belong.

The question naturally here arises, as to what becomes of the *property* of a defunct Corporation? And there is we presume no great cause for perplexity, in regard to this subject. The capital and debts of Banking and other moneyed Corporations constitute a trust fund and pledge for the payment of creditors and stockholders, and Courts invested with equity powers will in case of the dissolution of such Corporations lay hold of the fund and see that it is applied to its legitimate purposes.—Sec. 2 Kent's Commentaries (Edition of 1850) page 354.

THE DUTY OF THE EXECUTIVE IN THE CASE OF RESISTANCE TO PROCESS.—The Constitution of the United States imposes on the President the solemn charge "to take care that the laws be faithfully executed."

Indeed unless a Chief Magistrate is invested with such a power, he is not an Executive, but a Head Clerk.

In case of a State insurrection against the government thereof, the President may on the application of the Legislature of such State or of its Executive (when the Legislature cannot be convened) call forth such a number of the Militia of any other State, or States as may be applied for, or as he may judge sufficient.—Act of 1795, § 1.

Whenever the laws of the United States shall be opposed or the execution thereof obstructed in any State by combinations too powerful to be suppressed by ordinary judicial proceedings, or by powers invested in Marshals, the President may

call forth the Militia of such State, or of such other State or States as may be necessary to suppress such combination and to cause the laws to be duly executed; and the use of Militia so to be called forth may be continued if necessary until the expiration of 30 days after the commencement of the then next session of Congress.—Act of 1795, § 2

Or in the case above described, the President may employ for the same purposes such part of the Army or Navy as shall be judged necessary, having first observed all the given requisites of law in that respect.—Act of March 1807.

Whenever it may be necessary in the judgment of the President, to use the Military force hereby directed to be called forth, the President shall forthwith by proclamation, command such insurgents to disperse, and retire peaceably to their respective abodes, within a limited time.—Act of 1795, § 3.

SUNDAY TRAVELLING.—The Supreme Court of Pennsylvania has, (Chief Justice Black and one of his brethren dissenting from the decision,) affirmed the judgment of the Court of Quarter Sessions, by which the driver of an omnibus was fined for pursuing his vocation on Sunday. The Court held that Sunday Omnibus driving does not fall within either of the two Statutory exemptions "of works of necessity" and "works of charity."

Important Decision.

CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK—APRIL TERM, 1853.

Wm. Blake, vs. E. S. & J. G. Belknap. This was an action brought by the plaintiff to establish the *validity* (in a Court at Law) of his Patent for fire and weather proof paint or artificial slate, granted the 28th day of March, 1848. The defendants, in addition to the plea of not guilty, gave notice that they should prove that the plaintiff was not the first and original inventor or discoverer of the improvement by him claimed—that the substance was well known and used by others long before the plaintiff commenced experimenting with it.

That if the plaintiff was the first who discovered the improvement, he had abandoned the same to the public long before he applied for a patent, and that said patent was therefore void; and further that the subject matter was not patentable, as the earth with all its properties were natural productions, equally open to the use of all.

The plaintiff read in evidence his patent, and called some sixteen or seventeen witnesses who testified to the novelty, originality, and utility of said discovery and invention, and also that the defendants had taken in and sold a small quantity of the paint.

As this action was commenced to try the validity of said patent, and to give the defendants and others associated with them in the defence, an opportunity to test the validity of said patent, nothing beyond nominal damages was asked by the plaintiff. Thomas Wilson, of Ohio, who was the manufacturer, had indemnified the defendants against all damage, and the suit was defended under his supervision and management; and he himself was examined as a witness on the part of the defendants. In addition to Wilson, the defendants examined between thirty and forty witnesses. The cause was thoroughly tried, and occupied the Court for five days. It was argued at great length by counsel on both sides; after which, Judge Nelson, who presided at the trial, charged the jury very fully, and in his charge, so far as the validity of the patent was a question of law, sustained it in every particular. The jury returned a verdict for the plaintiff, and thereby established the validity of the patent.

The validity of the patent was so thoroughly

tried, and the preponderance of testimony in favor of the plaintiff was so clear and so great that the defendants made no application to disturb the verdict, and the judgment entered on the 16th of June, 1853, for \$1,029 67 costs, was paid by the defendants.

The validity of the patent having thus been established at law, by the verdict of a jury, the Court will not ordinarily compel the plaintiff again to establish it; but will in the first instance restrain by injunction any infringement of it, and the Patentee, by a bill on the equity side of the Court, can compel the party (complained of, as having infringed the patent) to make a discovery under oath of the amount they may have made, sold, or used; and the production of the books, and a full examination of the accounts of the party, relating to the article, will be required by the Court. The account required to be taken, is generally taken under the direction of the Court, before a master in Equity appointed for that purpose, and the plaintiff's damages are ascertained in that way.

The fact that the patent has been sustained by one trial at law is all that the Court requires to be shown before granting to the Patentee the summary process of injunction to restrain all persons from making, using, or vending the patented article, or in any wise infringing the patent.

J. E. BURRILL, Jr.,
Attorney for Wm. Blake, in the suit above.
SETH P. STAPLES,
F. B. CUTTING,
Of Counsel for the Plaintiff.

New York, Nov. 1853.

NOTICE!

To all those who have been infringing my Patent.

It will be seen by the above decision, that the validity of the patent has been settled; that I am not to try the patent again before a jury, but shall bring suits in equity against any person who has been violating my patent by manufacturing, selling, or using the Fire Proof Paint, unless they come forward and settle with me for thus infringing my rights.

WM. BLAKE,
119 Pearl Street.
New-York, November 26th, 1853.

Buffalo and New York City Railroad.

The Buffalo Courier furnishes a report of a meeting of the stockholders of the Buffalo and New York City Railroad, which was recently held at Warsaw, to consider the present condition of the affairs of the company.

Hon. G. R. Babcock, of Buffalo, one of the directors, stated that it was generally understood that the affairs of the company were in an embarrassed situation. The road was originally intended to extend from Attica to Hornellsville, to connect the New York Central and the New York and Erie, but was finally extended to Buffalo—that the road was thus built 90 miles instead of 60 as first intended, and that no increase of the capital stock of the company was made to meet the additional cost of the work.

That, he thought, was the primary cause of the present embarrassment. The total cost of the road and fixtures up to October was in round numbers \$3,343,000. The capital stock is \$900,000, of which about \$700,000 has been received and applied. The first bonds issued were \$700,000 secured only by a mortgage of that part of the road between Attica and Hornellsville; and \$500,000 were issued on a bond and mortgage of the remaining part of the road; a part of the last were applied to the purchase of that part of the road formerly owned by the Buffalo and Attica Railroad Company. About \$160,000 income bonds have also been issued, making the capital and funded debt something over \$2,000,000, and leaving still about \$1,200,000 floating debt, part of which is due, and to meet which steps must be immediately taken. A part of the floating debt is secured to the creditors by a further issue of

bonds which are hypothecated, but which have never been sold or even put in the market.

The earnings of the road during the summer have varied from \$18,000 per month in May, to \$38,000 in July, and has receded again to \$28,000 in October, the falling off being in passenger receipts, those for freight having been steadily on the increase, and under the present reduced rates of expenditure, less than half of the receipts have been required for running expenses. Mr. B. said, that from a hasty calculation, he had just made it appears that, could the receipts of the road be made to average \$35,000 per month, this would pay all the interest of the debt, and leave a dividend of 8 per cent. per annum on the capital stock, and this, with the consideration that the road is now complete, with a branch to the harbor, offering facilities for freighting not heretofore enjoyed, that the entire cost of the road has only been about \$37,000 per mile, while the New York and Erie cost \$60,000, and others even more—that the opening of the railroads through Canada must increase the receipts for passengers, and that the real estate owned by the Company in the City of Buffalo is worth \$200,000 more than it cost, ought to be an assurance that the road will eventually become a paying road, and that its stock will be a good investment. Several plans, said Mr. B., have been suggested to meet the emergency, and among others, the issuing of bonds to the present stockholders, at a rate of discount agreed upon, the bonds to be convertible into stock at any time, at par, seemed perhaps the most feasible.

A Committee of eleven of the stockholders was appointed, who, through their Chairman, John B. Skinner, Esq., adopted resolutions approving of the manner in which the affairs of the Company were conducted by the present Board of Directors, and expressing entire confidence in their integrity and good faith. The resolutions were unanimously adopted. A Committee consisting of one stockholder from each of the towns along the line of this road, where many of those having stock reside, and one from this City, were appointed by the Committee to act in conjunction with the Directors in adopting such measures as they deem best calculated to promote the interests of the Company.

Boston and Providence Railroad.

The report of the directors of this Company is for the half year ending Nov. 30th, the time of the annual meeting having been changed from June to January.

The receipts for the six months ending Nov. 30, 1853, were..... \$284,901 69
Expenses 169,087 11

Net receipts..... \$115,814 58
The receipts for the year ending Nov. 30, 1853 were..... \$508,326 59
Expenses 281,687 12

Net receipts..... \$226,639 47
One dividend of 8 per cent., and one of $3\frac{1}{2}$ per cent. have been declared, amounting to..... \$205,400 00
Carried to credit of income account This exhibits an increase of receipts from 1852 of..... \$78,841 13
And of expenses including interest on bonds each year of..... \$44,828 20

This statement does not, however, present a true comparison between the ordinary expenses of the two years. The rebuilding of the South street bridge on the West Roxbury branch, \$20,651 45, has been charged to the expenses of the last six months. This expense has been occasioned by the imperfection of the material of the original structure. Another cause of the apparent increase of expenses is the adoption of a different mode of making up accounts, by which all due at the end of the year is charged, whether paid or not. In consequence of this change there was

charged in the expenses of last year the pay rolls of 13 months, making a difference of \$8,674 95. There is also charged the sum of \$7,535 for interest accrued to Dec. 1, upon bonds beyond the amount which has been paid. Deducting these several accounts from the expenses of the year, it will be found that the actual increase of ordinary expenses beyond that of preceding years amounts to \$7,986 80.

There has also been charged to income account the sum of \$13,288 25, as a fund for the renewal of the superstructure of the road.

The income account stood credited
Nov. 30, 1852, \$47,397 78
Profits for 1853 beyond dividends. 21,239 47

\$68,637 25
Less depreciation of cars
and engines..... \$11,741
Renewal fund..... 13,288 25
\$25,009 25

Income account, Nov. 30, 1853.... \$43,628

The following Board of Directors was elected:
C. H. Warren, John Barstow, Jos. Grinnell, Geo. R. Russell, Wm. Amory, Samuel T. Dana, and G. W. Hallett.

Western Railroad.

The receipts of the Western Railroad for the year ending Nov. 30, 1853, were \$1,525,223, of which \$603,290 was for passengers, \$786,215 for freight, and \$45,718 for carrying of mails and from other sources. The expenses for the same time were \$778,487, of which \$165,696 were for repairs of engines and cars, \$13,070 for repairs of buildings, \$13,290 for new cars, \$406,634 for expenses of transportation, and \$23,002 for general expenses, leaving a balance of \$746,736, the net earnings of the year. From this is to be deducted for interest on State Loans and Exchange \$283,968, one per cent. to Sinking Fund, \$50,000, per cent. dividends to stockholders \$360,500, and loss on running the Pittsfield and North Adams Railroad, Railroad, \$791; leaving \$51,476, as the surplus earnings of 1853. Add to this \$137,413, being the balance on hand Nov. 30, 1852, and we have the sum of \$188,889, the amount of the surplus or Contingent Fund Nov. 30, 1853.

The increase over 1852 of the gross receipts of the Western road on the main line, during the year was \$185,350; and that of the gross expenses \$121,809. The causes assigned for this large increase of expenses are the extra distance run by the trains, increased price of fuel, payment of heavy land damages arising prior to 1848, the renewal of iron, rails, &c.

The nett income of 1852 was \$683,194, this year \$746,736—increased \$63,542.

The two Sinking Funds (Massachusetts and Albany) amounted, on the 30th November, 1853, to \$1,247,837, and the Contingent Fund, on the same day, to \$188,889; together, to the sum of \$1,436,726, or to \$27.90 on each share of Stock.

The increase of business of the Road is shown by the following figures, which we extract from the tables. Whole number of passengers carried on the road in 1843, 200,965; in '48, 405,614; in '53, 656,194. Number of tons of freight transported in '48, 158,052; in '53, 180,471. Number of barrels of flour carried in '43, 244,239; in '48, 578,015; in '53, 471,804. Number of miles run by trains of all kinds in '48, 804,492; in '53, 947,382. The corporation now own 59 engines and 1,003 passenger and freight cars, besides a share in 16 cars of the New York and Boston Express line.

The total cost of the road and its equipments, thus far, has been \$10,016,838, including \$63,079 which has been expended on the new Station House in Springfield. The total means provided for the construction and equipment of the road, amount to \$10,469,620, of which \$459,578 has been paid to the Sinking Funds, leaving the nett means \$10,009,941. The debt of the road consists

of \$4,319,520 of English bonds payable between 1868 and 1871, and guaranteed by the State of Massachusetts, and \$1,000,000 of Albany city bonds payable between 1866 and 1876. To meet this debt, Sinking Funds, now amounting to \$1,247,837 and continually increasing, have been established, and will be sufficient to pay all liabilities when they fall due. When the debt is thus paid, the stockholders will have for the five millions of stock for which they have paid, a road costing over ten millions of dollars. In other words, the stock will be doubled in value.

Testing Railway Axles.

The London *Railway Times* of December 10th, 1853, gives some account of testing axles on the Caledonian Railway.—In order to discover the cause and a remedy for the breaking of axles, now unfortunately so common, the manager instructed the locomotive superintendent to put to a severe test the axles supplied by the two principal makers in Scotland. This was done in the works of Messrs. Craig, Fullerton, & Co., engineers, Paisley who have at present in their works a quantity of axles supplied by the Monkland Iron and Steel Company, and by Messrs. George Allen and Sons, Clyde Forge, Greenock.

The test was applied to one axle at a time. The axle was placed on blocks, which raised it six inches from the ground, and a large cast-iron ball, weighing 12 cwt. was allowed to drop on the middle of the axle, from heights varying from 12 to 23 feet. The following are the results:

MESSRS. GEORGE ALLEN AND SON'S AXLES.		
	Height of ball when dropped.	Result.
	feet.	
First axle.....	12	Bent without fracture.
Do. reversed.....	12½	Straightened without fracture.
Second axle.....	15	Bent without fracture.
Third axle.....	15	Bent without fracture.
Do reversed.....	15	Straightened without fracture.
Do. again reversed....	15	Bent without fracture.
Do. do. block 6 inches higher.....	23	Broke in two at the 4th trial.
Fourth axle.....	15	Bent without fracture.
Fifth axle.....	20	Bent without fracture.
MONKLAND IRON AND STEEL COMPANY'S AXLES.		
First axle.....	12	Broke without bend'g.
Second axle.....	15	Bent without fracture.
Do. do. 6 inches higher.	23	Bent further without fracture.
Third axle.....	15	Bent without fracture.
Do. do.....	23	Bent further without fracture.
Fourth axle.....	12	Broke without bend'g.
Fifth axle.....	12	Broke without bend'g.
Sixth axle.....	12	Broke without bend'g.

Bridge of the Ohio and Mississippi Railroad over the Great Miami River.

This immense bridge, built by the Ohio and Mississippi Railroad Company across the Great Miami River, about a quarter of a mile from its mouth, and two miles above Lawrenceburg, is so far completed as to allow trains to pass over it.

At the first trial of the bridge a twenty-seven ton locomotive and tender, with platform cars heavily laden with cross-ties, &c., passed over the bridge at all rates of speed under forty miles an hour, and at one time stopping in the center of each span, and without causing the least creak or vibration, to use the words of a person who was there.

The bridge consists of four spans, each two hundred and ten feet long—making a total length of eight hundred and forty feet. The piers and abutments are of the most substantial masonry laid with cement. The bridge was built by Messrs. McCullam & Brundage, under the direction and superintendence of Francis Pruyn, Esq., Civil Engineer on the O. & M. R. R. It presents a noble appearance viewed from steamboats passing on the Ohio. The road is expected to be open soon from Cincinnati to Lawrenceburg and Aurora,

Sunbury and Erie Railroad.

The following is the result of the election for Directors of this road:

From Philadelphia.

Henry White,	Charles S. Boker,
Charles Lennig,	Daniel Deal,
Joseph B. Myers,	Franklin Platt,
John W. Stokes,	Robert Ewing.

From the Interior.

David K. Jackman, Clinton County.
James Armstrong, Lycoming County.
Gideon J. Ball, James Thompson, Erie.

The subscription of \$2,000,000 to this road by the city of Philadelphia, has been confirmed in the city councils. John Tucker is President *pro tem* of the Sunbury and Erie road.

The Northern Cross and Central Military Tract Railroads.

The contract for the bridging and grading of the Northern Cross Railroad has been let, and the iron for the track which is to be the compound rail, has been engaged and is to be delivered at Quincy, on the Mississippi, early in the season. It is expected that the entire line of road will be in running order by the first of next December.

The Northern Cross Railroad, which runs from Quincy to Galesburg, in Knox county, Illinois, connects at the latter point with the Central Military Tract Railroad, which runs from Galesburg to the point where the Aurora Road from Chicago connects with the Illinois Central.

The Central Military Tract Railroad is now graded and bridged and all ready for the iron rails, so that by the first of next year there will be a direct and continuous line of railroads from Detroit via the Central Michigan, the Aurora and Chicago Railroad, the Central Military Tract Railroad, and the Northern Cross Railroad, to Quincy, a distance of 540 miles.

Macon and Western Railroad of Georgia.

The eighth annual report of the Directors shows the gross receipts, for the year ending Nov. 30th, 1853, to be, (including \$1,776 41 interests and discounts,) \$280,515 95, or \$10,560 20 over the previous year. The expenses were \$128,779 14, leaving a gross income of \$151,736 81, or over 54 per cent. of the gross receipts. Semi-annual dividends, amounting to 8 per cent., have been declared on the original capital of \$1,214,000.

The capital stock of the company has been increased during the year to \$1,500,000, and \$14,370 of the increase have been paid in.

The amount charged to construction on the 1st of December, 1853, was \$1,339,931 83. The difference between the par of 12,140 shares and the amount at which they were originally issued is \$215,282. The balance of assets is \$80,329 03. The company's bonds amount to \$163,000. Their reserved fund \$35,000.

At the annual meeting of the stockholders, held at Macon, January 10th, 1854, a committee was appointed to confer with a similar committee, from the Georgia Central Railroad, upon the terms of consolidation of the two companies. A single line of railroad is contemplated extending from Savannah to Atlanta.

The following gentlemen were elected officers for the ensuing year:

Isaac Scott, of Macon, *President*; Andrew Low, J. C. Levy, Edward Padelford, Charles Moran, Drake Mills, Adam Norrie, Ker Boyce, T. C. Matheson, N. C. Munroe, J. B. Ross, Robert Collins, and Hendley Varner *Directors*; Ira H. Taylor *Secretary*.

Terre Haute and Richmond Railroad.

The following gentlemen were elected Directors of the above Company, at a meeting of the Stockholders held on Monday, Jan. 1854 2:

R. Rose, S. Crawford, A. McGregor, D. Deming, C. Warren, John Crawford and W. D. Griswold of Terre Haute; E. J. Peck, Indianapolis; and W. H. Thornburgh, Greencastle.

Philadelphia, Wilmington and Baltimore Railroad Company.

At the annual meeting of Stockholders held at Wilmington, the following gentlemen were elected Directors of this Company for the ensuing year:

Pennsylvania—S. M. Felton, M. B. Buckley, Moncure Robinson and Aubrey H. Smith.
Delaware—C. I. Dupont, J. A. Duncan, Jesse Lane, Frederick A. Curtis, and Joseph C. Gilpen.
Maryland—John C. Groome, Thomas Kelso, J. I. Cohen, Jr., Columbus O'Donnell, Enoch Pratt and Thomas Donaldson.

At a subsequent meeting of the Board of Directors, Samuel M. Felton, Esq., was elected President; S. L. Spafford, General Superintendent; and Alfred Homer, Esq., of Philadelphia, Secretary and Treasurer. The President, and three of the Directors, are re-elected. All the other Directors are new, as is also the Secretary and Treasurer.

Consumption of wood by Locomotives.

The consumption of wood by the locomotives on the Michigan Central and Southern roads, between Chicago and Niles, and South Bend is estimated at 30,000 cords within the past year. The Rock Island, and some other Illinois roads are dependent on Michigan and Indiana for wood, and get it by running their wood trains over the Michigan roads. The present prices of wood in Chicago are: Hickory \$6 50 to 7; Beach and Maple, \$5 50 to 6; Oak, \$4 50 to 5. This is nearly as dear as it is in Albany, N. Y. Before the introduction of railroads, hickory wood could be purchased in Michigan for \$1 50 per cord.

Tunnel at the Blue Ridge. Virginia Central Railroad.

The Message of the Governor of Virginia, speaks of the above work as follows:

"One section of this line, of about 15 miles, consists of the Blue Ridge railroad, which was undertaken and is being constructed by State Agents and with State means. A part of this section embraces the tunnel through the Blue Ridge, a work of extreme difficulty, causing the unavoidable delay in the completion of the section. The tunnel is 4,248 feet in length, and it is confidently expected that it will be completed by the 1st of January, 1856. The perforation on the 1st of November last was 2,317 feet, leaving 1931 feet to be cut. There has been paid for the construction of this section up to the same time, \$874,578 10; and it is estimated that the expenditure, for the year ending 1st January, 1855, will be \$195,050, and for the year ending 1st January, 1856, \$136,200, making the total cost of section when completed, \$4,205,828 10.

Fall River Railroad.

The annual report of the Fall River Railroad shows that for the year ending 30th of November, 1853, the gross income of the corporation has been \$294,183 20; expenditures \$167,589 83; leaving a balance over expenses of \$126,589 32, which, deducting \$84,000, the amount of dividend paid to stockholders, leaves the sum of \$42,589 32 to be carried to the surplus fund. The entire value of the property of the road is estimated at \$1,185,977 85, which is an excess of \$87,709 42 over all liabilities.

Cleveland and Pittsburgh Railroad.

At the recent election for officers of this road Cyrus Prentiss was re-elected President, and the following gentlemen Directors: Zalmon Fitch, W. A. Otis, A. C. Brownell, H. W. Clark, E. G. Williams, H. N. Day, C. Prentiss, J. Farmer, J. L. McIntosh, Hiram Stow, of Beaver, Pa., and Joshua Hanna, of Pittsburgh.

Managing Staff of the New York and Erie Railroad.

The Officers in charge of the operation of the Erie Rail Road are as follows:

Charles Minot, General Superintendent and T. L. Smith, Assistant Superintendent; offices, Erie Building, foot of Duane street, New York City.

Henry Hobbs, Supt. of Union Railroad, Jersey City, N. J.

P. Ward, Supt. Newburg Branch, Newburg, N. Y.

J. J. Lawrence, Supt. Eastern Division, Piermont, N. Y.

Wm. H. Power, Supt. Delaware Division, Delaware, N. Y.

R. N. Brown, Susquehanna Division, Owego, N. Y.

J. A. Hart, Supt. Western Division, Dunkirk, N. Y.

Harvey Rice, Master of Engine Repairs, Piermont Shop, Piermont, N. Y.

James B. Gregg, Master of Engine Repairs, Susquehanna Shop, Susquehanna, Pa.

J. A. Hart, Master of Engine Repairs, Dunkirk Shop, Dunkirk, N. Y.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

BLAKE'S PATENT FIRE-PROOF PAINT.

THIS extraordinary substance has now been tested nearly nine years, and its FIRE and WEATHER PROOF qualities are most extraordinary. Instead of the action of the weather destroying the coating as it does ordinary paints, it only serves to turn it to a perfect slate or stone, protecting whatever covered from the action of fire and weather, as will be seen by the testimony of the following persons.

BORTON GREEN, being called in the case of Blake vs. Belknap, after being duly sworn, testifies and says, that he resides in Ohio. A few days since examined a house that had been painted nearly eight years with said paint, and to all appearance, it was as perfect as the day it was put on, and could even now see distinctly the brush marks upon the surface.

NORMAN RUDD being called, and duly sworn in the above-mentioned case, says that he was owner or part owner of a large Machine Shop situate in Newmarket, N. H., that the Shop took fire and burned down, loss, \$50,000. The roof of a large Foundry near by, was covered with this paint, a Cupola upon the Foundry was not painted, it took fire and fell on to the roof and burned up, without apparently injuring the roof, except to char the boards underneath.

Amesbury, Conn., August 18th, 1851.
We were present at the burning of the Amesbury Factory, which was struck by lightning on the 10th of July last, and which, with the surrounding buildings, was painted with Blake's Ohio Fire Proof Paint, and have no doubt but that all the surrounding buildings would have been consumed had they not been painted with said paint.
JOHN TALBOT, Superintendent.
DAVID TALBOT, Agent.

Akron, Ohio, May 22d, 1850.
This may certify that we have been acquainted with Blake's Patent Fire Proof Paint for some years, and are well assured that it is really what its name indicates—fire-proof. We consider it a better fire proof than tin or zinc, and will insure buildings covered with it at a much lower premium than those covered with the above-mentioned metals.

H. K. SMITH, Sec. Summit Mut. Fire Ins. Co.
DAN'L S. LEE, Ag't of Medina Co. Mut. Ins. Co.
D. R. HADLEY, Ag't of Stark Mut. Ins. Co.
R. F. CODDING, Ag't Portage & Farm's Ins. Co.
J. A. BEALES, Ag't Portage Ins. Co.
WHEELER, LEE & CO., Col. Ins. Co.

The best evidence of the value of an article, is from the fact of persons of practical skill, having used in years past large quantities, and still continue to order largely for future use.

OFFICE OF THE PHILADELPHIA & READING RAILROAD CO.
Philadelphia, July 16th, 1850.

Dear Sir:—This Company have been and are using BLAKE'S FIRE PROOF OHIO PAINT extensively for Bridges and Buildings. In the course of time it becomes very hard, and seems to be both fire and water proof under any ordinary circumstances. We decidedly prefer it for the purposes named above, to any paint we have hitherto used, as it costs less and is much more durable.

JOHN TUCKER, President.

ENGINEER'S DEPARTMENT, P. R. R. CO.
Philadelphia, Feb. 17th, 1850.

Dear Sir:—Having used Blake's Fire Proof Paint on this Road for two years past, I am sufficiently satisfied with its superiority to continue its application to all the structures and cars on the line of the Penna. railroad. Yours, very respectfully,
J. EDGAR THOMPSON, Chief Engineer.

OFFICE PENNA. R. R., April 20th, 1852.

Dear Sir:—Ship immediately the fifty barrels yet undelivered of our order for one hundred barrel Blake's Patent Fire Proof Paint, dated Feb. 15th, 1851, to care of Strickland Kneass, Esq., Altoona, and care of John Covorie, Esq., Pittsburg.

Yours truly,

J. EDGAR THOMPSON.

GEORGIA RAILROAD, Augusta, Ga., November 27th, 1851.
Dear Sir:—Please furnish us with (30) thirty bbls. Blake's Fire Proof Paint, Chocolate Color. We have been using Blake's Fire Proof upon Freight Cars and Buildings for the last three years, and it gives me pleasure to state that we have found it both more economical and durable than any other kind of paint.
F. C. ARMS, Gen. Supt.

I fully concur in the above recommendation.
JESSE OSMOND, Supt. Car Factory.

Portland, April 11th, 1851.

Dear Sir:—I have requested Mr. Emory, Ag't and Supt. of the Y. & C. Railroad, to give you an order for twenty bbls. of Blake's Ohio Fire Proof Paint, for the use of this Road; and I take pleasure in adding, that I regard it as an article superior to any other introduced into the market and use, as also more economical in price, for coating Depots, Cars, and every other material of wood or metal, exposed either to fire or weather; and I can cheerfully concur in recommending it accordingly for most uses and roofs generally. Please forward the amount of Mr. Emory's order by the earliest conveyance.

F. O. J. SMITH, President York and Cumberland R. R.

CAMDEN & AMBOY RAILROAD OFFICE.

Bordentown, March 4th, 1851.

In reply to your inquiry as to your opinion of Blake's Ohio Fire Proof Paint, I would state that we have used considerable of it during the last two years, and consider it a first rate article, and hereafter shall prefer it to any other paint, for Buildings, Bridges and Cars outside.

R. S. VAN RANSELLER, Superintendent.

ENCL'S OFFICE, BALTIMORE & OHIO R. R.

Dear Sir:—Being satisfied with the testimonials you have produced, that Blake's Fire Proof Paint which you have for sale is a valuable article for the purposes which you mentioned, I now give you an order for 50 barrels, of 350 lbs. or thereabouts, of the paint; 25 bbls. of Black and 25 bbls. Chocolate color. Consign the paint to Jas. B. Jordan, Mount Clear Depot, Baltimore.

B. H. LATROBE, Chief Engineer.

OFFICE OF MASTER OF ROAD, BALTIMORE & OHIO R. R.
Baltimore, Nov. 3d, 1851.

Dear Sir:—After using "Blake's Patent Ohio Fire Proof Paint" for the last year, I have concluded to give you an additional order for 40 bbls. I feel a pleasure in saying that I consider it the best material for covering Wood, Brick, or Iron, now in use.

Respectfully your Obedt. Servant.

W. BOLLMAN, Master of Road.

SUPERINT'T OFFICE, RICHMOND & FREDERICKSBURG R. R.
November 6th, 1851.

Dear Sir:—In reply to your inquiry in reference to our satisfaction with Blake's Patent Paint, sold us last Spring, I would say that we are so well pleased with it that I should like to have you ship us seven bbls. more of the Chocolate at your earliest convenience. Yours, &c.

THOS. SHARP, Supt. R. F. and P. R. R.

JUNCTION HANOVER COUNTY, November 1st, 1851.
The Virginia Central Railroad Co. have been and are using Blake's Fire Proof Ohio Paint extensively for Bridges, Car-tops, &c. We decidedly prefer it for the purposes named above to any paint we have ever used, as it costs less and is much more durable.

C. R. MASON, Supt.

PHILADELPHIA & BALTIMORE R. R.
Baltimore, Sept. 10th, 1851.

I have used Blake's Ohio Paint for four years, and have found it to be an article of great economy and value, and calculated to supersede for most purposes all other paints, for Public Buildings and Private Residences.

J. R. TRIMBLE, General Agent.

ATLANTA, December 10th, 1851.

Dear Sir:—Please send me for the Atlanta and Lagrange Railroad Co., 20 bbls. Blake's Fire Proof Paint, Chocolate Color. I have used the paint for various purposes, and am well satisfied that it makes a good and durable coating.

L. P. GRANT, Eng. & Supt. A. & L. Railroad.

SUPERINT'T'S OFFICE, S. W. Railroad.
Macon, December 5th, 1851.

Dear Sir:—Please ship us, care of Central Railroad Agent, Savannah, 2 bbls. Blake's Fire Proof Paint.
I have used on the Central Railroad, and on this road a considerable quantity of the above Paint, in the last four years, and have no hesitation in pronouncing it the best for covering for wood that I know of, as a protection from the weather or fire.

GEORGE W. ADAMS, Supt.

MACON & WESTERN R. R., Macon, Dec. 6th, 1851.
Dear Sir:—You will please furnish for this Company 8 bbls. Blake's Patent Fire Proof Paint, (Black color), and 4 bbls. Chocolate color—in all 12 bbls. We have heretofore used Blake's Fire Proof Paint on Freight Cars and Buildings with much satisfaction, considering it both economical and durable.

EMERSON FOOTE, Supt.

MONTGOMERY & W. POINT R. R. CO.
Montgomery, January 21st, 1852.

We have been using Blake's Patent Ohio Fire Proof Paint for several years for painting Cars and Buildings, and have been highly pleased with it. You may send us twenty barrels of the paint; fifteen of the Chocolate color and five of the Slate color.

Respectfully,

SAML. G. JONES, Engineer & Superintendent.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Norfolk, Va., Jan. 8, 1854.

SEALED PROPOSALS will be received by the undersigned at this Office, from the 1st until the 20th day of March next, at sundown, for the "clearing" and "Graduation" on the line of the "Norfolk and Petersburg Railroad," between that portion of said road now under contract, and its terminus at Petersburg—covering a distance of about eighteen miles; also, for the "Culvert" and "Bridge" Masonry of the last section of said work.

At the same time, sealed proposals are invited for the "Abutment" Masonry of "Bridges" over the Eastern and Southern branches of Elizabeth River.

The work will be divided into sections of about three miles, and bids may be made for one or more of said sections.

The line, plan, profiles and quantities of work will be ready for examination on and after the 1st of March.

Specifications with forms of contract and pro-

posals may be had of the undersigned after date.

Payments will be made in current funds during the progress of the work, in proportion of four-fifths of the amount due.

Of bidders personally unknown to the undersigned, evidence of their responsibility will be necessary; and of those to whom work shall be allotted, will be required bond and approved security in an amount not exceeding one-twentieth of the amount of their contract, for the timely and faithful execution of the same.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

The line is easy of access, the country through which it passes abundant in supplies and of a climate highly favorable for the prosecution of work at all seasons.

The work here offered for contract is of a character well worthy the consideration of the most responsible contractors.

W. MAHONE,
Chief Engineer.

January 19.

To Contractors.

LAFAYETTE RAILROAD.

SEALED PROPOSALS will be received by the undersigned at the Engineer's Office of the Lafayette Railroad, No. 23 Spaulding's Exchange, Buffalo, N. Y., until Tuesday at 12 M. the 7th day of February next, for the grading, masonry, bridging and the entire construction of 17 miles of the Lafayette railroad from the State line of New York to Lafayette, Pa. Plans, profiles and specifications are ready for examination by parties wishing to contract.

Any further information in reference to the work, may be obtained on application to the Hon. C. S. Woodhull 133 Nassau str., New York, or of the undersigned.

E. R. BLACKWELL,
Chief Engineer.

Buffalo, January 24th, 1854.

Fire Bricks.

SCOTCH Patent—for sale in lots to suit purchasers, by
G. O. ROBERTSON,
135 Water street, corner of Pine,
November 19, 1852. New York.

Valuable**Engineering and Mechanical Works,**

IMPORTED and FOR SALE by

JOHN WILEY, 167 Broadway.

- SCOTT'S ENGINEERS' AND MACHINISTS' ASSISTANT, 2 vols. Quarto... \$20.00
- TREDGOLD on the LOCOMOTIVE ENGINE, half calf..... 15.00
- " on the MARINE ENGINE, half calf..... 24.00
- " on the STATIONARY ENGINE, &c., half calf..... 24.00
- TREATISE on the STEAM ENGINE by the Artizan Club..... 6.00
- WEALE'S THEORY, PRACTICE and ARCHITECTURE of BRIDGES, 3 large vols., half bound..... 25.00
- WEALE'S SUPPLEMENTARY VOL. (just published), half bound..... 14.00
- TRAUTWINE on RAILROAD CURVES, turk..... 1.00
- " on EMBANKMENTS AND EXCAVATIONS..... 1.00
- WILSON'S HANDBOOK of PLAIN and ORNAMENTAL MAPPING, and Engineering Drawing, for Civil and Mechanical Engineers..... 7.50
- WOOD'S PRACTICAL TREATISE on RAILROADS, 8vo..... 5.00
- RYDE'S TEXT BOOK for the USE of ARCHITECTS, ENGINEERS, SURVEYERS, &c. 1 vol Royal 8vo..... 8.50
- GREGORY'S MATHEMATICS for PRACTICAL MEN. 8vo..... 6.00
- BARLOW on the STRENGTH of MATERIALS and on CONSTRUCTION..... 4.50
- LARDNER on the STEAM ENGINE. New Edition..... 2'00
- SCRIBNER'S ENGINEER'S, SURVEYOR'S and CONTRACTOR'S POCKET TABLE BOOK..... 1.50
- SCRIBNER'S ENGINEER'S and MECHANIC'S COMPANION..... 1.50
- BUCK ON OBLIQUE BRIDGES. Illustrated with Plans, &c..... 4.00
- EXAMPLES of RAILWAY MAKING. With PRACTICAL ILLUSTRATIONS.. 3.50
- SIMM'S on LEVELLING and SETTING OUT RAILWAY CURVES. 8vo..... 3.25
- SIMM'S on MATHEMATICAL INSTRUMENTS, 8vo..... 2.25
- HAUPT on BRIDGE CONSTRUCTION. 8vo..... 3.00
- QUESTED'S TREATISE on RAILWAY SURVEYING and LEVELLING. 8vo... 1.75

Together with an extensive assortment of Books in every department of science.

LAWRENCE SCIENTIFIC SCHOOL,
Harvard University.

THE next Term of this Institution will open on the second day of March, 1854, and continue twenty weeks

Instruction by Recitations; Lectures and Practical Exercises, according to the nature of the Study, will be given in:

- Astronomy..... by Messrs. Bond.
- Botany..... " Prof. Gray.
- Chemistry, analytical and practical..... " Horsford.
- Comparative Anatomy and Physiology..... " Wyman.
- Engineering..... " Eustis.
- Mathematics..... " Pierce.
- Mineralogy..... " Cooke.
- Physics..... " Lovering.
- Zoology and Geology..... " Agassiz.

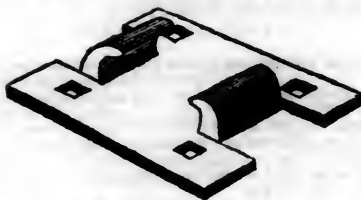
For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

Cambridge, Mass., January 1854.

NEW YORK
Wrought Iron Railroad
Chair Company,

Office, 38 Exchange Place, New York.

A. B. LANSING, President.



THIS Company is prepared to receive orders for the manufacture of Wrought Iron Railroad Chairs of the best material, on a new and superior model, and by improved patented machinery.

The thickness of the Lips of the Chair increases through the bend, where the greatest strength is required, and diminishes towards the edge;—so that a less weight of metal may be used and a strength acquired equal, if not superior, to that of a heavier Chair of uniform thickness.

GALENA & CHICAGO UNION R. R. CO. }
Secretary's office, Chicago, Jan'y 21th, 1854. }

Notice to Stockholders.

NOTICE is hereby given to the Stockholders of the GALENA & CHICAGO UNION R. R. CO., that a dividend of ten per cent. on the capital stock paid in (entitled to dividends) for the six months ending January 31st 1854, has been declared.

The Income of the road having been used for construction purposes, the dividend will be payable, on and after the first day of February next at the office of the Company, in dividend certificates, redeemable at the pleasure of the holder in full paid Consolidated Stock of the Company when presented at this office in terms of One hundred dollars.

By order of the Board of Directors.

W. M. LARRABEE, Secretary.

FULTON CAR WORKS,
CINCINNATI, OHIO.

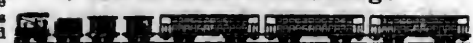
WE respectfully call the attention of Railroad Companies and Contractors in the West and South to our establishment. Our facilities for manufacturing are extensive, our work is made from the best material the country affords, and of the most superior workmanship, we are prepared to execute to order on short notice Passenger Cars of the most approved description and elegant finish. Baggage, Freight, Cattle and Gravel Cars, also Crank and Lever Hand Cars, Trucks, and Railroad work generally.

Washburn Car Wheels.

Having secured the exclusive right to make and sell this celebrated wheel in Cincinnati, Covington and Newport, we are prepared to furnish them in any quantity, either fitted with axles or separate. These wheels are made of the best of iron, mixed with most approved manner.

Cincinnati, Ohio, January 18th, 1854.

KECK & HUBBARD.

Rail Road Letting.

PROPOSALS will be received at the Office of the Company in the City of Evansville, Indiana, until 6 o'clock, P. M., of Wednesday, 15th day of February, 1854, for the Grubbing, Grating and Bridging of that part of the 1st Division of the

EVANSVILLE, INDIANAPOLIS, AND CLEVELAND STRAIGHT-LINE RAIL ROAD,

Extending from Evansville to the Crossing of the Ohio and Mississippi Rail Road, in Daviess County, a distance of fifty-four miles.

The work will be divided into sections of about one mile each, and proposals will be received for one or more sections, or for the whole line.

Maps, Profiles and Specifications will be ready for the examination of bidders on and after the 1st of February, and all necessary information given on application to W. C. MOORE, Chief Engineer.

O. H. SMITH, PRESIDENT,

W. CARPENTER, VICE PRES.

Evansville, Jan. 2, 1854.

NEW YORK & ERIE RAILROAD.

NEW YORK, December 31, 1853.

THE NEW YORK & ERIE RAILROAD COMPANY, have for sale on favorable terms, the following Schedule of Rolling Stock of the Gauge of

FOUR FEET, TEN INCHES,

all of which can be delivered immediately.

It can be seen at Paterson, and is the entire stock of the Union Railroad, the Paterson & Ramapo Railroad, and the Paterson & Hudson River Railroad.

Reasonable credit will be given on the above, on satisfactory security.

CHA'S MINOT, Sup't.

SCHEDULE.

ENGINES.	MAKER.	CYLINDER.	STROKE.	WHEEL.	CONDITION.
R. L. Colt...	New Jersey Locomotive Co.....	16	20	5 feet	Good.
Union.....	Rogers, Ketchum, & Grosvenor.	15	20	6	Good.
New York...	do. do.	14½	18	6	Good.
Ramapo.....	do. do.	14½	18	6	Wants painting & small repairs.
Passaic.....	do. do.	14½	22	5½	do. do. do.
Paterson.....	do. do.	12	22	5	do. do. do.
Whistler.....	Made in Baltimore	11	16	5	Wants much repairs.
McNeil.....	Made in Liverpool.....	9½	16	4	In bad order.
CARS.	DESCRIPTION.	BY WHOM MADE.			CONDITION.
2.....	Passenger, 8 wheels....	Cummings & James, Jersey City.	Good.		
2.....	do. 8 do.	Wm. Cummings, Jersey City.....	Good, but wants painting.		
2.....	do. 8 do.	Tracy & Fales, Hartford.....	Very good.		
4.....	do. 8 do.	Springfield Car & Engine Co.....	Good, but three want painting.		
2.....	do. 8 do.	A. T. Pearce, Norwich.....	Good.		
2.....	do. 8 do.	Eaton & Gilbert, Troy.....	Want repairs.		
1.....	do. 8 do.	New York & Erie R. R. Co.	Good, new.		
1.....	Baggage, 8 do.	do. do.	Good.		
6.....	do. 8 do.	Unknown	Want small repairs.		
1.....	do. 6 do.	do.	do. do.		
8.....	Box freight, 8 do.	New York & Erie R. R. Co.	Good.		
18.....	do. 4 do.	Unknown	Want small repairs.		
16.....	Platform, 8 do.	New York & Erie R. R. Co.	Good.		
9.....	do. 4 do.	Unknown	Want considerable repairs.		
1.....	do. 6 do.	do.	do. do. do.		
2.....	do. 8 do.	do.	do. do. do.		

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 5.]

SATURDAY, FEBRUARY 4, 1854.

[WHOLE No. 929, VOL. XXVII.]

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

New Theory of Taxation in Pennsylvania.....	65
McConnell's Locomotives.....	66
Cost of Transportation and Depreciation of Iron on the Western Railroad of Mass.....	67
Economical Working of Grades.....	67
Effects of Melting on the Strength of Iron.....	67
Philadelphia, Wilmington and Baltimore R. R.....	69
State Finances.....	69
Ohio and Pennsylvania Railroad.....	70
Journal of Railroad Law.....	71
Pacific Railroad of Missouri.....	71
Friction of Steam Engines.....	74
Internal Improvements in Virginia.....	74
Blue Ridge Railroad of South Carolina.....	75
Milwaukee and Mississippi Railroad.....	76
Expansion of Locomotive Boilers.....	76
Finances of St. Louis.....	78

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, February 4, 1854.

The New Theory of Taxation in Pennsylvania.

The legislature of Pennsylvania has finally repealed the charter of the Franklin Canal; and we presume, ere our paper goes to press, will have taken formal possession of the road.

Whatever may be the complications in which the Erie affair has become involved, there is no doubt that the whole difficulties have their origin in the determination on the part of Pennsylvania not to allow an uniform gauge through her north-western frontier upon the line occupied by the Lake Shore road.

The avowed object of the break of gauge, is to benefit Erie; and to check, to use a favorite phrase of our neighbor, "the grasping and unscrupulous ambition of New York." The break it is hoped, will check the current of Western trade in the direction of that city.

To tax commerce has always been one of the favorite modes by which all governments, and all persons in possession of power, have sought to derive a revenue. But however laid, it has always been done with a *show*, or pretence of a compensa-

tion to the *payer*, in the shape of protection, or of some facility or advantage extended to him. The savage chieftain, darting out from his lair, commutes with the unlucky merchant for a right to seize the *whole* property of the latter, who may be well content to give up a part of his merchandize as a price for retaining the remainder. In civilized communities the arbitrary right of the savage is exercised by law, uniform in its operations, and claiming to promote the highest advantages of the whole community. In the latter case, taxes are paid, not so much as a compensation for protection, as for the enjoyment of some privilege by the tax payer, as the use of a road, harbor, light house, etc., etc.; or for the purpose of defraying the necessary charges of government, by which all parties are *equally* benefitted. Such, among civilized States, is the *theory* upon which the right of taxation rests. It is submitted to on the same ground that a merchant devotes a part of his income to the protection and care of his property, or to the education and well-being of his family. He feels that the demands which *society* creates, must be met as certainly as must those of the *individual*; consequently no man complains in paying a reasonable tax, for public purposes, any more than he does in paying for his dinner.

A tax to be cheerfully paid must be of the character described. There must be a *mutuality* in the transaction by which the benefits and the burdens are *shared*. When the benefits and the burdens are not theoretically equal, a tax is *odious*. Such is a tax upon the mere right to *move* property. A person feels that a gross injustice is done him, by compelling him to pay a certain sum for the mere privilege of crossing the boundaries of a town or State. If this sum is levied as a thing due from a person to the *State*, a sum which he pays in common with all his fellow citizens, then the manner in which it is paid becomes immaterial. In theory, at least, he gets his money's worth, and is satisfied.

But to be compelled to pay *without* any equivalent, is felt to be an intolerable burden. In this light were viewed many of the taxes imposed by the several States previous to the confederation. It was felt there was no justice, nor reason, in compelling a person to pay a certain sum for the privilege of driving a flock of cattle, or sheep,

from Connecticut to New York. The mere passing from one to the other did not deprive him of his citizenship. He saw too that by the consolidation of the States, the necessity of transit duties, or imposts levied by each might be obviated, and that the objects for which they were levied might, in a great measure, be superceded; that a *homogeneous* State might be made up of the numerous fragmentary ones, and that by uniting *thirteen* into *one*, the expenses of the whole might, in many important particulars, be reduced in like ratio. To effect such a saving, was, as before stated, the leading motive that lead to the formation of the general government, which both asserted the rights that were previously common to its several members, and expressly prohibited the latter from imposing any burdens upon the commerce *between* the several States; no matter what the objects.

But a privilege which all tradition had shown to be so valuable, was not to be *practically* given up without a struggle. Several of the States sought, at different times, to violate the terms of the compact of the general government, in indirect ways, but in the end were always restrained by the legal tribunals. The decisions of such tribunals had come to command very nearly, not only common consent, but the general approbation and to be followed by almost universal submission to their spirit and letter. The internal commerce of the country was practically free from all burdens, and any charges imposed upon it were designed to promote its advantage.

Railroads were chartered and constructed in view of their adaptation to a system embracing a *whole* country, instead of a State. Local boundaries were entirely disregarded, on the ground that the surest way to advance the greatest good of the *individual*, was to promote the *aggregate* good of all. The lines of our railroads, therefore, pay no attention to the boundaries of the States. They are co-extensive with the *whole* country. The different parts of the road from New York to Chicago, are but complements of *one* line. So is the road from this city to Charleston and Savannah. Such should be the fact. The road should correspond to its objects and uses, and as commerce is purely cosmopolitan, so should be its instruments, railroads.

But at this late day a new doctrine is proclaimed, which strikes not only at the existence of commerce, but of all political organization, by destroying the very reasons upon which it is founded. The State of Pennsylvania, through its Governor says: "we interpose ourselves between important sections of the country, and we will turn our position to our own advantage." Direct taxation cannot be imposed. The law against it is too palpable. Imposts, and capitation taxes cannot be levied for the same reason. But ingenuity has found out a new mode of turning the "position" of the State to account; and this is by compelling every pound of produce and of merchandise passing through a portion of the State, to be *lifted from one car to another*, for the purpose of giving employment to a certain number of the population of a feeble and emaciated borough! This is an invention which neither savage cunning, nor civilized rapacity ever dreamed of. These had some respect for *show*; a plausible case, as an apology for plundering, had to be made out to make the thing practicable; the improvement of a highway; the support of some charity, or some institution, the reason of which had long since faded away; perchance to erect a monument to some canonized saint; some excuse of sufficient force to satisfy the public mind, and to give an air of justice to the affair, had always to be put forth. But Pennsylvania has got far beyond such antiquated notions. She assumes to tax the commerce of the country by forcing it to support a few riotous vagabonds, by employing them in transferring freight from one train of cars to another. Such sublime truths in the science of political economy it seems to be her mission to evolve, and of Governor Bigler, to announce to the world.

The discovery is a great one. The past ages present nothing to be compared to it; the present no parallel. Such discovery could not have been made outside of Pennsylvania. She clearly is the inventor, and it is right that she should reap the reward. Let us see what this will be.

The reward will be the employment of a few persons at labor entirely useless, and worse than useless; because a change of freights must always be attended by great destruction of property. All labor expended in transferring freight from car to car, is worse than wasted. It may give employment to a certain number of persons, but commerce could better afford to pension them off, by giving them ten times the amount of their wages, than to suffer the losses that breaks of gauges occasion. No labor is ever *valuable* to the State, that is not *productive*. It would be vastly better for Pennsylvania, and for Erie, that the labor of the citizens should be directed to some *profitable* pursuit, and which would add something to the aggregate property of society. Certainly there is no want of employment, of profitable employment in this country, at as good or better prices, as will be paid probably by the Railroad Companies at Erie. Why then not have the people of that town pursuing some honest, productive and honorable occupation, instead of aiding them to levy black mail out of the public; a vocation which cannot fail to exert a most disastrous and demoralizing effect even upon the persons so engaged.

We do not think it worth the while to devote much time to the discussion of the expediency

or propriety, of having a break of gauge for the purpose of deviating business from New York and turning it to Philadelphia. It is easy to see that all such measures inevitably recoil upon their authors. The Western people who are chiefly concerned in this matter, will, we have no doubt settle it to suit themselves. The more they are *punished* for not going to Philadelphia, the less will they go there. They will never be *bullied* into trading with that city. As stated in a previous number of our paper, where one dollar is made, ten will be lost to that city by the policy Pennsylvania is now pursuing.

In every point of view is Pennsylvania the loser by a break at Erie, as far as its *direct* results are concerned. But taking it in all its consequences, she must be a tremendous sufferer. She will lose credit both at home and abroad. Her railroad companies will find their securities entirely shut out of the general market. She will be avoided by all the States, whose business she seeks to control, if for no other reason than to retaliate upon her, the injuries they have suffered. Already have her securities suffered a serious depreciation, which is still going on without any apparent limit. The Bonds of the City of Pittsburgh, a city of 100,000 inhabitants, which recently commanded *par*, can be had at 87½, with no sales at that. Much the largest part of this fall is directly due to the Erie riots. If the Bonds of a city like Pittsburgh are so much affected, how will those of a railroad fare? They cannot be sold at all. The only purchasers are the owners of railway property injured by the Erie riots. Pennsylvania in this matter is fighting a battle with the whole world upon her back. Every holder of our American securities is in league against her. They see, if Governor Bigler's doctrine is to prevail, that their property may not be worth a dollar. They will not touch the securities of a State that proclaims and maintains such abominable doctrines. Pennsylvania policy has become as odious among the money lenders of England, Germany and France, as among the farmers of Ohio. Years will not suffice for her to outgrow the blow she has inflicted upon her credit and those of her railroads.

While she has excited such formidable enemies in front, she will raise up others hardly less formidable in her rear. She dictates a policy the most offensive possible to every Western man. If for every pig, or sheep, or every bushel of corn, or barrel of flour, he sends through *Erie*, he is compelled to pay a tax to sustain a rotten borough, the Mayor of which tells us would be ruined without the privilege of imposing such tax, our word for it, he will pay nothing but the *tax*. He will not long pay even the tax. Such foolery will not be tolerated in this country. If Pennsylvania has any wisdom left, she will see this and not provoke the maintenance of a quarrel, her position in which, is most absurd and intolerable.

Ohio and Indiana Railroad.

The Ohio and Indiana Railroad is now completed to Patterson, on the Mad River Road.—West of Patterson, to the Indiana line, the work is being prosecuted with energy, and large quantities of iron (T rail) are now in store at Sandusky and Toledo, for laying the unfinished portion.—The completion of the whole line, from Crestline to Fort Wayne may be looked for in the early part of next season.

McConnell's Locomotives.

The Practical Mechanics' Journal for December, 1853, contains a longitudinal section of McConnell's express Locomotives, upon the London and North-western Railway. Much has been published in regard to these engines, and much has been claimed for the value of the new principles embodied in their construction.

The engines were designed in the expectation of making the distance between London and Birmingham, 112 miles, in 2 hours. To accomplish this the general dimensions and plan of the engines were as follows:

Inside connection; one pair of leading and one pair of trailing wheels. Outside and inside frames, Cylinders 18 inches in diameter; 24 inches stroke; drivers 7 feet 6 inches in diameter; leading wheels 4 feet 6 inches and trailing wheels 4 feet in diameter.

The boiler is 11 feet 9 inches long in the cylinder, and 4 feet 3¼ inches in external diameter, the waist and outer firebox being of Bowling iron ¾ inch thick. The firebox is of copper; is 70 inches long on grate. Depth of furnace at door plate 82 inches, and 5 inches less at front plate, or plate next to tubes. Width of grate 48 inches. The furnace is extended within the waist of the boiler 4 feet 9 inches beyond the usual position of the tube sheet, forming a "combustion chamber," surrounded by water. As the combustion chamber is stayed to the waist of the boiler it is not necessary that the circular form should be preserved. The under side is accordingly recessed to give room for the clearance of the cranks. Nine inches are gained in this manner. A "mid feather" is also inserted longitudinally in the furnace. There are 303 brass tubes, 7 feet long and 1½ inches diameter. The pistons are of wrought iron; the springs of india rubber; the leading, trailing and tender axles are tubular. The valve motion is the shifting link. The steam pipe is in the form of a broad flat belt, standing with its flat side opposite the ends of the tubes. Tubular stays are passed through the steam pipes for the purpose of surcharging the steam with the waste heat from the tubes.

The economy of the combustion chamber and short tubes has been strenuously supported, it having been claimed to be equal to a reduction of nearly 50 per cent. taking the same load the same distance. It has been ascertained, however, that the waste heat in the smoke-box is about 1100°, while in ordinary engines it averages only about 600°, thus showing a great waste of heat.

The weight of this engine is 28 tons, (of 2240 lbs.), empty, and 31 tons, or about 62,500 lbs., in running order. The large dimensions of this engine, joined with the unfavorable arrangement of an inside connection, shows the *capacity* of the 4 feet 8½ inch gauge, that of the London and North-western Railroad.

We regard the illustrations of these engines, contained in the Mechanics' Journal, as exemplifying a thorough and first class description of workmanship, rather than any especially useful principle not before used.—It is quite well ascertained that with coke, which contains a much greater proportion of carbon than any other fuel, that combustion is practically perfect in ordinary locomotive furnaces. Fuel having an inferior proportion of carbon would therefore be perfectly consumed with a sufficient supply of air. The

use of mid feathers and projecting furnaces, to increase the area of heating surface, is more expensive and less efficient than where the same surface is disposed in the tubes. The great object, we conceive, in the boiler constructed by McConnell, (for which Joseph Harrison, of Philadelphia, obtained a patent in England,) is the means of reducing the height of the boiler with an inside connection. An outside connection would accomplish the same object and afford other advantages of equal importance. Z. C.

Cost of Transportation and Depreciation of Iron on the Western Railroad of Massachusetts.

The cost of carriage of each ton of freight or passenger, per mile, over the Western Railroad in 1852, was 1,402-1,000 cents; there being an equivalent to 46,911,123 passengers or tons of freight carried for that distance. In 1853, carrying 55,638,698 passengers or tons of freight one mile, the cost was 1,399-1,000 cents each.

The number of miles run was 947,382. The expenses of road repairs was $17\frac{1}{2}$ cents per mile run; repairs of Engines $6\frac{3}{4}$ cts. per mile run; transportation expenses 42.92 cents per mile.

In regard to the depreciation of iron the statistics in the report of the Directors enables us to gather the following facts. The road from Springfield to Albany, 102 miles, is of a single track. This part of the road was opened through to Albany in 1842, and since 1851 about 36 miles have been relaid with new iron, while it is expected that about 20 miles will require to be relaid each year for the next three years. At the end of 14 years, therefore, from the opening of the road it will have been relaid throughout with new iron. The business over the road is heavy. We are not able to state precisely the business done over this part of the line, but the whole line from Worcester to Albany, 166 miles, and which now has 44 miles of second track, has borne the wear of 8,135,778 miles of running by locomotives, from the first of January, 1842 to November 30, 1853. The number of passengers carried in that time were 4,495,395, of which 362,193 were through passengers between Albany and Worcester. A large part of the way travel was received from the New York City line of roads, the "way" travel having increased over 50 per cent. since 1849, the year of the opening of the New York City line, while the "through" travel has increased only 13 per cent. in the same time. This "way" travel, received from New York, enters the Western road at Springfield, and passes over the 54 miles between that point and Worcester. A movement of freight has been made over the Western road, from January 1, 1846 to November 30, 1853, equal to 1,244,532 tons over the whole length of the road, or equal to 194,137,108 tons moved one mile.

From the results of the working of the Western road it thus appears that a road chiefly of single track, doing a business about as heavy as most first class roads engaged in the same character of traffic, will require to be relaid with new iron every twelve years.

The Report says "the principle adopted in relaying the road, is to remove from a given section all the old rails. Such as are not too much worn serve for temporary repairs on other parts of the line, while those which have become thin, or in any other manner unsafe, are cut up and re-rolled,

as stated in former reports. By this mode of making the renewals, the iron is alike, as nearly as may be, and we have not a new rail interposed between two old or worn out rails."

Effects of Melting on the Strength of Iron.

William Fairbairn, of Manchester, England, who has become celebrated for his researches in the strength of materials, has undertaken experiments, at the request of the British Association, upon the effects of repeated meltings upon the strength of iron.

It has been commonly supposed that iron depreciated sensibly in strength after three or four meltings, but these experiments have shown this opinion to be erroneous. One ton of hot-blast iron was experimented upon; the quantity of coke and flux being accurately noted at each trial. Precautions were taken that the cooling and mode of pouring should be in each case alike, so as not to affect the result. The iron was run into one-inch square bars, and lengths of seven feet were supported on two points and weights applied to the center until the bar broke.

It was found that the strength of the bars increased up to the twelfth melting, after which it rapidly diminished with each successive melting. The breaking weight at the commencement was 403 lbs., and the deflection of the bar before breaking $1\frac{1}{4}$ inches. At the twelfth melting the breaking weight was 725 lbs., and the deflection $1\frac{3}{4}$ inches. At the 13th melting the breaking weight was 671 lbs., at the fifteenth 391, at the sixteenth 368 and at the seventeenth 330 lbs.

In the fracture made after the fifteenth melting there was a bright rim, like silver, surrounding the interior which was of the usual crystalline structure. This bright silvery fracture extended in the sixteenth and seventeenth specimens till it pervaded the mass, which then resembled cast steel.

Are not these results valuable in their application to castings for important purposes, as for parts of steam machinery, car wheels, tires, etc.

Economical Working of Grades.

BY ZERAH COLBURN.

In the last number of the Journal I endeavored to show that the disadvantage of grades was materially influenced, not only by their disposition, but by the capacity of the motive power employed to operate them. The adaptation of locomotives, with reference to the physical features of a line of road, has much effect in the cost of operation; and more with freight than with passenger engines. Leaving out the consideration of the effects of heavy express trains, there is no doubt that concentration of power is the secret of true economy in working a heavy freight, and especially upon an undulating road. The carriage of coal, which demands the greatest economy owing to the relation between the bulk and value of that article, has been reduced on the Reading Road, to the lowest limits of cost, chiefly through carrying maximum trains. The engines on that line, weighing from 55,000 to 60,000 lbs. take a net load of 500 tons of coal, exclusive of cars. The favorable gradient of that road is an important element. With the same grades, engines of but half the power of those in use would draw but one-half

the above load, while the gross expense of running would be fully three-fourths, if not more, for each train moved.

Locomotives only exert their greatest useful power at speeds of from eight to fifteen miles per hour. This range of economical velocity depends upon the dimensions of the engine and the pressure of the steam, but what are usually termed "low speeds" are always the most economical for heavy freight, while there is generally no necessity for moving such freight at anything like passenger train speed. The motive power of those roads whose freight transportation is effected with the greatest economy, is adapted only for low speed, not generally above twelve miles an hour when in motion.

Joined with concentrated power at low speed is the distribution of weight of the engine. An engine of thirty tons weight will not produce much more wear of track than another engine of twenty tons, provided the weight on each wheel is the same. This principle, besides being founded on physical facts, is sustained by the operation of those roads upon which, while the whole weight of the engines has been increased, the weight on each wheel has been kept about the same.

The use of coupled drivers, by which the necessary adhesion is obtained with an economical distribution of adhesive weight, has been carried out to a greater extent in America than in other countries. It is found that the disadvantage of the friction involved in connected drivers is nothing compared with the saving by relieving the track from excessive concentration of weight. The single pair of drivers, an established feature in English engines, has been loaded in that country with from ten to fifteen tons, twelve being a common allowance; and upon passenger engines, moving forty to sixty miles an hour, the effects have been well indicated in the unceasing outcry, on the part of railroad men, of the "destruction of the permanent way."

These principles are applicable to transportation on level roads; while, where the resistances are increased by grades, the engines require to be heavier, the speed slower, and the weight of the engines divided upon a greater number of points.

The working of the Baltimore and Ohio and of the New York and Erie roads shows the application and results of these principles. The grades of the Erie road were given in last week's Journal and the capacity of the Erie engines also, for freight trains, while in the Journal of November 26th, 1853, the dimensions were given in detail for every engine on that road.

The Baltimore and Ohio road has only 4 miles of grades in a distance of 179 miles between Baltimore and Cumberland, in which the rate of ascent is over 40 feet to the mile. On these 4 miles the rise is 82 feet per mile. West of Cumberland there are a succession of 116 feet grades, and for a distance of 33 miles the most part is on grades of from 100 to 116 feet per mile.

The following is a list of the engines of the Baltimore and Ohio railroad, giving their dimensions and weights, heating surface, &c. It was furnished to the writer by Samuel J. Hayes, Esq., the Master of Machinery of the road, and includes the engines contracted for, over and above those on the road. The number of engines on the road, Sept. 30th, 1853, was 167.

EXHIBIT OF MOTIVE POWER, BALTIMORE AND OHIO RAILROAD.

FREIGHT ENGINES.

Number of Engines of same class.	Diam. of Cylinder.	Length of Stroke.	No. of Drivers.	Diam. of Drivers.	Number of Trucks.	Weight on each Back wheel.	Weight on each Front wheel.	Whole Weight.	Diameter of Boiler.	No. of Tubes.	Diameter of Tubes.	Length of Tubes.	Tube surface.	Fire box surface.	Grate surface.
	in.	in.		in.		lbs.	lbs.	lbs.	in.		in.	ft. in.	sq. ft.	sq. ft.	sq. ft.
12	12 $\frac{3}{4}$	22	4	35	0	5,000	6,750	23,500	53 $\frac{1}{2}$	400	1 1-2 and 1 1-4	2 7 $\frac{1}{2}$	275	26 1-4	10
12	13 $\frac{3}{4}$	23 $\frac{3}{4}$	4	35	0	....	....	....	57 $\frac{1}{2}$	375	1 1-2 and 1 3-4	4 0	395	37 1-2	13
7	17	24	8	33	0	6,250	7,175	53,700	48	211	2 and 2 1-8	8 4	805	62 3-4	11
1	17	24	8	33	0	7,306	7,687	59,975	48	119	2 and 2 3-8	12 6	802	61	..
1	13	24	8	43	0	4,850	5,625	41,900	40	130	2	9 0	....	....	..
2	13 $\frac{1}{2}$	18	6	43	0	6,625	7,200	42,050	33 $\frac{3}{4}$	94	2	10 11 $\frac{1}{2}$	....	....	..
2	13 $\frac{1}{2}$	18	8	43	0	....	....	....	36 $\frac{1}{2}$	..	2	11 1 $\frac{1}{2}$	....	....	..
4	17	22	8	43	0	....	....	50,000	44	142	2 1-8 and 2 3-8	12 6	....	....	10 1-2
8	17	22	8	43	0	6,062	6,562	50,500	42	103	2 1-2	13 1	....	....	15 3-8
2	17	22	8	43	0	5,770	6,750	50,080	43	132	2 3-16	12 0	....	....	11 1-2
3	17	22	8	43	0	6,032	5,795	47,310	44	135	2 1-2	13 6	835	57	9 8-9
39	19	22	8	43	0	6,062	6,562	50,500	46	103	2 1-2	13 7	....	....	18
1	20	22	8	43	0	....	....	57,200	46	141	2 3-16	14 0	....	83 8-10	16 8-10
85	19	22	8	43	0	6,175	7,375	54,200	46	103	2 1-2	14 1 $\frac{1}{2}$	903	86 1-2	24 1-2
4	20	22	8	43	0	7,300	5,550	57,400	48	131	2	14 0	984	87 1-2	18
10	17	22	6	50	4	7,500	3,750	60,000	48	134	2 1-4	14 0	1,105	71	17 1-2

169

PASSENGER ENGINES.															
6	17	20	6	50	4	7,500	3,750	60,000	48	134	2 1-4	14 0	1,105	71	17 1-2
8	10 $\frac{1}{2}$	18	2	50	4	7,800	2,400	25,200	37	78	2	8 0	283	45	8
2	10 $\frac{1}{2}$	18	4	48	4	4,639	3,000	30,550	37	78	2	7 11	283	45	8
2	12 $\frac{1}{2}$	18	4	48	4	5,225	3,475	34,800	..	125	.....	..	..	..	..
2	13	20	4	60	4	6,337	4,250	42,450	41	198	1 3-4	8 9 $\frac{1}{2}$	577	52	10 3-8
1	12 $\frac{1}{2}$	20	4	54	4	5,350	3,800	36,600	39 $\frac{1}{2}$	107	2	8 11	437	44	8
1	14	18	4	54	4	5,600	3,925	38,100	39	142	2	8 0 $\frac{1}{2}$	522	53	10
2	14	18	4	54	4	5,750	4,225	39,900	42 $\frac{1}{2}$	120	2	9 0	495	56	10 1-2
2	14	18	4	54	4	5,600	3,925	38,100	39	150	2	8 0 $\frac{1}{2}$	553	53	10
7	13 $\frac{1}{4}$	18	4	60	4	7,375	3,675	44,200	39	133	1 3-4	9 10	599	68	12
6	15	20	4	60	4	7,916	3,833	46,999	48	151	2	9 3 $\frac{1}{2}$	786 $\frac{1}{2}$	82 1-8	14
5	15	20	4	60	4	8,333	4,166	50,000	46	151	1 3-4	11 8	778	75 1-2	10 1-2

207

The preceding table shows the following facts: 85 of the freight engines are alike, and their dimensions may be, therefore, assumed as a standard. These engines, under an effective pressure of 75 lbs. per square inch of the piston, exert a tractive power of 13,852 lbs. at the rims of the wheels, to balance which the adhesion must be fully one-fourth of the weight of the engine. These engines use 6,772 cubic feet of steam per mile, besides the amount lost in ports and cylinder ends.

There is no such freight engine on the road as one of four drivers and trucks; the old stereotyped plan of New England freight engine.

No engine on the road has over 7,916 lbs. upon a single wheel, except five engines which were built in New England. No freight engine has over 7,500 lbs. on a wheel, and the standard freight engines have but 7,375 lbs. on each of the heaviest loaded wheels.

The standard freight engines are not calculated to run much above twelve miles per hour, and on the ordinary level parts of the road do not carry over an average of 90 lbs. steam.

Five of the freight engines are larger than the standard, having 20 inch cylinders, and weighing 57,400 lbs. One of these has taken a train of 225 tons, 7 miles per hour, on a grade of 116 feet per mile; to do which a tractive power of 15,722 lbs. at the rims of the wheels, or 77 lbs. per square inch of the piston, were required.

The largest number of the freight engines are burning bituminous coal, while many of the passenger engines are being adapted for burning coke.

Over 200 of this stock of engines have cast iron chilled slip tires, or solid chilled driving wheels.

To continue the comparison between the working of the engines of the two roads:

	B. & O.	Erie.
Diameter of cylinder.	19 in.	18 in.
Stroke.....	22 "	20 "
Diameter of drivers..	43 "	62 "
Number of do. ..	8	4
Weight of engine....	51,200 lbs.	63,000 lbs.
Greatest weight on one wheel.....	7,375 "	10,500 "
Pons load with 75 lbs. of steam.....	1,385 "	784 "
Steam used per mile, cubic ft.....	6,772 "	3,958 "
Cost of engine.....	\$9,750	\$10,500
Working speed.....	12 miles per hour.	
Working pressure....	90 lbs.	

In regard to the pressure used, and speed made, on the Erie road, it may be hardly fair for me to state what I know upon that point. The present master of machinery, however, at Piermont has assured me that previous to his coming upon the road, the engineers used often to "wedge their valves," as he believes, to 200 lbs., and furthermore—that, even now, 32 $\frac{1}{2}$ ton freight engines, with their trains, are run down grades at speeds, in some cases, of 45 miles per hour; and that often, on some parts of the Eastern Division, the freight engineers will take and maintain the lead of the express trains, keeping out of the way for several miles on a stretch.

In the last number of the Journal it was stated that owing to the difference in the grades of the Eastern and Delaware Divisions of the Erie road, two or three trains were made up on the former for one for the latter.

Yet, notwithstanding the differences in the resistances on these divisions, there is not a corresponding adaptation of engines to work them. The following table shows the ruling grade of each division, and the steam used per mile, in cubic feet, for the average of the engines marked as "freight engines" in the recent report of the company.

Ruling Grade.	Steam used.
Eastern Division.....	60 feet. 3,658
*Delaware ..	15 " 3,709
Susquehanna Division.....	10 " 3,590
Western ..	50 " 3,931

The average for the Eastern Division, which is less than for any other except the Susquehanna includes two engines of the construction and dimensions of the standard Baltimore engine; either of which can haul 25 cars over the division in place of 14 by the other engines. Without regard to this fact, and although the Baltimore engines have cost far less for repairs than most of the others, they have not been used on regular freight trains; simply because they could not run at the speed which has become customary with the freight trains.

The system of divided trains, in which one or two trains are behind another, involves frequent and expensive accidents, often attended with loss of life. "Rear collisions" have become very frequent on the division, and the utmost care cannot prevent them so long as the present system continues.

To do an economical business, the different divi-

*60 feet grades for a few miles, on which assistant engines are used. The consumption of steam per mile of these engines, not included in the average, is 5,849 cubic feet.

sions of the Erie road should have engines adapted to their grades. Concentrated power, distributed weight, absence of dead weight, and low speeds, must be the means by which this shall be accomplished. The road will suffer more than \$150,000 yearly in its future business without such adaptation.

Philadelphia, Wilmington and Baltimore Railroad Company.

We have received the annual report of the president and directors of this company, from which it appears that its business has largely increased during the past year. Its receipts were—for passengers, \$696,618; for freight and express \$120,236 64; for rents, \$13,683 20; for mails, &c., \$37,500—total \$868,037 84. The expenses amounted to \$522,949 82, leaving as the net earnings of the year, the sum of \$345,088 02; in addition to a surplus of \$54,750 67 on hand last year, making an aggregate of \$399,838 69.

In addition to the surplus of \$399,838 69, is to be added the year's receipts of the Newcastle Company, amounting to \$74,430 19—making a sum of \$174,268 88, of which \$105,485 23 has been paid for expenses, including tax on capital and bonus, and interest—leaving a joint surplus of \$368,783 65. Of this sum \$77,000 was paid on the 2 per cent. dividend in April, 1852; \$151,591 66 the 3 per cent. dividend in October, on old and new stock and tax; \$60,000 carried to the renewal funds of the two companies—leaving a surplus, after dividends and renewals, of \$80,191 99.

A comparison of the revenue of both lines, for the year ending Nov. 30th, 1853, with that ending Nov. 30th, 1852, shows an increase in the aggregate of \$182,604 57, while a comparison of the receipts of the Newcastle line for the same period, shows a decrease of \$17,647 52. The increase of revenue on the road from Baltimore to Philadelphia, over 1852, is \$200,252 09.

The whole number of through first class passengers, including through tickets to and from other roads, and passengers between Philadelphia and Baltimore, on the railroad in 1852, 128,428½, paying \$374,512 48; of second class, 8,409, paying \$16,122 87. Total from through passengers in 1852, \$390,635 34. The whole number of first class in 1853, was 177,348, paying \$513,219 80; of second class, 7,736½, paying \$15,217. Total from through passengers in 1853, \$528,436 80, showing a gain of \$187,801 46 in the through travel, including that between Philadelphia and Baltimore, by railroad, as compared with the year before.

The whole number of way passengers, by the railroad line, in 1852, was 251,918½, paying \$132,129 48. In 1853, the number was 331,578½, paying \$168,181 20, showing a gain in receipts from way travel of \$36,051 72, and a gain in numbers of 79,660 passengers.

Sufficient iron has been purchased, with the amount on hand, to lay fifteen miles of double track from Philadelphia to Wilmington, and this work will be continued from year to year, until there is a double track all the way to Baltimore. At present the road is in a high state of repair and efficiency. The construction of the bridge across the Susquehanna, at Havre-de-Grace, will be pushed forward with all practicable speed. A reduction of fare between New York and Washington, and New York and Baltimore, simultaneous with a reduction between Philadelphia and Balti-

more, has been unsuccessful, but it is anticipated that the various roads concerned will yet unite in the measure.

State Finances.

NEW YORK.

The finances of New York are conducted on the account of several funds. The "General Fund" is set apart for the ordinary expenses of government and the payment of appropriations not specifically due to other funds. The operations in this fund for the year ending September 30th, 1853, were as follows.

Deficiency at end of previous year... \$188,582 83
Payments during the year... 1,004,578 77
Transferred to other funds for interests due them... 26,663 35

\$1,219,824 95

Receipts on account of General Fund... \$769,278 53
Transferred from other funds... 31,333 46

Total receipts... \$800,611 99

Deficiency in revenue Sept. 30th, 1853... \$419,212 96
On account of the "General Fund Debt Sinking Fund" there has been paid... \$828,517 53
Balance due on previous year... 61,967 45
Returned to other funds... 4,080 21

\$894,565 19

Received into this fund from the treasury... 837,575 20

Balance due Treasury Sept. 30th, 1853... \$56,989 99

The condition of this fund is as follows.

Balance due Treasury, as above... \$56,989 99
Amount of fund invested in stock... 50,153 32

Deficiency in fund, September 30th, 1853... \$6,836 67

The valuation of real and personal estate, based upon the returns made, and upon the returns for 1852 where returns have not been made, is \$1,200,000,000, upon which an assessment of one mill per dollar will yield \$1,200,000. The state debt is as follows.

"Astor debt", 5 per cent., redeemable at pleasure... \$561,500 00

Stock, 5 per cent., redeemable Jan'y 1st, 1855... 348,107 00

Ithaca and Owego R. R. 4½ per cent. red. Jan'y 1st, 1864 587,700 00

Canajoharie and Catskill R. R. 5 per cent. red. July 1st 1858... 100,000 00

do. " ½ in 1859 and ½ in 1860... 100,000 00

Revenue deficiency Stock, 5 per cent., 1838... 422,961 20

New York and Erie R. R. 4½ per cent. 1859... \$300,000

5½ " " 1860... 400,000

5½ " " 1861... 1,200,000

6 " " 1861... 200,000

6 " " 1862... 900,000 3,000,000 00

Amount of State Stock... \$4,858,268 05

Comptroller's Bonds... 1,374,691 45

Indian Annuities... 122,694 37

General Fund Debt, Sept. 30th, 1853... \$6,355,654 37

Contingent State debt... 931,644 83

Canal debt... 15,501,263 16

Canal revenue certificates... 1,500,000 00

Total State debt absolute and contingent... \$24,288,568 36

State of the Treasury.

Balance on hand, Sept. 30th, 1852... \$177,378 08

Receipts from all sources... 2,356,658 20

\$2,534,036 28

Payments for all purposes... 2,460,011 12

Balance on hand, Sept. 30th, 1853... \$74,025 16

ILLINOIS.

The following is the statement of the receipts and expenditures at the State Treasury for the thirteen months ending Dec. 31st:

Receipts for revenue purposes... \$251,688 62
On hand, Dec. 1st, 1852... 146,373 30

\$398,061 92

From which payments have been made as follows:

To purchase State indebtedness... \$137,018 82

Education of deaf and dumb... 25,000 00

All other appropriations... 196,577 88

\$58,596 20

Balance in the Treasury, Jan'y 1st, 1854... \$39,465 78

Outstanding claims against the Treasury at the same date, amounting to—say... 20,000 00

Receipts from special taxes.

Constitutional two mill tax... 285,258 41

Interest fund tax... 217,743 51

Insane hospital tax... 49,752 33

Institution for the blind tax... 20,575 88

\$582,330 12

Total special taxes... 251,698 62

Total payments into the Treasury... \$831,018 75
In addition to the above taxes, there has been received from the recent sales of State lands, and paid to the Governor, for the purchase of State indebtedness, the sum of... 97,000 00

WISCONSIN.

The whole sum paid into the Treasury for 1853 amounted to about \$300,000;—disbursements \$262,717 45. The general expenses of the State for the present year is estimated at \$147,210 70 and the means relied upon to meet them, at \$160,017 74. The School Fund January 1st, 1853, amounted to \$1,141,804 24, arising almost exclusively from sale of lands granted by Congress, and the amount for the support of common schools the present year is \$97,391 39.

LOUISIANA.

The message of Governor Hebert, of Louisiana, estimates the debt proper of the State, including the bonds issued for subscriptions of stock to New Orleans and Jackson, the New Orleans and Opelousas, and the Shreveport and Vicksburg Railroad, is \$3,281,809 41. Under the operation of the law passed at the last session to provide for the deficiency of the State resources by a loan of \$750,000, the receipts of the Treasury for the current year have amounted to \$2,148,407 65. The expenditures for the same period, for the ordinary expenses of the government and to meet the appropriation made by the last Legislature, amount to \$1,340,443 30, showing a surplus of receipts over expenditures of \$808,024 35.

Movement of Wheat and Flour over the Michigan Southern Railroad in 1853.

Barrels of flour carried during the year ending Nov. 30th, 1853... 144,061

Bushels of wheat do... 1,242,281½

Adrian, Coldwater and La Porte supplied the largest lots of wheat, and Tecumseh, Goshen, South Bend, Constantine and Adrian the largest lots of flour.

Ohio and Pennsylvania Railroad.

The sixth annual report of the President and Directors of this Company was read at the annual meeting at Pittsburgh, Jan. 26th. The following embraces the principal part of this document.

TO THE STOCKHOLDERS OF THE OHIO AND PENNSYLVANIA RAILROAD COMPANY:

Gentlemen:—The President and Directors of the Ohio and Pennsylvania Railroad Company take pleasure in presenting to the Stockholders, their sixth annual report since the commencement of the undertaking, and the first since the whole road was opened for use; and in congratulating them upon the eminent success which has crowned the enterprise.

The very small means with which the work was begun, and the active hostility of opposing interests with which it was met, admonished the officers of the Company, at an early day, of the necessity of great exertions to press the road forward to completion, in the confident belief that when the work was done, it would fulfil the expectations of its friends; both in its profitability to the stockholders and its usefulness to the public. The result has fully equalled our hopes in both of these important particulars.

On the 11th of April last, the road was opened from Pittsburgh to Crestline, 187 miles; and as soon after as the requisite arrangements could be made, an Express train was put upon it; the time of running which has been reduced to seven hours; so that passengers are brought from Cincinnati to Pittsburgh in fourteen hours and a quarter; at the low fare of seven dollars for a first class passenger, and five dollars for one taking a second class ticket. At these rates a successful competition with the steamboats on the Ohio River has been maintained.

Passengers are also ticketed to and from Louisville, Indianapolis, St. Louis, Chicago, Detroit, Toledo, Cleveland, and other important points.

The extraordinary development of the local business of the line, and of the trade and travel between the numerous towns upon it, is one of the most gratifying results of the business of the past year. It has taxed the equipment of the road to its utmost capacity, and has demonstrated the necessity of immediately increasing the number of engines and cars to an extent adequate to its accommodation.

It will be seen from the Report of the Chief Engineer and Superintendent, that the general result of the working of the road for the year, has been as follows:

Receipts in 1853.....	\$668,004 49
Expenses ".....	301,639 36

Net receipts.....\$366,365 13

Which has enabled the Board to declare two semi-annual dividends to the Stockholders, the first of three and a half, and the second of four per cent. The net revenue of the road for the year, after paying expenses and interest, has been about nine per cent. on the amount of the stock.

The receipts of the first half of the year were about forty thousand dollars per month, and of the last half more than seventy thousand dollars; which great increase justifies the belief that the earnings of 1854 will be much larger than those of last year.

The patronage of the public thus liberally bestowed upon the road, calls for corresponding exertions on the part of the Company, to merit its continuance and increase. A double track has been begun, and twelve miles of it are now nearly completed, extending from Pittsburgh to Sewickley. The second track should be extended to New Brighton, twenty-eight miles from Pittsburgh, as soon as it can conveniently be done. The road bed is already graded for it. Surveys have been made for widening the road bed between Alliance and Massillon, which will not be an expensive work; and the double track from Alliance westward ought to be begun at an early day.

In the beginning of the year there were twenty

Locomotive Engines upon the road. The number now is thirty-one, and ten more have been contracted for, several of which are ready for delivery. Unexpected delays in the receipt of machinery have been productive of much inconvenience and disappointment.

It is the intention of the Board, with the approbation of the Stockholders, to make such additions to the equipment of the road as may be necessary to do all the transportation that may offer, without detention or delay; and also to provide such portions of double track, and such machinery and conveniences as may be necessary to maintain for the road the highest reputation for safety, promptness, and punctuality.

Three hundred and fifty-eight thousand seven hundred and thirty-eight passengers have been carried upon the line, in the past year, without an accident to the trains by which a single life has been lost.

The preparations for a greatly increased business will of course require an additional outlay of capital; but with conclusive proofs of the profitable character of the investment, the Board hope to be able to obtain the required amount without injurious financial sacrifices.

If necessary, the Board proposes to assist the Bellefontaine and Indiana Railroad Company, in extending its road from Galion to Crestline, a distance of about four miles.

The Board has given much consideration to the question of the extension of the line across the Allegheny river at Pittsburgh. The subject was referred to a special committee, and surveys were directed to be made by the Chief Engineer. The views of that officer are presented in his report, herewith submitted, and they will be found worthy of the attention of the stockholders. The City of Pittsburgh has already granted the right of way from the Allegheny river to Liberty street, either by St. Clair street, Hand street, or the Aqueduct. The adoption of either of these routes will require some legislation; and the work ought to be begun as soon as this can be obtained, and other preliminary obstacles can be removed. The consent of the Stockholders of the Pennsylvania Railroad Company must also be granted, before any other crossing than that opposite their outer depot can be adopted. It is supposed that they will prefer a crossing at the Aqueduct, on account of its affording an opportunity for a direct connection with their station on Liberty street.

In accordance with authority given by the Stockholders at their last annual meeting, the Board has subscribed One Hundred Thousand Dollars to the stock of the Springfield, Mount Vernon, and Pittsburgh Railroad Company, and a like amount to the Ohio and Indiana Railroad Company. Of the first named subscription Sixty-two Thousand Dollars have been paid, up to this time, and of the last named Fifty Thousand Dollars. Portions of both the roads are already in use, and forty miles of the Ohio and Indiana road have been opened, within a few days, extending from Crestline to the Mad River road near Patterson.

The Board are so well satisfied that the most profitable application that the Company can make of its means and credit, is in perfecting and equipping its own road; that it is only in very peculiar cases that a departure from such a course can be justified.

They think, however, that a subscription of one hundred thousand dollars ought to be made to the stock of the Fort Wayne and Chicago Railroad Company, which will, when its work is completed, furnish a very direct line, of a uniform gauge, 463 miles long, from Pittsburgh to Chicago. This will be one of the most important extensions that the Ohio and Pennsylvania Railroad can possibly have, and the Board believes that it will pay well.

The expediency of constructing a branch railroad up the valley of the Big Beaver from Brighton to Newcastle, a distance of twenty-two miles, has been frequently urged upon the Board by citizens of Beaver and Lawrence counties. Such a line would connect with the proposed Pittsburgh and Erie, and Cleveland and Mahoning Railroads,

and would bring the north-western counties of Pennsylvania into close connection with Pittsburgh. It is proposed that the stockholders should pass a resolution, authorizing the Board of Directors to take such order in the matter, as they may think, after due deliberation, will be best calculated to promote the permanent interests of the Company.

It is expected that the inclined planes on the Portage R. R. will be avoided in about ten days by the opening of the Tunnel through the Allegheny mountain by the Penna. R. R. Co., which will greatly benefit our route, and shorten the time between Pittsburgh and Philadelphia.

The general result of the working of our road during the past year has been very satisfactory to the Board, and is highly creditable to the Chief Engineer and Superintendent, S. W. Roberts, Esq., whose services to the Company from the commencement of the undertaking have been of the most valuable character.

WM. ROBINSON, JR.,
President.

The following resolutions were presented, preface by some explanatory remarks, and after considerable discussion and interchange of views by the Stockholders, were adopted,

By F. Lorenz, Esq.,

Resolved, That the Stockholders instruct the Directors to proceed with the work of extending the Railroad across the Allegheny river, as soon as the necessary preliminary arrangements can be made.

By Gen. Wm. Robinson, Jr.,

Resolved, That the Stockholders hereby authorize the Board of Directors to contribute One Hundred Thousand Dollars, on the part of this Company, towards the construction of the Fort Wayne and Chicago Railroad, on such conditions as they may think necessary to protect the interests of this Company.

Resolved, That the Stockholders hereby authorize the Board of Directors to take such action as they may think best with regard to the construction of a Branch road from Brighton to Newcastle.

By R. McKnight, Esq.,

Resolved, That the Board of Directors be and they are hereby authorized to subscribe or contribute to the construction of the link of road between Crestline and Galion, to connect this road with the Bellefontaine and Indiana R. R., on such terms and conditions as they may deem best for the interests of this Company.

Safety Valve Fastenings.

The ordinary mode of confining the end of the lever of the locomotive safety valve is by a "spring balance". As the resistance of a spring increases with the distance of movement, or extension, it follows that a pressure of steam barely able to raise the valve cannot raise it enough farther to cause a free and abundant discharge of steam. In view of this difficulty it has been attempted to use weights on the safety valve lever, as on stationary boilers. Henry Waterman of Hudson, N. Y., formerly Master Mechanic of the Hudson River Railroad, has obtained a patent for the attachment of a piston moving in a cylinder of oil, to the weighted end of a safety valve lever.

In the engines built by John V. Gooch of the London and South Western Railway, of England, the safety valve was in the form of a piston, sliding within a cylinder of 1 3-16 inch bore, and the coiled spring was placed immediately over the valve. It was thought better to have a small valve which could be fully opened without great increase of pressure than a large valve, rising, within a considerable range of pressure, through only a very small distance. With large valves, long levers and stiff springs, this difficulty is very

great, and there is no doubt that the iron is often strained by it, if the boiler be not exploded.

Journal of Railroad Law.

The following will at this time be found worthy of attention,—as presenting the *strictly legal phase* of a great question of divers aspects and bearings.

A Railway Company incorporated by Act of Parliament cannot even with the assent of all its shareholders legally enter into a contract involving the application of any portion of its funds to purposes foreign from those for which it was incorporated. *The East Anglian Railway Company vs. the Eastern Counties' Railway Company* (Dec. 5, 1851, in *Eng. Com. Pleas*) 73 *Eng. Common Law*, p. 775.

The defendants above named were incorporated by an act of Parliament, the 1st section of which enacted that certain persons should be united into a Company for working and maintaining a certain Railway and other works by the Act authorized, according to the provisions thereafter mentioned, and for that purpose should be one body corporate by the name of "The Eastern Counties' Railway Company." The 3d section authorized raising money for the purposes above specified.—The 5th section provided for the specific expenditure of the money so raised in accordance with the purpose of the Act. Subsequent sections provided for the division of the net profits. Held, that it was not competent to the Directors to enter into a contract with another Railway Company, to take a lease of their line and to pay them the expenses they had incurred in procuring from Parliament the extension and improvement of such other line of railway, even though their own Company were benefitted by such extension and improvement. Such a contract would be void and could not be enforced. Jervis, Chief Justice, in deciding this case observed in substance that it was clear that defendants had a limited authority only,—and that their funds can only be applied as the Statute dictates. But it had been contended that they might deviate from their Charter, if by so doing they increased the profits of their own Railway. But they could not engage in any new trade, for they were incorporated for a specific purpose. However great might be the expected profits of a speculation,—if it was not within the scope of their authority they could not embark in it. Every Shareholder has a right to expect that the conditions upon which the act was obtained will be complied with and it was no sufficient answer to a stockholder expecting his dividend, that the money has been expended upon an undertaking, which may ultimately be very beneficial to the line. The public, too, has an interest in the proper administration of the powers conferred by the Act. The comfort and safety of the line would be jeopardized by a misapplication of its funds.—Lord Langdale said, in 10 *Beavan* 15, that there was no authority whatever to justify a Railway Company in encouraging, for the increase of their own traffic, schemes not embraced by their Charters. The assent of all the stockholders in cases of this kind might make them personally liable but would not hinder them in their corporate capacity nor affect their corporate funds.

THE EFFECT OF PAYING MONEY INTO COURT IN ACTIONS FOR DAMAGES.—Payment of money into Court in actions brought to recover damages for

wrongs may, according to the form of the declaration used by the plaintiff, be construed in different ways. Where the declaration is *general and unspecific*, the payment into Court admits a *cause of action*, but not the identical cause of action sued for; on the other hand if the declaration is *specific* the payment into Court admits the very cause of action so specifically stated.

For example, if a declaration is filed for rescuing cattle which as trespassers have been impounded, in a pound not described in the declaration, the payment by defendant of money into Court, would not be deemed an admission on his part that cattle had been rescued from any particular pound and the plaintiff in order to recover damages beyond the amount paid into Court would be obliged to prove that a rescue had been unlawfully made by defendant, from some particular pound. But if on the other hand, the declaration did particularly describe the pound in question, the payment of money into Court by defendant, would have admitted the breach of that very pound, and consequently the plaintiff could not have been required to adduce any further proof on that head.

So in any action against a Railway Company for negligence whereby the plaintiff, a passenger, was injured, the injury having been specifically described in the declaration, the defendant paid £25 into Court and pleaded that no further damages had been sustained in consequence of the injury.—Held, by the Court, that the payment of the money into Court by the defendants admitted on their part that a contract to carry the plaintiff had been made, and also that such contract had been violated by the defendants. Such admission having been made, the plaintiff in order to recover additional damages was not obliged to furnish any additional proof that the defendants had been negligent, the damages being single, and depending upon nothing beyond the mere breach of duty admitted. *Ferren on the Monmouthshire Railway and Canal Co.* (May 9th in 1853, *Eng. Com. Pleas.*) 73 *Eng. Com. Law*, Rep. 855. See also *Spalding vs. Vandercook*, 2 Wend. 431, *Johnston vs. Columbian Ins. Co.*, 7 John. 315. *Bank of Columbia vs. Sutherland*, 3 Cowen, 3.

Rochester and Pittsburgh Railroad.

The *Daily American* publishes a report from McRee Swift, Esq., Engineer in Chief of the Rochester and Pittsburgh Railroad, to the Directors of the Company. A Company has been organized for the construction of a railroad in continuation of the line of the Valley Road from its Southern terminus at Portage to Ceres, a point in Pennsylvania, where the railroad of the Alleghany Valley extending to Pittsburgh is designed to have its northerly termination.

Two distinct routes have been instrumentally examined with much care, both passing through the village of Angelica and both terminating at Ceres, as above mentioned. By one of these routes via the Vallies of the West branch of the Cashagua, Baker's, Van Campen, and the Little Genesee Creeks, the distance upon a location would be 48½ miles. By the same route, as far as Angelica, and thence by the Vallies of the Genesee River, and Knight's, and Little Genesee Creeks, to the Southern terminus, the distance upon a location would be 51½ miles. On either route the maximum grade ascending northwardly and in the direction of the bulk of tonnage, is 40 feet per mile, and ascending southwardly, the present maximum grade of the Rochester and Genesee Valley Railroad can be closely adhered to.

Pacific Railroad of Missouri.

We have the second report of the above company, giving an exhibit of the operations upon, and condition of their work, for the year ending Nov. 30th, 1853.

FINANCIAL CONDITION.

The amount of capital, as by charter	\$10,000,000 00
The amount of stock subscribed	2,426,550 00
The amount paid in, as by last report	512,600 00
The total amount of capital stock now paid	1,048,580 00
The funded debt, as by last report, the total amount now of funded debt, being issue of company's bond	\$ 90,000
Missouri State bonds, 1,150,000	1,240,000 00
The floating debt as per last report:	
The amount now of floating debt	94,084 58
Total amount now of floating and funded debt	1,334,084 58
Average rate per annum of interest of funded debt	6 per cent.

Total expenditure to date \$2,480,926 94

COST OF ROAD AND EQUIPMENT.

Graduation and masonry	\$848,302 16
Bridging	46,227 93
Superstructure, including iron and ballasting	334,904 80
Passenger and freight stations, buildings and fixtures	33,993 93
Engine houses, machinery, etc.	29,120 26
Land, land damages and fences	126,206 78
Locomotives, stationary engines and saws	57,474 06
Passenger and baggage cars	27,417 88
Freight, gravel and hand cars	44,515 24
Engineering and agencies	47,699 10

Total

Repairs of road, buildings, fences, etc.	4,898 19
Repairs of engines, cars and machinery	1,701 67
General transportation expenses	19,012 72

Total expenses, one year

Receipts for year from Passengers, freights and rents	\$35,486 43
---	-------------

The first division of the road, 36½ miles, was only opened on the 23d day of July last.

Bridging the Ohio.

The citizens of Covington, Ky., are about to apply for the right for the construction of a bridge to connect them with Cincinnati.

At Louisville a bridge is also proposed to connect the northern and southern systems of railroads which terminate on the opposite banks of the Ohio.

The Ohio is already bridged some hundreds of miles above, at Wheeling, and in a manner which offers no obstruction to the navigation.

The suspension principle is becoming a general feature in Western bridge engineering. It is capable of the wide spans which wide rivers with alluvial beds require. It can be readily and cheaply applied at great heights, an essential condition in crossing navigable waters, which are subject to great variation in water level at different seasons: The tubular bridge, which is the only other description of bridge which has been applied to open spans of 300 feet and upwards, is constructed only at immense cost, is dark within, and has never been applied above spans of 460 feet. It employs the transverse resistance instead of the longitudinal cohesion of the material. The suspension

bridge of nearly 1000 feet span, now building by Roebling across the Niagara, will show the adaptation of the suspension principle for railroad trains.

American Railroad Journal.

Saturday, February 4, 1854.

Stock and Money Market.

There has been a noticeable improvement in the Stock market for a few days past, indicating a greater abundance of money, and more confidence as to the future. The very rapid curtailment of expenditures in every branch of business for the past six months, has materially checked the flow of capital into the interior, while the extraordinary advance in all kinds of produce, has placed unexpected resources in the hands of Agriculturists. Money is sufficiently abundant for ordinary business purposes, and though but little is yet doing in Railroads and other securities, the continuance of the present improvement will soon create a demand for these. On the whole, affairs wear a more cheerful aspect than they have done for some time past.

The following is the comparative Bank statement for the week ending Jan 23:

	Jan. 28.	Jan. 21.
Loans.....	89,759,465	90,068,738
Specie.....	11,117,958	11,455,116
Circulation.....	8,642,677	8,605,235
Deposits.....	58,239,577	59,071,252

COINAGE OF THE UNITED STATES' MINT FOR JANUARY.

Gold.

	Pieces.	Value.
Double Eagles.....	156,850	\$3,137,000
Quarter do.....	32,632	81,580
Dollars.....	55,808	55,808

Bars.....	245,290	\$3,274,388
		368,883

Silver.

	Pieces.	Value.
Half Dollars.....	408,000	\$204,000
Quarter Dollars.....	1,196,000	299,000
Dimes.....	1,040,000	104,000

	2,644,000	\$607,000
--	-----------	-----------

Copper.

	Pieces.	Value.
Cents.....	152,541	\$1,525 41
Half Cents.....	55,360	276 80

	207,901	\$1,802 21
--	---------	------------

Gold Bullion Deposited.

	Value.
From California.....	\$4,151,000
" Other Sources.....	50,000

Total in January, 1854.....	\$4,201,000
" December, 1853.....	4,446,817

Silver Bullion deposited.....	\$108,000
-------------------------------	-----------

The New York Central Railroad Company paid on the 1st instant a 6 per cent. dividend, out of the earnings for 9 months. The Penn. Coal Company have declared a semi-annual dividend of 5 per cent. The New Albany and Salem of 4 per cent. in Stock, payable at Cammann & Co. The Cleveland and Pittsburgh a dividend of 5 per cent, payable at the Ohio Life and Trust Co. Messrs.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	83
Androscoggin and Kennebec... "	55	809,378	1,016,500	2,064,458	140,561	80,053	none	30
Kennebec and Portland... "	72	952,621	291,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth... "	51	1,355,500	123,884	1,459,384	208,669	6	96½	
York and Cumberland... "	20	285,747	311,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	35
Concord..... "	35	1,485,000	none.	1,485,000	305,805	141,836	8	110
Cheshire..... "	54	2,078,625	720,900	3,002,094	237,768	55,266	5	38
Northern..... "	82	3,016,634	.....	.....	328,782	163,075	5	58
Manchester and Lawrence... "	24	717,543	.....	.....	.....	6	90	
Nashua and Lowell... "	15	600,000	none.	651,214	132,545	51,513	8	106
Portsmouth and Concord... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	none	21
Connecticut and Passumpsic... Vt.	61	1,097,600	550,000	1,745,616	.....	.....	none	29
Rutland..... "	120	2,486,000	2,429,100	5,577,467	495,397	266,639	none	11
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	13
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	cent.	97½	
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley..... "	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell... Mass.	28	1,830,000	.....	1,996,249	388,108	130,881	7	91
Boston and Maine..... "	83	4,076,974	150,000	4,092,927	669,001	338,215	7	103
Boston and Providence..... "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	84½
Boston and Worcester..... "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	101½
Cape Cod branch..... "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River..... "	52	1,591,100	193,500	1,801,946	229,004	72,028	5	56
Eastern..... "	75	2,850,000	500,000	3,120,391	488,793	241,017	7	90
Fall River..... "	42	1,050,000	none.	1,050,000	229,445	99,589	8	100
Fitchburg..... "	66	3,540,000	112,305	3,623,073	574,574	232,787	6	92½
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County..... "	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony..... "	45	1,964,070	282,300	2,293,534	322,213	101,510	none	92½
Taunton Branch..... "	12	250,000	none.	307,136	137,406	24,399	8	.....
Vermont and Massachusetts... "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	23½
Worcester and Nashua..... "	45	1,154,000	171,210	1,321,945	162,109	66,900	4	58
Western..... "	155	5,150,000	5,319,520	9,953,759	1,339,873	683,194	6	96½
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	66
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	124
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill... "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	99½
Naugatuck..... "	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	.....	Recently opened.	none	52
Norwich and Worcester... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	56
Buffalo and New York City... N. Y.	91	900,000	1,550,000	2,550,500	.....	Recently opened.	none	85
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	.....	Recently opened.	.....	130
Canandaigua and Niagara F... "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	30,360	none	68
Cayuga and Susquehanna... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	78½
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	68
Harlem..... "	130	4,725,250	977,463	6,102,935	681,445	324,494	5	52½
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	30½
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	109
Ogdensburg (Northern)... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	none	30½
Oswego and Syracuse..... "	35	350,000	201,500	607,808	90,616	43,609	4	70
Plattsburg and Montreal... "	23	174,042	131,000	349,775	.....	Recently opened.	none	.....
Rensselaer and Saratoga... "	25	610,000	25,000	774,495	213,078	96,787	.....	.....
Rutland and Washington... "	60	850,000	400,000	1,250,000	.....	Recently opened.	.....	.....
Saratoga and Washington... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	.....	Recently opened.	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	.....	Recently opened.	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	18,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	.....	Recently opened.	.....	125
Harrisburgh and Lancaster... "	36	830,100	713,227	1,702,523	265,227	106,320	8	52
Philadelphia and Reading... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	72
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	80

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97½
Philadelphia and Trenton....	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio.....Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	57½
Washington branch.....	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna....	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg....	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.....	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.....N.C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina..S.C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.....	140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina.....	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central.....Ga.	191	3,500,000	418,137	3,465,879	966,074	535,608	8	115
Georgia.....	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western.....	101	1,013,088	163,000	1,277,334	278,739	149,960	9	100
Muscogee.....	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western.....	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River..Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.....	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point....	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern.....Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia....Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga....	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.....Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	70
Frankfort and Lexington.....	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.....	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.....	.....	.....	.....	In prog.	.....	.....	.....	.....
Cleveland and Pittsburgh.....Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	81
Cleveland and Toledo.....	147	2,000,000	1,600,000	.....	.....	.....	.....	91½
Cleveland, and Erie.....	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.....	135	3,027,000	408,200	3,655,000	777,793	483,454	12	124
Columbus, Piqua and Indiana....	46	.....	.....	2,000,000	.....	.....	.....	80
Columbus and Lake Erie.....	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton....	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	105
Cincinnati and Marietta.....	.....	.....	.....	In prog.	.....	.....	.....	72
Dayton and Western.....	40	310,000	550,000	925,000	Recently opened.	.....	.....	80
Dayton and Michigan.....	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	36	.....	.....	.....	.....	.....	.....	60
Greenville and Miami.....	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro.....	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami.....	84	2,668,402	482,000	3,169,733	667,559	352,133	10	117
Mansfield and Sandusky.....	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.....	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	95
Ohio Central.....	57	.....	.....	In prog.	.....	.....	.....	90
Ohio and Mississippi.....	.....	.....	.....	.....	.....	.....	.....	87
Ohio and Pennsylvania.....	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana.....	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley....	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Xenia and Columbus.....	54	1,291,000	300,000	1,257,714	317,000	158,500	10	116
Evansville and Illinois.....Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central.....	.....	.....	.....	.....	.....	.....	.....	90
Indiana Northern.....	131	.....	.....	.....	.....	.....	.....	115
Indianapolis and Bellefontaine..	83	.....	.....	.....	Recently opened.	.....	.....	88
Indianapolis and Cincinnati....	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	77
Lafayette and Indianapolis....	62	.....	.....	.....	.....	.....	.....	82
Madison and Indianapolis.....	88	1,650,000	750,000	2,400,000	516,414	268,075	10	70
Peru and Indianapolis.....	40	.....	.....	In prog.	.....	.....	.....	65
Terre Haute and Indianapolis....	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.....Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.....	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central.....	92	1,932,361	500,000	In prog.	473,548	236,152	.....	136
Galena and Chicago.....	.....	.....	.....	.....	.....	.....	.....	122
Michigan Southern.....Mich.	315	2,800,000	3,741,564	7,276,616	1,200,922	586,929	8	116
Michigan Central.....	282	4,856,700	3,977,563	8,618,505	1,145,598	582,816	8	101
Pacific.....Mo.	83	1,000,000	none.	In progress	Recently opened.	.....	.....	.....

Winslow and Lanier advertise to pay the interest on several county and Railroad Bonds.

Baltimore and Ohio Railroad.

The Erie difficulties have turned a large amount of trade and travel from the New York roads, which, rather than pass through Pennsylvania has sought the Baltimore and Ohio road. This road, which has heretofore run but one through passenger train daily, commenced January 23d to run two through trains daily from Baltimore to Wheeling, one leaving Baltimore at 8 A. M., the other at 7 P. M.

The association of Jobbers in this city send their freights daily by the line of steam propellers, and give assurances that this shall be as safe, cheap and quick as any other route.

India Rubber for Railroads.

The New York Central Railroad Company have assumed the expense of laying one or two miles of rubber under their tracks, intended to obviate the present destruction of rails and machinery, and to do away with the noise attendant upon the motion of the trains.

News.

Mr. J. Edgar Thompson, President of the Pennsylvania Central Railroad Company, discontinues his subscription to our paper, on the ground "that the JOURNAL has ceased to be American!"

Cincinnati, Logansport and Chicago Railroad.

The following gentlemen were elected Directors of the above road on the 2d inst. About 12,000 shares of stock were voted:

J. T. Elliott and Miles Murphy, Newcastle; Williamson Wright, Logansport; John Hutton, Richmond; James Pullan and J. A. James, Cincinnati; Chas. K. Hamilton, Lemuel Stanwood, Geo. W. Riggs, L. Holbrook, Chas. J. Stedman, New York.

Ohio and Pennsylvania Railroad.

We give this week the 6th annual report of the Ohio and Pennsylvania Railroad. It shows the affairs of the Company in a very favorable light. The success of the road so far, bids fair to justify the high expectations that have been formed of it.

The old Board of Directors were rechosen. The road will continue under the efficient management of General ROBINSON as President, and S. W. ROBERTS as superintendent and Chief Engineer.

Jacksonville and Carrollton Railroad.

About \$3,000 has been paid in on the first installments of the stock of this road; while bonds of counties and of the city of Alton have been deposited to the amount of \$12,500.

Dividend Notice.

THE SEMI-ANNUAL INTEREST falling due in this city on the first day of Feb., 1854, on the following named Securities, will be paid on and after that date at the office of the undersigned on presentation of the proper Coupons:

The Cleveland, Painesville and Ashtabula Railroad Company Mortgage Bonds, 7 per cents.

The Ohio and Indiana Railroad Company Mortgage Bonds, 7 per cents.

The Clark County (Ohio) Bonds issued to Springfield and Columbus Railroad Company, 7 per cents.

The City of Madison (Indiana) six per cent. Bonds.

WINSLOW, LANIER & Co., No. 52 Wall-st. New York, Jan. 27th, 1854.

Friction of Steam Engines.

Experiments have been made at the Crystal Palace which show incidentally the normal friction of two steam engines; one an upright cylinder, beam engine, 14 inches cylinder, and 54 inches stroke, built by Corliss and Nightingale, of Providence, R. I.; the other a double cylinder, horizontal engine, 15 inch cylinders and 32 inch stroke, built by the Lawrence Machine Shop, at Lawrence, Mass.

The boilers are placed 200 feet from the engines. The pressure of steam was noted, however, from a pressure gauge in each steam pipe, near the engines.

The results obtained were as follows:

PROVIDENCE ENGINE.		—O—	LAWRENCE ENGINE.	
Pressure per sqr inch, lbs.	Revolutions per minute.		Pressure per sqr inch, lbs.	Revolutions per minute.
42	37		42	46
32	37		32	46
27	37		27	45
22	37		22	43
15	37		15	40
10½	37		10½	34
7	37		7	36
4½	36		4½	33
3	34		3	21
2	25		2	17
1½	18		1½	13
1	14		1	10
¾	7		¾	7
0	stopped		0	stopped

These trials were made when the engines and connected shafting were lubricated with Dr. S. A. Main's oil and grease. With the best sperm oil the results were not so favorable by fifty per cent.

It is to be remembered that these results show only the friction of the engines *out of work*, and that the absolute friction when underload is much greater. This remark is made that no such inference should be drawn as that "4 lbs." or "1 lb." of steam is only required to overcome the friction. With the Providence engine, a pressure of 7 lbs. to the square inch was the least which preserved the ordinary working velocity; while with the Lawrence engine, working at the same pressure, the working velocity was reduced nearly one-fourth.

An ordinary practical allowance for the friction of steam engines is 3-10 the pressure on the piston when under *working* pressure and velocity.

Troy and Boston Railroad.

The report of the Directors of this road, read to the stockholders January 18th, 1854, shows the whole cost of the work to Sept. 30th, 1853, to have been—

	\$1,080,405
Stock paid in	437,830
Funded debt	469,000
Floating debt	235,757
Gross earnings for the year	154,118
Net earnings for the same time....	68,321

The assets are nearly \$100,000 more than the floating debt.

The report says—"We have the greatest reason for confidence, that the State of Massachusetts, awaking to its interests and its pride, is represented by a legislature that will, this winter, make the loan, (to the amount of \$2,000,000,) of the State credit, to ensure the making of the Hoosic Tunnel, and thus make ours a great trunk road, for that part of the business of the West that may

seek an eastern outlet to New England and the Ocean.

Virginia.

A portion of the recent message of Governor Johnson is devoted to facts and suggestions touching the railroad interests of Virginia.

The lines of railroad, now under construction or survey in the State, are alluded to as of especial importance in their results upon the commerce of Alexandria, Richmond, Petersburg and Norfolk.

The Alexandria, Loudoun and Hampshire road, now under survey, will connect Alexandria with the Baltimore and Ohio Railroad, at Paddytown, west of Cumberland, and draw from thence a large share of the coal from the George's Creek Valley. The line will intersect the fertile, populous, and wealthy counties of Fairfax, Loudoun, Clark, Frederick and Hampshire. Paddytown is 165 miles from Alexandria, by the Loudoun line, and 201 miles to Baltimore, by the Baltimore and Ohio road. The Baltimore road has 82 feet grades both ways; the Alexandria line has 53 feet grades going east, and 79 feet going west. The Governor's message says:—

"This will give Alexandria an advantage over Baltimore for the trade of the north-west, of 36 miles in distance, and the difference between a grade of less than 53 and 82 feet. These are no small advantages, and especially in a competition for the heavy coal trade of the mountains. It will shorten the route of travel from the north-west to the capital of the State some 65 miles, and secure to Alexandria the benefits that Cumberland and Baltimore have been enjoying from that travel. Indeed, it will be a shorter route for all who may be coming from the west to Washington city, or going from the federal capital to the great west, to take this road, than by the Baltimore and Ohio road, by the way of Baltimore or the Relay-house, by 21 miles."

The importance of a trade between Virginia and European ports is urged, both upon its direct advantages, and as an incidental assistance to the public works in existence and in progress.

The message apparently encourages State aid in favor of the establishment of lines of steamers from the Chesapeake ports to Europe. The interest of all the available ports will be improved in the opening of an outlet to the trade which will be supplied through the various internal improvements in progress, or completed.

"The construction," says the message, "of the Fredericksburg and Gordonsville road will make the prosecution of the Alexandria and Orange railroad to Lynchburg as important to Fredericksburg as it is to Alexandria. In the same way the completion of the Central road, the construction of the Covington and Ohio railroad, and the extension of the Virginia and Tennessee road, will alike contribute to the interests of Alexandria, Fredericksburg and Richmond. The dock connections, the Norfolk and Petersburg, and the Petersburg and Lynchburg roads, will connect the cities of Norfolk and Petersburg with the Virginia and Tennessee road and the James River Canal. The other roads in the system answer like purposes—and as a common outlet to accommodate the immense trade and travel that these stems will bring to our shore—would contribute greatly to enhance that trade and travel, so it must be to the interest of each and all of these cities to secure such an outlet, though it should be the means of building up at one of our ports a city that would do credit to Virginia, and be the pride of the State. "Nature has been so bounteous that more difficulty is to be apprehended in selecting between the different locations than in finding a suitable point

for such a city." Let this be done with a proper regard to the best interests of the State, and in that liberal spirit that should characterize a Virginia people, and all will be satisfied."

Affairs at Erie.

The *American Railroad Journal* of Saturday has a strong and ably directed article on the Erie embargo. We recapitulate a few of the points made: 1. The West is the great party in interest, she cannot be forced to trade with the East through Pittsburg and Philadelphia, while New England as the great manufacturer, and New York as the great commercial agent of the country, afford better markets. The embargo and impost attempted at Erie are designed to affect this unreasonable purpose, and at the same time to collect a local tax for the benefit of an isolated borough. This to the Western farmer is a violation of his rights as a citizen, and a violation of the spirit of the Constitution of the United States, and may be so excessive as to cut him off from his favorite markets altogether.

"According to Gov. Bigler's doctrine, every little town may insist upon a break of gauge for the plunde it can gather out of it. The whole State in this way may be converted into a community of *wreckers*, living upon the misfortunes of their fellows. A caravan traversing the barbarous tribes of Asia or Africa is not more exposed to insults, to vexatious delays, to personal inconvenience, or to the danger of having their property destroyed than will be a person passing through Northwestern Pennsylvania, when the policy advocated by Gov. Bigler shall be practically applied.

Will the Western people submit to the degrading conditions imposed for the *right* to pass through Pennsylvania on the way to market? Can they be forced to take Philadelphia in their route in going from East to West? Will they not, at every cost, seek to defeat the object for which they are taxed? Such is human nature."

The next question is, will the Western people submit to this? The writer answers:

"The whole State of Pennsylvania, if she sustains the doctrines of Governor Bigler, will literally *stink* in the nostrils of the Western people. We think we know enough of Western States to say that for every dollar spunged out of them, the State of Pennsylvania will lose ten, by the withdrawal of a hitherto profitable intercourse. As it is, the Western people must have suffered severe losses by the interruptions suffered thus far at Erie. The forwarding of Western produce to market has been annihilated. The earnings of Western as well as Eastern roads, have been largely reduced. The former have particularly suffered in consequence of the detention, East of Erie, of a large number of locomotives ordered by them and almost indispensable to their daily wants. The next class of sufferers are the owners of railroad property. The general application of Governor Bigler's doctrine would destroy its value throughout the country. At the very announcement of such extraordinary doctrines, it is natural that capitalists should take alarm. It is well known that in this city the holders of Pennsylvania securities of all kinds are running them off quietly, but as rapidly as possible. Correspondents of foreign houses are taking the same views that we have expressed, and are advising their principals not to touch a security issued on account of a Pennsylvania Road. This distrust is the natural result of what has taken place, and will soon become general throughout the monied circles both of this country and Europe."

3. The interest of the city of Pittsburg is advertised, in connection with the repeal of charters:

"In this view of the case, we are astonished at the move made by Mr. Darsie. Of the plunder to be gained by taxing Western commerce, Pittsburg could only expect to reap a small share. But she has a great interest at stake in the numerous and important lines of railroad which she is proposing to construct, and in the success of which she is deeply involved. Except for the money

they can get within their own State, these projects are as dead as a herring. As far as the general markets are concerned, the Pittsburgh companies might as well come before the public with projects for a railroad to the moon. Mr. Darsie undoubtedly thinks he has put a feather in his cap. If he has, it is one purchased at the expense of the Pennsylvania railroads. If he has any doubt as to the correctness of our opinions, we advise him to make a trial of the market."

We give this view of the Erie case from this old established *Journal*, exclusively devoted, for 25 years, to the railroad interest of the whole country—the works of Pennsylvania always included and liberally treated—in order that our Pennsylvania neighbors may know that they have not to battle with New York and Ohio alone, as they have suffered such miserable rioters as King and Lowry to persuade them, but that the issue is with the whole West, and with New England. Not only so, but that the effect is to be told hereafter, where some of their works, not yet completed, and others whose shares and bonds are a sore drag on their own money markets, will feel it most keenly—in Europe. No paper is so widely circulated abroad among the holders and buyers of American Railway securities as the *Railroad Journal*.—*New York Daily Times*, Jan 30th.

Nashville and Cincinnati Railroad.

We have received the report of Capt. John Childe upon the surveys made for a railroad from Nashville, Tenn., to Danville, Ky.

Nashville and Lexington have become important focal points for the Northern and Southern systems of railways. The miles of railroad directly converging to Nashville will be 2,950, and to Lexington 3,850, or in all 6,800 miles. Beyond and through these systems of railways there is connection with all the railways built or to be built in the United States.

Locally, the route intersects various tributary lines, five at least in Kentucky and one in Tennessee. The population of the counties intersected, including the terminal counties, was, in 1850, 170,000; and the taxable property valuation \$53,000,000.

The route of the road will be nearly North-east and South-west, the direction of the Cumberland Mountains; and the road lying intermediate between these and the Ohio River, will avoid the business competition of the latter as well as the difficult or impracticable points of the former.

Several routes have been surveyed, in all of which Gallatin, in Sumner County, Tenn., and Glasgow, in Barren Co., Ky., are intermediate points.

The most favorable route appears to be via. Gallatin, the Hermitage, Scottsville, Glasgow and Perryville to Danville. The characteristics of this route are stated as follows.

Total length, miles.....	178.82
Maximum grade feet per mile, (same on all the routes surveyed).....	70
Shortest radius of curvature.....	1,432
Total deflection in degrees.....	6,512
Length wood bridges and trestlework, feet.....	6,399
Length of tunnels, feet.....	4,850
Highest summit, feet.....	675
Highest bridge above water.....	117
Rise and fall, feet.....	7,342
Total perches masonry.....	53,851
Total yards earth and rock graduation.....	10,282,007
Total cost roadway.....	\$3,272,594
" " cars and engines.....	389,700
" " superstructure.....	1,929,806
" " of road and equipment.....	\$5,592,100
Average cost per mile.....	\$31,272

Capt. Childe estimates the receipts of the road

as \$1,081,250 per annum, the expenses \$402,960, and the net income \$678,290, or equal to 10 per cent. on six millions of dollars and \$78,290 over for depreciation of tracks and rolling stock.

Blue Ridge Railroad of South Carolina.

The object of this road, long cherished by the people of South Carolina, is that of affording a north western connection of Charleston with Louisville, Cincinnati and the general country in that direction.

The road will probably leave the South Carolina road at Aiken, and thence run through Edgefield, Abbeville; Anderson, Clayton, Rabun Gap and to Knoxville, Tenn. With the Knoxville and Danville road, the route between Louisville and Charleston will be brought upon nearly a direct line.

The Columbia Branch and Greenville and Newbury roads, in South Carolina, would form the immediate connections of the Blue Ridge road with Charleston, and until the completion of the proposed route from Aiken to Anderson, via Abbeville.

In the late message of the Governor of South Carolina is given the following information relative to the condition of this enterprise.

By the act of incorporation of the Blue Ridge Railroad Company, passed by the last General Assembly, the guarantee of the State upon the bonds of the Company, to the extent of \$1,250,000 was secured upon the following conditions: First, that \$500,000 should be previously subscribed to the capital stock of the said Blue Ridge Railroad Company in South Carolina, by responsible persons, companies, or corporations. Secondly, that such subscriptions should be made, or aid furnished to the Railroad Companies in North Carolina and Tennessee, designed to connect with that portion of the road lying in this State, as would give reasonable assurances of the construction of the said North Carolina and Tennessee Roads. These conditions have been complied with.

At rates agreed upon with contractors, the entire cost of the Road, from Anderson to Knoxville in Tennessee, together with necessary appertinances, including interest accruing upon the bonds of the Company until the completion of the road, will amount to the sum of about \$7,500,000. To meet this outlay, the Company estimate their resources at \$6,700,000.

It will thus be seen that the means of the Company will fall short of the estimated cost of the work about \$800,000.

I have been enabled to ascertain, that by the terms of contract between Messrs. Bangs and Co., the work was to be commenced on the first of this month—and that a large portion of the surveys are completed, and found to present fewer obstacles than was at first supposed. A location has been made for tunnelling the Blue Ridge, and work allotted to contractors,—that their preliminary arrangements are in a state of forwardness,—that the districts through which the road will pass in this State will abundantly supply all the necessary labor,—that the citizens both in this State and beyond it have with extraordinary unanimity ceded the right of way without compensation—and that every circumstance tends favorably to an early and thorough completion of this enterprise.

A subscription on the part of the State of \$750,000 to this work is recommended by the Governor.

The Tennessee Legislature have also granted aid to the Blue Ridge Railroad Company within the limits of that State to the amount of \$550,000. This with the subscription under the control of Knoxville, raises the contribution to this important work to the sum of \$850,000. We also

learn that a bill was before the Legislature, the passage of which was confidently anticipated granting aid to the amount of a million of dollars to a branch connecting Chattanooga with the Blue Ridge Railroad at a point near the State line.

Loss of Lives and Property on the Lakes.

The loss of life and property on the great American Lakes during the last six years as nearly as it has been ascertained was as follows:

Years.	Value of Property.	No. of Lives
1848.....	\$420,512	55
1849.....	368,171	34
1850.....	558,826	395
1851.....	730,537	79
1852.....	992,659	296
1853.....	874,143	81

In 1850 and 1852, the years showing the alarming excess in the loss of life in the above table, the steamers *Griffith Wayne* and *Atlantic* were lost by fire and explosion, and the steamer *Troy* also exploded, causing severe loss of life; while during the other four years represented in the foregoing table no such casualties involving great losses of life occurred.

The causes of these losses as shown by the following comparative statement will be interesting to Insurance Companies and vessel owners as exhibiting in some degree the results of the new law with reference to steam vessels engaged in the passenger trade. With one exception no lives have been lost during 1853 on the regular passage steamers. This exception was the case of the *Ocean Wave* on Lake Ontario.

CAUSES.	1852.	1853.
Collision.....	\$261,950	\$55,823
Explosion.....	.....	77,394
Fire.....	730,709	132,055
Other causes.....	.....	608,871
Total.....	\$992,659	\$874,143

Decrease in value....\$118,516

The losses from explosions and collisions were much less in 1853 than in 1852 while from other "casualties" arising from stress of weather, bad harbors &c. they were greater.

The following table exhibiting the number of accidents each month will give some idea of the time of year most prolific in disasters, for the two last years respectively.

MONTHS.	1852.	1853.
April.....	7	19
May.....	19	30
June.....	24	17
July.....	15	11
August.....	16	28
September.....	21	30
October.....	27	39
November.....	85	80
December.....	15	12
Total.....	229	266

Increase in number in 1853..37

The annexed figures will show the character and nationality of the vessels and property lost and the waters in which the disasters occurred.

	1852.	1853.
American vessels.....	\$907,487	\$635,523
British ".....	65,172	238,620
Steam ".....	635,620	461,800
Sail ".....	359,089	412,843
Lake Ontario, Steam.....	49,350	188,400
" " Sail.....	29,589	94,677
Totals,....	\$78,939	\$288,077

Erie, Steam.....	\$543,470	\$128,606
" " Sail.....	197,830	121,906
Totals.....	\$741,300	\$250,512
Huron, Steam.....	\$16,000	\$88,594
" " Sail.....	53,600	72,744
Totals.....	\$69,600	\$161,338
Michigan, Steam....	\$800	\$28,700
" " Sail.....	78,020	183,616
Totals.....	\$78,820	\$212,316

The improved system of lights, as carried by vessels on the Lakes, and the operation of the new steamboat law have resulted most satisfactorily, in their effects as exhibited in the foregoing tables. The last year was the first of their operation, and these results should, we think entirely disarm opposition to them.

Trade of Lake Ports for 1853.

TOLEDO.

Imports Coastwise.

Merchandise 35,146 tons.....	\$28,116,800
Railroad iron 38,838 tons.....	2,330,880
Other articles.....	2,892,907

Total.....\$33,340,587

Exports Coastwise.

Wheat, bushels 2,467,564.....	\$2,615,617
Corn, " 2,549,606.....	1,402,283
Flour, bbls. 330,382.....	1,734,505
Other articles.....	4,505,449

Total.....\$10,257,854

Foreign imports.....	262,718
Exports to Canada.....	54,195
Total domestic and foreign imports..	33,603,305
" " " exports...	10,312,049

Total Lake Commerce of Toledo. \$43,915,354

GRAND HAVEN.

Exports in 1853 valued at.....	\$651,770
" 1852 ".....	407,332

Increase.....\$244,438

Of the exports in 1853, 41,000,000 feet of lumber, valued at \$328,000, and 19,336 barrels of flour, valued at \$96,680 are included.

Milwaukee and Mississippi Railroad.

The Milwaukee Free Democrat contains an abstract of the Annual Report of the Directors of this road, from which it appears that its earnings for the year 1853, have been as follows:

For passengers.....	\$ 78,635 34
Freight.....	142,820 28

Total.....\$221,455 68

Expenses of operating road, repairs to track, cars and engines, salaries, etc.....	\$ 87,115 48
--	--------------

Net receipts.....\$134,340 14

Deduct interest paid on construction bonds.....	\$58,200 00
---	-------------

Leaving.....\$76,140 24

The board have declared a dividend of ten per cent., payable in stock.

The road was opened to Stoughton, 80 miles from here, on the 2d inst., and will be opened to Madison in the spring.

75,975 persons have been carried over this road during the past year, without accident to one of them; and 67,000 tons of freight have also been transported over the road, exclusive of what has been carried for construction purposes.

The company have expended \$20,925 in the

erection of a machine shop, warehouses, etc., in Milwaukee; \$13,397 in the construction of fences; \$3,688 for a depot at Fulton; \$3,638 for a depot at Stoughton, and \$1,430 for a like purpose at Madison.

The amount of grain, flour, pork, etc., brought in from the West for the year, is as follows:—Wheat, bushels, 670,551; corn, do., 13,548; oats, do., 49,522; barley, do., 132,326; rye, do., 27,863; flax seed, do., 2,623; grass seed, do., 3,326; potatoes, do., 10,844; flour, bbls., 52,915; pork, do., 1,510; pork, lbs., 1,029,778; hogs, 55,523.

The Wisconsin of the 10th, states that the old Board, with the exception of H. S. Alden, who is substituted for Anson Eldred, resigned, will, probably, be elected with little opposition. The following is the ticket:

John Catlin,	George H. Walker,
E. B. Wolcott,	E. D. Holton,
E. Cramer,	H. Crocker,
A. Mitchell,	S. H. Alden,
A. E. Ray,	J. Cobb,
A. Finch, Jr.,	J. Goodrich,
S. C. Hall,	W. A. Barstow,
	H. L. Dousman.

Expansion of Locomotive Boilers.

Harvey Rice, Esq., master of engine repairs at the Piermont shops of the New York and Erie Railroad, has found that locomotive boilers of a little less than 16 feet extreme length, (furnace and tubes,) expanded 7-16 inch in length, between the temperature when cold and when under full steam. Another trial on boilers of about 18 feet length, (13 feet tubes and 4 feet furnace,) showed a range of expansion of *nine-sixteenths* of an inch. In the sixteen feet boiler, the forward end is held firmly to the frame; the hind end is fitted with an "expansion brace," and the allowance made in this brace is but one-quarter of an inch. Rogers was the first, we believe, to perceive the necessity, and to apply the expansion brace; but the allowance which he has made in his engines is often hardly sufficient. On the New York and New Haven road, with 11½ feet tubes, and furnaces 4½ feet long inside, an allowance of ¼ inch in the expansion brace is found insufficient, and the junction of the waist of the boiler with the firebox leaks in consequence.

Engine builders often judge of the amount of expansion by firing a boiler in the shop, up to a pressure of steam only sufficient to test the tightness of the boiler. When the engine comes into use and the fire is acted upon by the *blast pipe* the expansion is much more. A locomotive builder in New England, who recently commenced the construction of outside connected engines, with the boilers fastened firmly to the cylinders and frame at the forward end, has gravely told us there was *no perceptible expansion*, while we have found in the case of all his engines, so constructed, the boilers were leaking at the connection with the firebox; solely for the want of expensive allowance.

A large number, nearly fifty, of the earlier engines on the Erie road had dome-boilers fastened especially strong to the frame at each end. The connection of the horizontal barrel of the boiler with the upright side of the dome being the weakest part of the boiler in resisting expansion, the seam of rivets in that place was strained, and consequently commenced leaking. There are very

few engines of that pattern upon the road which do not now exhibit from one to three large *patches* riveted in the "gusset."

In Roger's engines having expansion braces at the furnace end, the back boiler brace, connecting the waist of the boiler with the frame, is placed with its edge outside, so as to offer its flat side in the direction of the expansive strain.

Representative Men.

Every State has its "representative men", in whom are incarnated the ideas, the sentiments, and the aspirations of the people. These incarnations are the *model man*, the *ideal* of excellence. Such in the eyes of Pennsylvania, appear to be Messrs. King and Lowry, the former Mayor of Erie, and both distinguished leaders in the Erie riots. These men have just now been making a triumphal tour of the State. In Pittsburgh a public meeting was got up for them, in which some of the leading citizens of that town figured conspicuously. One of their warmest sympathizers on that occasion was Gen. William Larimer, Treasurer of the Ohio and Pennsylvania, and President of the Connellsville, railroads. The papers also state that the Hon. Wm. F. Johnston, late Governor of the State, and President of the Alleghany Valley Road like a good Samaritan, "visited them in prison." At Philadelphia they had an equally flattering reception. They were taken by the hand by some of the leading men of that city, to whom they announced the momentous fact, that Erie would be totally ruined by an *uniform* gauge through her limits. This was the principal burden of their discourse, garnished by some allusions to the "grasping ambition of New York."

So much for the spontaneous bursts of expressions in favor of the "representative men of Erie." But these have reached a higher destiny. They are the representative men of the *legislature* as well as the citizen. But they have one smirch, however, upon their escutcheon. In them the "representative" is completely outdone by the "constituent". The "representative" burnt up a few bridges, tore up a hundred rods of road or so, but the "constituents" have laid violent hands upon a whole road, equipment, and all. The legislature have changed places with Messrs. King and Lowry, and have eclipsed their bright exemplars. They shine out with tenfold greater splendor.

"None but themselves can be their parallel."

Prizes to Enginemen.

In our last number was given a list of prizes awarded by the Little Miami Railroad Company to their enginemen. The policy of such awards is unquestionably for the interest of railroad companies, as it has been found to promote vigilance and caution. The Superintendent of the Indianapolis and Bellefontaine Railroad Company lately presented a valuable gold watch, in conformity with a previous offer of such a prize, to the engineman who should kill the least live stock while running passenger trains. On the New York and New Haven Railroad, a *bonus* of one hundred dollars per year is given to all enginemen who faithfully perform their duties. By this plan, no engineman who does his duty will be disappointed; the character of a *lottery*, in which light enginemen might look upon a contest for a *single* prize, being removed.

Fusible Plugs for Steam Boilers.

In Massachusetts the use of fusible plugs, in steam boilers of all kinds, is enforced by law.—From motives of economy, independent even of safety, we should suppose that every boiler should be provided with a plug, of fusible metal, in the crown of the furnace.

Fusible plugs were originally intended to melt at the temperature of a high pressure of steam, and to act then in the manner of a safety valve. The plug then might as well be in the outer crown as in the crown sheet of the furnace. Proportions of bismuth, tin and lead were compounded with reference to their becoming melted at assumed temperatures of steam. But it being found that the precaution was not always operative, the fusible plug went out of use, even where its employment had been made compulsory by law.

But for *over heating*, a danger different from ordinary over pressure, a fusible plug is of much value, as it is placed in the most exposed situation and its indications are unmistakable; a deficiency of water being attended by a discharge of steam into the furnace.

Lead is often used for safety plugs, but its melting temperature, 612°, is high enough to allow iron to become injured before the fire is put out in the furnace. A mixture with tin, by which the mass may melt at between 400° and 450°, would be better. As the alloy may, in time, become filled with infusible deposits it is a good precaution to renew a plug every few months.

We have often known furnaces to become burnt, or warped by over-heating, where a fusible plug would have averted the injury. The expense of removal and the danger of the failure of a "burnt crown" are both the bad results of a want of so simple a preventative.

But where a safety plug melts out on the road the engine is disabled until a new one is put in.—The safety plug made by Edward H. Ashcroft, of Boston, allows the water, however, to fall only to within an inch or two of the crown sheet before the plug is melted; and when the latter occurs the steam may be afterwards shut off from around the plug, so as to allow the engine to get to a station. The alloy of the plug is prepared to melt at from 400° to 450° and it is placed within a pipe open to, but an inch or two above the crown of the furnace. The operation of the apparatus is quick, and an alarm whistle can be attached, if thought necessary, to attract the attention of the engine-man. The furnace cannot be injured and the engine is not disabled.

From the danger of overheating, both in immediate explosion or subsequent failure, and from the expense of renewing a furnace, no engine should run a single day without some kind of plug.

Cincinnati and Aberdeen Railroad.

A route for a railroad to connect the above points has been surveyed by O. P. Ransom, Esq. The line follows the bank of the Ohio, and runs in a south-easterly direction from Cincinnati. The distance is 54 miles, and the estimated cost, (with 5 miles of sidings,) \$1,509,589 or \$25,586 26 per mile for the whole distance of 59 miles. The estimates are for a track 1½ feet above the highest floods of the Ohio. The maximum grade, for 9¾ miles, is 15 feet, while 38½ miles are level or less than 5 feet rise per mile.

The Chilled Slip Tire.

At the last meeting of the members of the *Franklin Institute* of Pennsylvania, this improvement was brought up for notice. The Journal of the Institute says:

"Mr. Fairman Rogers also described a new chilled cast iron wheel tire, used by the Baltimore and Ohio Railroad, for the driving wheels of their locomotives. In the traffic of that road, with heavy grades and large loads, the necessary use of sand on the rails has been found to wear the ordinary Low Moor wrought tire into flat places upon the circumference of the wheel. In addition, the wrought tires being shrunk on hot, are exceedingly difficult to remove and replace when worn. The new tires are cast in contact with a cold iron ring, in order to chill the tread and flanch; and the outside of the wheel and the inside of the tire being carefully turned to fit each other, and slightly coned towards the outside of the wheel, the tire is dropped into its place, set by a few blows with a sledge, and brought to its bearing by bolts passing through lugs cast on the tire. By having tires ready turned to fit the engines, a set of wheels can be newly tired in a very short time. The cast also costs much less than the wrought tire, and resists the wearing action of the sand on the rails a much longer time."

The chilled tire, however, is no new thing, the Baltimore and Ohio Company having had it in constant use for more than ten years; while it is now used there in preference and over all others. Mr. Rogers' view, in which we have no doubt the members of the Institute fully concurred, are demonstrably correct as regards the economy, convenience and durability of the chilled tire. Its safety and *adhesion* have also been satisfactorily determined.

Rolling Stock of British Railways.

The total number of locomotives on railways in the United Kingdom is 3,942, or about one to every two miles of road. The total number of passenger carriages, 11,364, capable of seating 335,206 passengers.

On the narrow, or 4 feet 8½ inch gauge lines, in England and Wales, the working stock in use is 2,982 engines, 1,770 first class and 2,578 second class carriages; besides third class and composite carriages. On the 7 feet gauge the working stock is 239 engines, 197 first class and 259 second class carriages, besides third class and composite carriages. All the Scotch lines are of 4 feet 8½ inch gauge; those of Ireland are 5 feet 3 inches.

Columbus and Xenia Railroad.

By the fourth annual report of this company we learn the receipts for the year ending November 30, 1853, were..... \$314,434 06
The operating expenses..... 145,821 37

Leaving as net earnings..... \$168,612 69

Two half yearly dividends, of 5 per cent each, have been declared payable in cash or stock. The Stockholders have elected to receive stock. The present capital stock is \$1,291,700. Bonds issued, convertible, \$26,000. Total cost of road and equipment \$1,319,047 68. The capital stock of the Company has been increased during the past year \$199,562 03, by the conversion of bonds, payment of stock dividends and by new subscriptions.

The Company have subscribed \$50,000 each to the Dayton, Xenia and Belpre and the Springfield and Columbus roads, by which, and with arrangements made for connections upon their completion a desirable position is attained by the C. and X. Road, such an one as has long been a part of its policy to secure.

Railroad Chairs cast upon the Rail.

The London and North Western Railway Company have for nearly two years applied their rail-chairs by *casting* them around the joint. A portable cupola is used, weighing six hundred weight, made of one sixteenth inch iron, 27 inches in diameter and 54 inches high, lined with fire brick 4 inches thick, and in which 3½ tons of iron have been run down in seven hours. Iron chills or moulds are put around the ends of the rails at the joints, loam being packed around to prevent loss of metal, the iron is then poured in, and in five minutes is cooled and the chair is perfect. 120 chairs have been cast by this manner from one cupola in one day.

There can be no settling of the ends of the rails by this manner of connection, as a line of rails thus becomes a continuous girder.

Improvement in forging Scrap Iron.

An important improvement is said to be practised at some of the English Forges, where scrap iron is worked up. Instead of carrying the piles for some distance to the rolls or hammers before being compressed, and during which the "scale" is forming, an anvil is fitted directly at the mouth of the puddling furnace and a hammer arranged over head so as to drop once or more, at pleasure, upon the opening of the furnace door.—A hammering weld is thus taken at the moment the iron leaves the furnace. In rolling, the ends of the piles are not overdrawn as is usually the case, and a considerable amount of "cropping" at the shears is saved. The quality of the iron is said to be improved \$5 per ton by this mode of working.

Can a State Seize the Property of an Individual?

It is stated that Governor Bigler has gone to Erie to take possession of the Franklin Canal company's road. We do not understand that he is competent, on behalf of the State, to do this. If the road has been constructed without a sufficient charter, then the original stockholders become tenants in common in the property. Their title to it is not impaired; the relations they sustain to it only changed. They may have no right to run their road, but they clearly cannot be dispossessed of their property. Neither locomotive engines, cars, nor the road, are *contraband*, even in Pennsylvania; and as we understand it, they may be transported through the State, or out of the State, by their lawful owners. The real estate of a road constructed without a valid charter, either reverts back to the original owners, or becomes vested in the stockholders; or perhaps in the Directors, in trust for the stockholders. So Governor Bigler may have gone on a fruitless errand after all. The owners of the road may retire with their portable property into Ohio or New York, and leave the Governor in possession of a field, barren both of laurels or spoils.

Portland, Saco and Portsmouth Railroad.

The accounts of the P. S. & P. Railroad are made up to the end of November in each year.—We give below a statement showing the comparative amount of passengers and the relative increase between the financial years 1852 and 1853.

	1852	1853.
Number of passengers,	22,359	264,080
Receipts.....	\$208,669 11	\$244,110 84
Increase in 1852 over 1853, \$35,441 28,—or 16 per cent.		

Progress and Finances of St. Louis.

Pop.	Assessed value of propy.
1840 16,649	\$8,682,506
1850 74,439	29,676,649
1852 94,000	38,281,669
1853 100,000	39,397,186
Receipts into city treasury for year ending in August 1853, were.....	
\$1,124,468	
The population and wealth of the city have doubled every five years since 1833.	
Imports of Saint Louis 1853.....	\$917,000
Receipts of Flour 1853.....	bbls.737,000
The present debt of the City of Saint Louis in bonds sold, exclusive of railroad bonds is.....	
\$1,960,206	
The debt of the County of St. Louis in bonds, exclusive of railroad bonds, is.....	
707,000	
Total.....	\$2,667,296
Debt of the city in bonds delivered to railroad companies.....	
1,075,000	
Debt of the county in do.....	
400,000	
In addition to the above the city has authorized to be issued:	
Bonds for railroad subscriptions.....	\$525,000
Conditional additional subscription to the North Missouri and Iron Mountain Railroad.....	
400,000	
Bonds for city purposes.....	672,000
Total.....	\$1,597,000
County bonds authorized to be issued, but not yet delivered, to railroads..	
1,300,000	

City and county bonds to be issued \$2,897,000
Of the city and county bonds to be issued about \$500,000 are yet unsold. And making the necessary change of this amount in the above calculation, the result is as follows:

City and county bonds sold.....	\$3,642,296
Do. authorized but not sold.....	3,397,000

Total..... \$7,039,296

In regard to the above \$1,300,000 proposed to be issued we understand that it is probable that that intention will be abandoned and a direct tax for the benefit of the roads which were to receive them, laid instead.

Belleville and Illinois town Railroad.

This road was originally designed to connect Illinois town, opposite Saint Louis, with Belleville, in St. Clair County. The direction is nearly south east from Saint Louis. By a section of its charter, by which it was authorized to connect with any other road in the State, it has been proposed to extend the road north to Alton, and south to a point of connection with the Central Road near Cairo. The objects sought are, first, a southern outlet to St. Louis, connecting with the Mobile and Ohio, and other roads on the great southern and south eastern lines; and second, a general connection of the northern and southern systems of railroads terminating respectively at Alton and Cairo. The people of Alton, anxious that the northern roads shall terminate in their city, have denied the right of extension of the Belleville Company, and the construction of the charter of the road has therefore been carried before the Supreme Court, where it will be soon decided.

In a recent letter of the President of the Company, Jas. L. D. Morrison, to the Belleville Advocate, it is stated that the grading and masonry of the road are completed between Illinois town and Belleville, the grading across the bottom being above the high water of 1852. The securities of the Company, amounting to \$600,000 have been

sold and the entire proceeds invested in iron, the Company having about 13,000 tons of rails. Invoices of 2,800 tons have been received, and from the time it has been at sea it is expected to be at New Orleans. Two miles of the road from the Mississippi river have been laid with rails borrowed from the Ohio and Mississippi Company, and in thirty five days from the receipt of their own iron the President states that the road will be opened to Belleville.

The President states that locomotives of the best class have been purchased from the New Jersey Locomotive Company of Paterson, and that these are only now detained on their way by the lawless proceedings at Erie.

New Locomotive Shop at Dayton, Ohio.

We observe that a company has been formed with a capital of \$100,000, for the manufacture of locomotives in Dayton. The principal stockholders are the following:

E. Thresher & Co. \$10,000; H. Doolittle \$10,000; D. Beckel \$10,000; Harshman & Winters \$10,000; L. Kinsley, of Canton, Mass., \$10,000; W. & W. P. Huffman \$10,000. The remainder of the stock is owned, as we learn, in amounts of \$5,000.

The character of the parties interested, the demand for Railway machinery, and the advantages which Dayton enjoys for its manufacture, will make this one of the leading establishments of its kind. The managers are from the Taunton Locomotive Works, of Taunton, Mass.

Manufacture of Railroad Machinery in the South

The Richmond Examiner speaks in rather discouraging terms of the progress of car and engine making in Virginia. We are pleased to know, however, that those establishments in Virginia which have founded their business upon the practical knowledge and skill of their proprietors have been in no way unfortunate in their operations, nor have their productions been such as Northern shops need be ashamed of. We know particularly of engines of a high character of design and workmanship which have been built in Virginia for the Northern Market, and one has been placed within a short time upon the Hudson River Railroad. The Examiner says:

"We descend to the small gear of Railroads, and manufacture passenger cars as strong and rugged as drays, and heavy enough unloaded for one engine to the half-dozen. We manufacture locomotives at off-hand, wholesale pace, which explode standing stock still, without the least provocation, killing only a few husbands and fathers, and instead of being ashamed of our bad handicraft we ask, with the complacency of the Irishman at the show, who got blown through the roof and was landed in a distant end of the town, thinking it a part of the performance—"what comes next?"—We talk of establishing Vulcan Iron Foundries in Richmond, and on the line of the Covington and Ohio, on semi-State account, that will spin out Railroads by the yard, and thrash locomotives and car wheels out of pig-metal like a wheat machine. Verily, we are prodigious on Railroads in Virginia, and enjoy a degree of illumination on the subject which the English and the Yankees can't hold a candle to."

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

JOHN H. HICKS,
90 Beaver street.

2d Feb'y.

To Railroad and Canal Co.'s, Contractors, &c.

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics, &c. of any description, and also to inform them that they forward such men to whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.
No. 85 Greenwich street, New York.

To Contractors.**LAFAYETTE RAILROAD.**

SEALED PROPOSALS will be received by the undersigned at the Engineer's Office of the Lafayette Railroad, No. 23 Spaulding's Exchange, Buffalo, N. Y., until Tuesday at 12 M. the 7th day of February next, for the grading, masonry, bridging and the entire construction of 17 miles of the Lafayette railroad from the State line of New York to Lafayette, Pa. Plans, profiles and specifications are ready for examination by parties wishing to contract.

Any further information in reference to the work, may be obtained on application to the Hon. C. S. Woodhull 133 Nassau str., New York, or of the undersigned.

E. R. BLACKWELL,
Chief Engineer.

Buffalo, January 24th, 1854.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Norfolk, Va., Jan. 8, 1854.

SEALED PROPOSALS will be received by the undersigned at this Office, from the 1st until the 20th day of March next, at sundown, for the "clearing" and "Graduation" on the line of the "Norfolk and Petersburg Railroad," between that portion of said road now under contract, and its terminus at Petersburg—covering a distance of about eighteen miles; also, for the "Culvert" and "Bridge" Masonry of the last section of said work.

At the same time, sealed proposals are invited for the "Abutment" Masonry of "Bridges" over the Eastern and Southern branches of Elizabeth River.

The work will be divided into sections of about three miles, and bids may be made for one or more of said sections.

The line, plan, profiles and quantities of work will be ready for examination on and after the 1st of March.

Specifications with forms of contract and proposal may be had of the undersigned after date.

Payments will be made in current funds during the progress of the work, in proportion of four-fifths of the amount due.

Of bidders personally unknown to the undersigned, evidence of their responsibility will be necessary; and of those to whom work shall be allotted, will be required bond and approved security in an amount not exceeding one-fifth of the amount of their contract, for the timely and faithful execution of the same.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

The line is easy of access, the country through which it passes abundant in supplies and of a climate highly favorable for the prosecution of work at all seasons.

The work here offered for contract is of a character well worthy the consideration of the most responsible contractors.

W. MAHONE,
Chief Engineer.

January 19.

BLAKE'S PATENT FIRE-PROOF PAINT.

THIS extraordinary substance has now been tested nearly *nine* years, and its FIRE and WEATHER PROOF qualities are most extraordinary. Instead of the action of the weather destroying the coating as it does ordinary paints, it only serves to turn it to a perfect *slate* or *stone*, protecting whatever covered from the action of *fire* and *weather*, as will be seen by the testimony of the following persons.

BORTON GREEN, being called in the case of Blake vs. Belknap, after being duly sworn, testifies and says, that he resides in Ohio. A few days since examined a house that had been painted nearly eight years with said paint, and to all appearance, it was as perfect as the day it was put on, and could even now see distinctly the brush marks upon the surface.

NORMAN RUDD being called, and duly sworn in the above-mentioned case, says that he was owner or part owner of a large Machine Shop situate in Newmarket, N. H., that the Shop took fire and burned down, loss, \$50,000. The roof of a large Foundry near by, was covered with this paint, a Cupola upon the Foundry was not painted, it took fire and fell on to the roof and burned up, without apparently injuring the roof, except to char the boards underneath.

Amesbury, Conn., August 18th, 1851.

We were present at the burning of the Amesbury Factory, which was struck by lightning on the 10th of July last, and which, with the surrounding buildings, was painted with Blake's Ohio Fire Proof Paint, and have no doubt but that all the surrounding buildings would have been consumed had they not been painted with said paint.

JOHN TALBOT, Superintendent.
DAVID TALBOT, Agent.

Akron, Ohio, May 22d, 1850.

This may certify that we have been acquainted with Blake's Patent Fire Proof Paint for some years, and are well assured that it is really what its name indicates—*fire-proof*. We consider it a better fire proof than tin or zinc, and will insure buildings covered with it at a much lower premium than those covered with the above-mentioned metals.

H. K. SMITH, Sec. Summit Mut. Fire Ins. Co.
DAN'L S. LEE, Ag't of Medina Co. Mut. Ins. Co.
D. R. HADLEY, Ag't of Stark Mut. Ins. Co.
R. F. CODDING, Ag't Portage & Farm's Ins. Co.
J. A. BEALES, Ag't Portage Ins. Co.
WHEELER, LEE & CO., Col. Ins. Co.

The best evidence of the value of an article, is from the fact of persons of practical skill, having used in years past large quantities, and still continue to order largely for future use.

OFFICE OF THE PHILADELPHIA & READING RAILROAD CO. }
Philadelphia, July 16th, 1850.

Dear Sir:—This Company have been and are using **BLAKE'S FIRE PROOF OHIO PAINT** extensively for Bridges and Buildings. In the course of time it becomes very hard, and seems to be both fire and water proof under any ordinary circumstances. We decidedly prefer it for the purposes named above, to any paint we have hitherto used, as it costs less and is much more durable.

JOHN TUCKER, President.

ENGINEER'S DEPARTMENT, P. R. R. Co. }
Philadelphia, Feb. 17th, 1850.

Dear Sir:—Having used Blake's Fire Proof Paint on this Road for two years past, I am sufficiently satisfied with its superiority to continue its application to all the structures and cars on the line of the Penna. railroad. Yours, very respectfully,

J. EDGAR THOMPSON, Chief Engineer.

OFFICE PENNA. R. R., April 20th, 1852.

Dear Sir:—Ship immediately the fifty barrels yet undelivered of our order for one hundred barrel Blake's Patent Fire Proof Paint, dated Feb. 15th, 1851, to care of Strickland Kneass, Esq., Altoona, and care of John Corvire, Esq., Pittsburg.

Yours truly,

J. EDGAR THOMPSON.

GEORGIA RAILROAD, Augusta, Ga., November 27th, 1851.

Dear Sir:—Please furnish us with (30) thirty bbls. Blake's Fire Proof Paint, Chocolate Color. We have been using Blake's Fire Proof upon Freight Cars and Buildings for the last three years, and it gives me pleasure to state that we have found it both more economical and durable than any other kind of paint.

F. C. ARMS, Gen. Sup't.

I fully concur in the above recommendation.

JESSE OSMOND, Sup't. Car Factory.

Portland, April 11th, 1851.

Dear Sir:—I have requested Mr. Emory, Ag't and Sup't of the Y. & O. Railroad, to give you an order for twenty bbls. of Blake's Ohio Fire Proof Paint, for the use of this Road; and I take pleasure in adding, that I regard it as an article superior to any other introduced into the market and use, as also more economical in price, for coating Dupots, Cars, and every other material of wood or metal, exposed either to fire or weather; and I can cheerfully concur in recommending it accordingly for most uses and roofs generally. Please forward the amount of Mr. Emory's order by the earliest conveyance.

F. O. J. SMITH, President York and Cumberland R. R.

CAMDEN & AMBOY RAILROAD OFFICE. }
Bordentown, March 4th, 1851.

In reply to your inquiry as to your opinion of Blake's Ohio Fire Proof Paint, I would state that we have used considerable of it during the last two years, and consider it a first rate article, and hereafter shall prefer it to any other paint, for Buildings, Bridges and Cars outside.

R. S. VAN RANSELLER, Superintendent.

ENG'S OFFICE, BALTIMORE & OHIO R. R.

Dear Sir:—Being satisfied with the testimonials you here produced, that Blake's Fire Proof Paint which you have for sale is a valuable article for the purposes which they mentioned, I now give you an order for 50 barrels, of 350 lbs. or thereabouts, of the paint; 25 bbls. of Black and 25 bbls. Chocolate color. Consign the paint to Jas. B. Jordan, Mount Clear Depot, Baltimore.

B. H. LATROBE, Chief Engineer.

OFFICE OF MASTER OF ROAD, BALTIMORE & OHIO R. R. }
Baltimore, Nov. 3d, 1851.

Dear Sir:—After using "Blake's Patent Ohio Fire Proof Paint" for the last year, I have concluded to give you an additional order for 40 bbls. I feel a pleasure in saying that I consider it the best material for covering Wood, Brick, or Iron, now in use.

Respectfully your Obedt. Servant.

W. BOLLMAN, Master of Road.

SUPERINT'T OFFICE, RICHMOND & FREDERICKSBURG R. R. }
November 6th, 1851.

Dear Sir:—In reply to your inquiry in reference to our satisfaction with Blake's Patent Paint, sold us last Spring, I would say that we are so well pleased with it that I should like to have you ship us seven bbls. more of the Chocolate at your earliest convenience. Yours, &c.

THOS. SHARP, Supt. R. F. and P. R. R.

JUNCTION HANOVER COUNTY, November 1st, 1851.

The Virginia Central Railroad Co. have been and are using Blake's Fire Proof Ohio Paint extensively for Bridges, Car-tops, &c. We decidedly prefer it for the purposes named above to any paint we have ever used, as it costs less and is much more durable.

C. R. MASON, Supt.

PHILAD'A. WILMINGTON & BALTIMORE R. R. }
Baltimore, Sept. 10th, 1851.

I have used Blake's Ohio Paint for four years, and have found it to be an article of great economy and value, and calculated to supersede for most purposes all other paints, for Public Buildings and Private Residences.

J. R. TRIMBLE, General Agent.

ATLANTA, December 10th, 1851.

Dear Sir:—Please send me for the Atlanta and Lagrange Railroad Co., 20 bbls. Blake's Fire Proof Paint, Chocolate Color. I have used the paint for various purposes, and am well satisfied that it makes a good and durable coating.

L. P. GRANT, Eng. & Sup't. A. & L. Railroad.

SUPERINT'T'S OFFICE, S. W. Railroad. }
Macon, December 5th, 1851.

Dear Sir:—Please ship us, care of Central Railroad Agent, Savannah, 2 bbls. Blake's Fire Proof Paint.

I have used on the Central Railroad, and on this road a considerable quantity of the above Paint, in the last four years, and have no hesitation in pronouncing it the best for covering for wood that I know of, as a protection from the weather or fire.

GEO. W. ADAMS, Sup't.

MACON & WESTERN R. R., Macon, Dec. 6th, 1851.

Dear Sir:—You will please furnish for this Company 8 bbls. Blake's Patent Fire Proof Paint, (Black color,) and 4 bbls. Chocolate color—in all 12 bbls. We have heretofore used Blake's Fire Proof Paint on Freight Cars and Buildings with much satisfaction, considering it both economical and durable.

EMERSON FOOTE, Sup't.

MONTGOMERY & W. POINT R. R. Co. }
Montgomery, January 21st, 1852.

We have been using Blake's Patent Ohio Fire Proof Paint for several years for painting Cars and Buildings, and have been highly pleased with it. You may send us twenty barrels of the paint; fifteen of the Chocolate color and five of the Slate color.

Respectfully,
SAML. G. JONES, Engineer & Superintendent.

ALL ORDERS ADDRESSED TO

WILLIAM BLAKE, Patentee.

119 Pearl Street, New York.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans,

Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be

promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by

BOORMAN, JOHNSTON & CO.,
June 9, 1853. 90 Broadway, New York.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to

THOS. CHAMBERS, President,
63 Beaver st, N. Y.,

September, 1850.

Valuable

Engineering and Mechanical Works,

IMPORTED and FOR SALE by
JOHN WILEY, 167 Broadway.

DEMPSEY'S PRACTICAL RAILWAY ENGINEER. 1 vol. 4to, with 50 Engravings, bound in half Morocco.	\$11.00
SCOTT'S ENGINEERS' AND MACHINISTS' ASSISTANT, 2 vols. Quarto.	20.00
TREDGOLD on the LOCOMOTIVE ENGINE, half calf.	15.00
" on the MARINE ENGINE, half calf.	24.00
" on the STATIONARY ENGINE, &c., half calf.	24.00
TREATISE on the STEAM ENGINE by the Artizau Club.	6.00
WEALE'S THEORY, PRACTICE and ARCHITECTURE of BRIDGES, 3 large vols., half bound.	25.00
" SUPPLEMENTARY VOL. (just published), half bound.	14.00
TRAUTWINE on RAILROAD CURVES, turk.	1.00
" on EMBANKMENTS AND EXCAVATIONS.	1.00
WILMES' HANDBOOK OF PLAIN and ORNAMENTAL MAPPING, and Engineering Drawing, for Civil and Mechanical Engineers.	7.50
WOOD'S PRACTICAL TREATISE on RAILROADS, 8vo.	5.00
RYDE'S TEXT BOOK for the USE of ARCHITECTS, ENGINEERS, SURVEYERS, &c. 1 vol Royal 8vo.	8.50
GREGORY'S MATHEMATICS for PRACTICAL MEN. 8vo.	6.00
BARLOW on the STRENGTH of MATERIALS and on CONSTRUCTION.	4.50
LARDNER on the STEAM ENGINE. New Edition.	2'00
SCRIBNER'S ENGINEER'S, SURVEYOR'S and CONTRACTOR'S POCKET TABLE BOOK.	1.50
SCRIBNER'S ENGINEER'S and MECHANIC'S COMPANION.	1.50
BUCK on OBLIQUE BRIDGES. Illustrated with Plans, &c.	4.00
EXAMPLES of RAILWAY MAKING. With PRACTICAL ILLUSTRATIONS.	3.50
SIMM'S on LEVELLING and SETTING OUT RAILWAY CURVES. 8vo.	2.25
SIMM'S on MATHEMATICAL INSTRUMENTS, 8vo.	2.25
HAUPT on BRIDGE CONSTRUCTION. 8vo.	3.00
QUESTED'S TREATISE on RAILWAY SURVEYING and LEVELLING. 8vo.	1.75

Together with an extensive assortment of Books in every department of science.

LAWRENCE SCIENTIFIC SCHOOL, Harvard University.

THE next Term of this Institution will open on the second day of March, 1854, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical Exercises, according to the nature of the Study, will be given in:

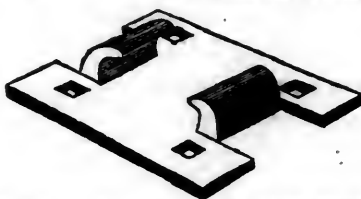
Astronomy	by Messrs. Bond.
Botany	" Prof. Gray.
Chemistry, analytical and practical	" " Horsford.
Comparative Anatomy and Physiology	" " Wyman.
Engineering	" " Eustis.
Mathematics	" " Pierce.
Mineralogy	" " Cooke.
Physics	" " Lovering.
Zoology and Geology	" " Agassiz.

For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

Cambridge, Mass., January 1854.

NEW YORK Wrought Iron Railroad Chair Company,

Office, 38 Exchange Place, New York.
A. B. LANSING, President.



THIS Company is prepared to receive orders for the manufacture of Wrought Iron Railroad Chairs of the best material, on a new and superior model, and by improved patented machinery.

The thickness of the Lips of the Chair increases through the bend, where the greatest strength is required, and diminishes towards the edge;—so that a less weight of metal may be used and a strength acquired equal, if not superior, to that of a heavier Chair of uniform thickness.

GALENA & CHICAGO UNION R. R. CO.
Secretary's office, Chicago, Jan'y 21st, 1854.

Notice to Stockholders.

NOTICE is hereby given to the Stockholders of the GALENA & CHICAGO UNION R. R. CO., that a dividend of ten per cent. on the capital stock paid in (entitled to dividends) for the six months ending January 31st 1854, has been declared.

The Income of the road having been used for construction purposes, the dividend will be payable, on and after the first day of February next at the office of the Company, in dividend certificates, redeemable at the pleasure of the holder in full paid Consolidated Stock of the Company when presented at this office in sums of One hundred dollars.

By order of the Board of Directors,
W. M. LARRABEE, Secretary.

NEW YORK & ERIE RAILROAD.

New York, December 31, 1853.

THE NEW YORK & ERIE RAILROAD COMPANY, have for sale on favorable terms, the following Schedule of Rolling Stock of the Gauge of
FOUR FEET, TEN INCHES,

all of which can be delivered immediately.

It can be seen at Paterson, and is the entire stock of the Union Railroad, the Paterson & Ramapo Railroad, and the Paterson & Hudson River Railroad.

Reasonable credit will be given on the above, on satisfactory security.

CHA'S MINOT, Sup't.

SCHEDULE.

ENGINES.	MAKER.	CYLINDER.	STROKE.	WHEEL.	CONDITION.
R. L. Colt...	New Jersey Locomotive Co.....	16	20	5 feet	Good.
Union.....	Rogers, Ketchum, & Grosvenor.	15	20	6 "	Good.
New York...	do. do.	14½	18	6 "	Good.
Ramapo.....	do. do.	14½	18	6 "	Wants painting & small repairs.
Passaic.....	do. do.	14½	22	5½	do. do. do.
Paterson....	do. do.	12	22	5 "	do. do. do.
Whistler....	Made in Baltimore	11	16	5 "	Wants much repairs.
McNeil.....	Made in Liverpool.....	9½	16	4 "	In bad order.
CARS.	DESCRIPTION.	BY WHOM MADE.		CONDITION.	
2.....	Passenger, 8 wheels...	Cummings & James, Jersey City.		Good.	
2.....	do. 8 do.	Wm. Cummings, Jersey City....		Good, but wants painting.	
2.....	do. 8 do.	Tracy & Fales, Hartford.....		Very good.	
4.....	do. 8 do.	Springfield Car & Engine Co.....		Good, but three want painting	
2.....	do. 8 do.	A. T. Pearce, Norwich.....		Good.	
2.....	do. 8 do.	Eaton & Gilbert, Troy.....		Want repairs.	
1.....	do. 8 do.	New York & Erie R. R. Co.		Good, new.	
1.....	Baggage, 8 do.	do. do.		Good.	
6.....	do. 8 do.	Unknown		Want small repairs.	
1.....	do. 6 do.	do.		do. do.	
8.....	Box freight, 8 do.	New York & Erie R. R. Co.		Good.	
18.....	do. 4 do.	Unknown		Want small repairs.	
16.....	Platform, 8 do.	New York & Erie R. R. Co.		Good.	
9.....	do. 4 do.	Unknown		Want considerable repairs.	
1.....	do. 6 do.	do.		do. do. do.	
2.....	do. 8 do.	do.		do. do. do.	

FULTON CAR WORKS, CINCINNATI, OHIO.

WE respectfully call the attention of Railroad Companies and Contractors in the West and South to our establishment. Our facilities for manufacturing are extensive, our work is made from the best material the country affords, and of the most superior workmanship. We are prepared to execute to order on short notice Passenger Cars of the most approved description and elegant finish; Baggage, Freight, Cattle and Gravel Cars, also Crank and Lever Hand Cars, Trucks, and Railroad work generally.

Washburn Car Wheels.

Having secured the exclusive right to make and sell this celebrated wheel in Cincinnati, Covington and Newport, we are prepared to furnish them in any quantity, either fitted with axles or separate. These wheels are made of the best of iron, mixed in most approved manner.

Cincinnati, Ohio, January 18th, 1854.

KECK & HUBBARD.

Rail Road Letting.



PROPOSALS will be received at the Office of the Company in the City of Evansville, Indiana, until 6 o'clock, P. M., of Wednesday, 15th day of February, 1854, for the Grubbing, Grading and Bridging of that part of the 1st Division of the

EVANSVILLE, INDIANAPOLIS, AND CLEVELAND STRAIGHT-LINE RAIL ROAD,

Extending from Evansville to the Crossing of the Ohio and Mississippi Rail Road, in Daviess County, a distance of fifty-four miles.

The work will be divided into sections of about one mile each, and proposals will be received for one or more sections, or for the whole line.

Maps, Profiles and Specifications will be ready for the examination of bidders on and after the 1st of February, and all necessary information given on application to W. C. MOORE, Chief Engineer.

O. H. SMITH, PRESIDENT,

W. CARPENTER, VICE PRES.

Evansville, Jan. 2, 1854.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 6.]

SATURDAY, FEBRUARY 11, 1854.

[WHOLE No. 920, VOL. XXVII.]

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Toledo and Illinois, and Lake Erie, Wabash and St. Louis Railroads.....	81
Milwaukee and Mississippi Railroad.....	82
Ohio and Indiana Railroad.....	82
Indianapolis and Bellefontaine Railroad.....	84
Indiana Central Railroad.....	85
Railroad Investments in New England.....	87
Stock and Money Market.....	88
Seizure of the Franklin Canal Road.....	91
Little Miami and Columbus and Xenia R.R.....	91
Break of Gauge.....	91
Springfield, Mount Vernon and Pittsburg Railroad.....	92
Madison, Indianapolis and Peru R. R.....	92
Journal of Railroad Law.....	93
Cincinnati, Logansport and Chicago Railroad.....	93
What it Costs to Support Erie—And who Pays for it.....	94

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, February 11, 1854.

The Toledo and Illinois and Lake Erie, Wabash and Saint Louis Railroads

Railroads divide themselves into two classes.—The first occupies the *natural* routes of commerce. Thesecond is tributary to the former. Of the former class, the New York Central, the Michigan Southern, and the New York and Philadelphia Railroads may be taken as good illustrations. The value of such roads is to be measured by the amount of movement upon the routes they occupy. They are of national importance, and belong to a system, not limited by the confines of a State, but embracing the whole country.

Of the character described is the proposed line of road under the above titles extending from Toledo, on the extreme western end of Lake Erie to Danville, Illinois, in the direction of St. Louis. From Toledo to the eastern boundary of Illinois, the line of the road follows the valleys of the Maumee and Wabash Rivers, already the route of a vast commerce created by the Wabash and Erie Canal. The canal has attracted to itself the business of the surrounding country, and upon its banks have

grown up numerous and thriving towns, which are not only the seats of a large commerce, but between which an active business intercourse exists. The canal was first constructed from the natural adaptation of the route for such a work, and from its coincidence with the direction of trade. This constructed, a Railroad followed as a matter of necessary consequence. The two works, instead of being rivals, will naturally assist each other, as has been fully demonstrated by the experience of the Central Railroad of New York, which for its whole length follows upon the immediate bank of one of the best water lines in the world. The canal takes the heavy and cheaper freight, leaving the more profitable kind, and passengers, to the Railroad, with which, for years, it has been taxed fully up to its capacity. The Canal is the pioneer for the Railroad, and has developed a business for the latter, which otherwise would not have existed.

The general route of the above road is as follows: Commencing at Toledo it extends up the valley of the Maumee to the eastern boundary of Indiana, a distance of 75 miles. After entering that State it continues up the valley of the same river to Fort Wayne, where it enters the valley of the Wabash, which it follows very nearly to the western boundary of the State, a distance of 168½ miles. On entering Illinois it pursues its general course to Danville, 249 miles from Toledo.

At Danville, the great western Railroad of Illinois is intersected, which, in connection with other roads in operation and in progress, will be extended to Hannibal on the Mississippi river, a distance of 205 miles, where a junction will be formed with the Hannibal and St. Joseph Railroad, now in progress from the former place to the Missouri River, a distance of over two hundred miles.

The more important extension of the above line from Danville, is in direction of St. Louis. From Danville the above line will be extended to the Alton and Terre Haute Road, (now in progress,) probably at Paris, by means of which a direct uninterrupted line of Railroad will be formed between Lake Erie and St. Louis, of 450 miles.

With the connections described the road will form very nearly a straight line between its termini, the course of which will coincide both with the convenient direction of trade of the country traversed, and with the great route of travel and

commerce between the Mississippi and the east. Its line is a direct prolongation of the Great Water route formed by the St. Lawrence and Lakes Erie and Ontario. It is a remarkable fact that a line drawn from the Gulf, and following up the River St. Lawrence, and continued through the above Lakes to St. Louis, would take almost the identical route of the above road. The depression in the continent occupied by the Lakes and the St. Lawrence, is continued in a similar direction as far as the Eastern Boundary of Illinois, in the valleys of the Maumee and the Wabash. The above road will be the natural prolongation of the greatest route of internal commerce in the United States; a commerce which is increasing above all precedent, and in a much greater ratio than all the works provided for its accommodation. The commerce of the west naturally seeks this route as the cheapest and most convenient one to the great markets of the country. For the region traversed by the above road, Toledo is the salient point on the Lake, and the proposed road, the most convenient outlet.

The connections formed by the above line will be of the most favorable character. Resting upon the Western shore of Lake Erie, it will have a choice of routes east, upon either side of the Lake, upon the completion of the short line from Toledo to Detroit. Toledo is soon to be the point of concentration of a number of very important roads, two of which, the Michigan Southern and the Toledo and Cleveland are already in operation. Others of secondary importance only to the above are in progress; the straight line to Chicago, under the auspices of the Michigan Southern and Indiana Northern companies, and the Dayton and Michigan road, which is to form the direct route to Cincinnati.

On leaving Toledo, the next most important point in the line is Fort Wayne, at which is also to be the concentration of numerous and important roads, viz, the Ohio and Indiana, the Fort Wayne and Chicago, and the Fort Wayne and Southern roads, all in progress of construction. Other important lines of Railroad are also proposed, terminating at this place. On entering the valley of the Wabash, the Peru and Indianapolis Railroad will connect the above line with Indianapolis, and will constitute an important tributary. At Logans-

port, still farther down the river, a connection will be formed with the Cincinnati, Logansport and Chicago Railroad, the Southern or Cincinnati division of which will be completed early next summer. At Logansport a road is also in progress to the Mississippi River by way of Peoria, the whole line being under contract and a portion of its western division in operation. On reaching Lafayette, the most important town in northern Indiana, and one of the most so in the State, lying some 40 miles below Logansport, several important lines of Railroad are intersected, among which are the Lafayette and Indianapolis, and New Albany and Salem Railroad, both of which are in operation the latter (except a short unfinished link,) extending from the Ohio River to Lake Michigan, and being one of the longest lines of Railroad in the west. At this point a Railroad is about being commenced in direction of Keokuk on the Mississippi River. At Lafayette, probably, a connection will be formed with a Railroad following down the Wabash River to Evansville, a very important town on the Ohio. A considerable portion of the last named line is already in operation, and the remainder making rapid progress. From Evansville this road will be extended to Nashville, and to other Southern cities, by roads already in active progress in Kentucky and Tennessee. At Danville, the proposed connection with the Great Western of Illinois has already been alluded to. The last named road may be properly regarded as a legitimate extension of the former rather than in the light of a mere tributary route. It must however prove a most valuable auxiliary. From Danville its main extension to St. Louis has already been sufficiently described. Of the numerous tributaries to the main trunk between Toledo and St. Louis the above road may be said to be the axis. To a certain extent, it is the centre of a system, all the members of which materially assist and benefit each other.

The great portion of the country traversed by the above road cannot be exceeded in the west for fertility, or extent of production. The excellence of the soil of the valley of the Wabash is almost a proverb. It is the great corn growing portion of the west. Lafayette ships more of this article than any other interior port in the United States. Toledo ships vastly more than any other Lake port. There are no better portions of the west than the valley of the Wabash and the sections of country traversed by the Great Western and Terre Haute and Alton Railroad in Illinois. The productions of which naturally seek the eastern market through the Lakes by way of Toledo.

The estimated cost of this portion of the road (249 miles) from Toledo to Danville, which is being built by the above companies is \$6,000,000. Of this sum \$3,000,000 has been provided by Stock subscriptions, and 60 per cent. of the amount paid up. The larger part of the Stock was taken by Eastern capitalists. The balance, necessary to complete the road, will be raised by the sale of bonds to the amount of \$3,000,000, which constitute a first and only incumbrance upon the road. The entire work of construction was let to Boody, Ross & Co., and will probably be completed by the 1st of July 1855. The high reputation which this firm has long enjoyed, both for energy, and as possessing abundant means, will be a satisfactory guaranty with all who know them, that the road

will be completed within the time stipulated, when the public may expect to see the shortest practicable line of Railroad from the Lakes to St. Louis in operation.

Milwaukee and Mississippi Railroad.

The fifth annual report of the President and Directors of this company has been issued, showing the progress and operations of the work during the past year, and its general condition and prospects at the present time.

The report exhibits, in a manner calculated to afford great encouragement to the holders of the stock and securities of the road, the large increase and amount of business done during the past year.

The earnings from all sources have been as follows:

January.....	\$10,801 25
February.....	8,930 86
March.....	8,143 35
April.....	8,914 38
May.....	13,967 90
June.....	18,585 24
July.....	16,177 00
August.....	18,276 16
September.....	35,297 43
October.....	41,597 24
November.....	27,050 17
December.....	19,147 50
	<hr/>
	\$226,918 48

The total earnings embrace a sum of about \$5,500 charged for transportation of materials for the purposes of the road, by which the absolute earnings are reduced to \$221,455 42. The expenses for all purposes chargeable to the operation of the road, for the same time, were \$87,115 48, or less than 40 per cent. of the earnings. This sum, charged as expenses, includes \$6,000 worth of materials on hand, besides all the expenses of transportation of materials for ballasting and construction.

This result, attained in the operation of an interior road, but partially opened, and in point of operating arrangements, imperfectly developed; occupying besides an isolated position, unconnected with any of the roads which will ultimately open to it the upper portion of the State, nor with those which will invite a lateral business from Northern Illinois, shows the value of the enterprise and the able and economical manner in which it has been established and conducted. The road has been built in the most permanent manner, and its location has rendered it capable of economical operation, inasmuch as it has no grades exceeding 34 feet per mile. A large part of the road in operation has been ballasted 18 inches in depth during the past year, while the equipment and fixtures have been maintained in the best order.

The earnings of the road are \$78,635 34 from passengers and \$142,820 28 from freights. Of the gross earnings of \$221,455 42, there were earned \$157,545 50 in the six months from July 1st to December 31st. The expenses for the last half-year, (including taxes paid for the whole year, sufficient to offset the heavy purchases of wood during the first half-year,) were \$57,931 03, or 33 per cent. of the earnings. Out of the whole earnings for the year a stock dividend of 10 per cent. has been declared.

The length of the road in use during this period

was about 66 miles, extending west of Milwaukee to Rock River. 14 miles have been opened on the 2d of January to Stoughton, 16 miles from Madison. Between Stoughton and Madison the work is so far advanced as not to require over \$20,000, nor a period of time extending beyond the opening of this spring's business, to complete it.

The cost of construction and equipment of the road, including all the outlay on those portions of the road not brought into use, has not exceeded \$1,850,000.

It will thus be seen that this road, the original enterprise of a great and rapidly advancing State, has already proved its resources of business and income, while the results are such as to warrant the strongest congratulations on the part of those who have projected and executed the work. There is no road in the West that has a better field before it for a great traffic, few which have created more business by their construction, while only those roads which have combined the best management with the best construction and equipment have approached it in the safety, security and despatch of their operation.

The report of the Directors bears evidence of the energy with which the work has been urged forward amid the most vexatious difficulties and disappointments. The contractors, to whom the work from Rock River to Madison was let in April last, have failed to complete their contract in the time agreed. Although the Directors admit the difficulty of procuring an abundant supply of hands, they do not withhold their regret at the delay which could have been avoided by an effort corresponding with the difficulty.

On the 24th of July last a contract was entered into with A. L. Catlin, Esq., for the construction of the road from Rock River to the Mississippi, a distance of about 125 miles, and embracing the work then in progress in the hands of other contractors. The terms stipulated in this contract covered a large sum for the amount of work to be done, but fixed the opening of the road at an early day. It was expected that this contract would secure the completion of the entire line to the Mississippi by the 1st of January next. The difficulty of procuring materials in season compelled the contractor to ask for a greater time than was stipulated, upon which the contract was cancelled by agreement, and the company assumed the construction of the work on their own account.

In the mean time a considerable portion of the work west of Madison has been put in progress, and surveys have been made in the Wisconsin river valley to Prairie du Chien. These show a route remarkably favorable for the economical construction of a railroad, embracing long stretches of straight line, with no grades exceeding 22 feet. A final report on the location of this part of the road will be published at an early day.

Permanent and capacious buildings have been erected within the past year at Milwaukee, over 45 miles of fence built, and permanent and first class buildings put up at Fulton, Stoughton, and Madison.

The financial basis of the Milwaukee and Mississippi Railroad is of the best description. The entire cost of the road up to January 1st is \$1,846,897 46. The authorized capital is \$3,000,000

—of which \$1,542,200 have been subscribed, and \$1,030,880 76 have been paid, as follows:

	Subscribed.	Paid.
City of Milwaukee....	\$250,000	\$245,300
Individuals.....	1,092,200	575,530
A. L. Catlin.....	200,000	200,000

\$1,542,200 \$1,030,880

Of the subscriptions paid, the following statement exhibits the manner of payment:

Milwaukee city, cash and bonds....	\$245,300
Individuals, mortgages.....	333,800
" cash.....	241,780
A. L. Catlin, contractor, charged in account.....	200,000

\$1,030,880

The bonds issued by the company amount to \$1,250,000 and bear an interest of 8 per cent. besides being convertible into stock at pleasure of the holder at any time within 5 years of their date.

The bonds of the company have been issued and disposed of as follows:—The first 20½ miles of the road, from Milwaukee to Waukesha, was originally mortgaged to secure the payment of \$74,000 bonds, bearing a rate of 10 per cent. interest. In June, 1852, \$600,000 of bonds were issued, secured by a second mortgage on that part of the road from Milwaukee to Waukesha, and a first and only mortgage on the rest of the distance to the Rock River, a distance of nearly 50 miles, or in all of about 70 miles. The bonds bear 8 per cent. interest and mature in 1862.

Of the second issue \$74,000 were deposited in trust with George S. Coe, Esq., of New York, for the redemption and cancellation of the first issue of bonds, so that a mortgage of only \$600,000 should rest upon the whole road to the Rock River.

On the 28th of May last an issue was made of \$650,000 of bonds, bearing 8 per cent. interest, and maturing in 1863. These were secured by a first mortgage on the Janesville branch, costing \$100,000, also upon 64 miles of the road from Rock River to Wisconsin River; besides a mortgage on the road from Milwaukee to the Rock River, subject to the first mortgage of \$600,000, issued last year.

By the banking laws of Wisconsin the first issue of these bonds are already employed as a basis for banking within the State, their application to this purpose being under but mild restrictions, such as present the least obstacles to their use.

The high character of these securities for safe and profitable investment may be estimated from their claim on a road costing, by the time the whole issue of bonds shall have been sold, at least twice their amount. A road which, incomplete and without connections, has earned in the last year a nett dividend of 10 per cent. above all expenses; creating a business which increases faster than the extension of the road, or in a higher ratio than the capital expended; and a road which commands productive business resources, and sustains a relation to the prospective trade and commerce of the Great West, such as is surpassed by but few of the other roads in that part of the country.

The route of the Milwaukee and Mississippi road follows a general eastern and western direction, on the 43d parallel of latitude, and connects Lake Michigan with the Mississippi at Prairie du Chien. It occupies the natural route across the

State of Wisconsin, connecting in a general direct course those points which have been found most favorable for settlement and for the concentration of the trade of the State. It lies also for two-thirds of its distance in the valleys of important rivers, commanding the business attracted to their banks, and protected from competition by the elevated ridges and undulating back country on each side. The valley of the Wisconsin bears the same controlling relation to that portion of the State as does the Mohawk river to New York, or the Connecticut river to New England.

The resources to be developed upon this route are more diversified, and for extent and value hardly surpassed by those possessed by any other State in the West. The following facts, touching upon this point, have been already given in the Journal as the result of our own inquiry and immediate observation:

"In 1840 the population of Wisconsin was only 30,000 souls. In 1850 it reached 304,000. At the present time the number of inhabitants cannot fall short of 450,000. The increase for the past ten years has been just about 400,000. As we were desirous of seeing what ten years had achieved in what, prior to that period, had been an unbroken and uncultivated waste, we passed over the principal line of railroad in the State, the Milwaukee and Mississippi, and devoted a day to a pretty critical study of the city of Milwaukee. In no part of the West did we see a better settled, a better cultivated, or a more productive country; and no road groaning under the press of a larger business in freights than the above named. Wisconsin is one of the most attractive, because it is one of the best wooded of the *Prairie States*. It presents a constant succession of small prairie, and wooded knolls, enabling nearly every farmer to locate in the vicinity of timber and good water, with prairies spread out before him of the easiest cultivation and almost inexhaustible fertility. With such advantages ten years have been sufficient for the creation of a great and prosperous State, filled with large and flourishing towns, and whose people present every evidence of wealth and extraordinary prosperity. Milwaukee, at the lowest estimate, contains thirty thousand inhabitants, and is one of the best built and most beautiful towns in the United States, with a very large and rapidly increasing commerce. Although the area of the State is very large, nearly the entire population of it is embraced in that portion of it south and east of the Wisconsin and Fox rivers, a territory of less than ten thousand square miles."

The route of the road west of Madison intersects extensive beds of lead ore, from which large quantities are carried by teams to the western terminus of the road, and often considerable amounts are carried for 100 to 120 miles over inferior roads to Milwaukee for shipment.

The Wisconsin river extends about 300 miles above the point where the railroad first approaches it, into one of the most extensive pine-timber regions in the West. Large quantities of pine lumber are annually sent down in rafts to various points on the Mississippi. This lumber can be immediately opened by the Milwaukee and Mississippi road to the Milwaukee and Chicago trade. The lumber brought over the New York and Erie road to New York and other eastern markets, (over 80 millions in 1853,) is hauled a far greater distance than from the Wisconsin River to Milwaukee.

Dane county, of which Madison is the center, contains 1,235 square miles, well watered by the Cat-fish, Sugar and Black Earth rivers, and the "four lakes." In 1835 Dane county had but one

civilized inhabitant. Now it contains nearly 25,000. The Milwaukee and Mississippi road was not extended into Dane county until January last.

But altogether apart from the local resources of the Milwaukee and Mississippi road, it sustains a relation to the trade of the West which must place it among the principal highways of national commerce. It is in the axis of a direct line touching Prairie du Chien, Milwaukee, Grand Haven, Detroit, Buffalo and Albany. On the Mississippi it connects with 1800 miles of lower navigation, and 800 more on the upper tributaries; on the East it reaches 1000 miles of lake navigation, with but 60 miles of which it will also connect with the Oakland and Ottawa, Great Western, Buffalo and Brantford, New York Central, Hudson River, Western, and New York and Erie roads. Across Lake Michigan a line of steamers has been offered to be established and kept running 336 days in the year, and to make such connections as to place Milwaukee and Detroit but ten hours apart.

Completed, as these connections soon will be, and united laterally with interior roads, the Milwaukee and Mississippi will become an established member of the great system of western improvements, and as such will share in their general success. Its own peculiar advantages, however, in which must be included its direct route, favorable gradient and permanent construction; its natural protections against competition, and its abundant and available productive resources, must insure to it a prosperity not always attained even with western roads.

Ohio and Indiana Railroad.

We have received the report of the President and Directors of this road, read at the annual meeting of the stockholders, held at Bucyrus, Ohio, Jan'y 11th. The following extracts exhibit the progress during the year, as well as the present condition of the work.

Notwithstanding many embarrassments the road was opened from Crestline to Bucyrus, a distance of 12 miles, on the 26th of August last, and the cars are now running to the Mad River road, a distance of 40 miles. Owing to unavoidable delay in the early shipment of iron, it has been impossible to get it all on the line of your road previous to the close of navigation. This fact alone will prevent the possibility of our getting the iron laid all the way through to Fort Wayne the present winter. But with a favorable spring, we can certainly reach that point as early as June or July next. 12,000 tons of iron (the estimated quantity to complete your road,) was purchased in Wales last February, under contracts that all should be shipped by the first of July last. However, to guard more effectually against all contingencies in relation to an early delivery of iron the past season, it was deemed advisable to purchase an additional amount of 1,000 tons in New York for early shipment, before we could possibly receive any from abroad, and to prevent any delay in the construction of the work in case of a loss in the shipment of said iron. The wisdom and policy of this provision have been highly exemplified, from the fact that we have lost two cargoes upon the ocean, one sunk in the St. Lawrence River, one in Lake Ontario, and a portion of a cargo thrown overboard on Lake Erie—all of which, however, was fully covered by insurance, enabling the Company to replace the same upon the opening of navigation in the spring.

Our iron is heavier and better than we at first contracted for, weighing about 60 lbs. to the lineal yard, and taking nearly 4 tons to the mile more

than the original estimate. This will cause a deficiency of a few hundred tons necessary to complete the entire road.

The most of the iron has arrived at the ports of Cleveland, Sandusky and Toledo, and from the two former can be brought on the line of the road, as it may be needed the present winter; but shall have to wait the opening of navigation in order to move what has been shipped to the latter place. A contract was made last February, with John Souther, Esq., of Boston, for the construction of 8 engines for your road, 5 of which have already been received, and it gives us satisfaction to say that they perform much better than was at first anticipated. Another contract has also been made with Messrs. Ridgway & Kimball, of Columbus, Ohio, for some 150 cars of different kinds. Many of these have been employed in the service of the Company since August last, and we are happy to say, give very good satisfaction. 60 gravel cars have been purchased of Messrs. C. Cooper & Co., of Mount Vernon, all of which have been received and placed on the road. This small amount of rolling machinery is only calculated for the first opening of your road, and is in no wise adequate to the amount of business that will be soon thrown upon it. Large accessions must be immediately added thereto. There are two things that will materially increase the originally estimated cost of your road—one is, the sudden advance in the price of iron previous to our purchase being made, and another is, the great increase in the price of labor. Nevertheless, we have no hesitation in saying that the cost per mile (fully equipped and ballasted,) will fall below \$20,000, which will be much less than most of the Western roads built during the same period. Admitting that the entire work, when fully completed and amply equipped, should cost \$2,500,000, the amount of business now thrown upon that portion of it which is in running order, abundantly proves that the earnings of the whole line will amount to, if not exceed, \$500,000 per annum. Allowing 50 per cent. of this to cover running expenses, the stockholders, under ordinary circumstances, would have 10 per cent. interest, in the shape of dividends upon the capital invested.

We are largely indebted to our Eastern friends for their timely assistance in making up the stock of this Company. The Pennsylvania Railroad Co. have taken \$300,000; the Ohio and Pennsylvania Railroad Company, \$100,000, and other New York friends, \$25,000 stock in our road—all of which has proved of the utmost importance to us in getting the enterprise so nearly accomplished. So far, \$1,000,000 of our first mortgage bonds are all the Company securities that have yet been disposed of.

For the purpose of trimming up, lining, surfacing, ballasting, putting the whole road in complete running order, and largely increasing the rolling machinery upon it, the Board have ordered an issue and sale of a sufficient amount of Income Bonds, not exceeding \$500,000. These bonds run twenty years, are convertible into the stock of the Company at any time, and are also secured by a second mortgage upon the road, drawing 7 per cent. interest—interest and principal payable in New York.

Arrangements have already been made, whereby a portion of these securities will be applied in the payment of contracts heretofore made at par. So that your Board of Directors are of opinion that about \$400,000 of those Income Bonds will constitute the only additional securities necessary to be sold in order to complete the entire line of road.

A very satisfactory arrangement has been made with the Fort Wayne and Chicago Company, for a union Depot, and Canal connection at the city of Fort Wayne. Also, a very desirable connection, in regard to depot buildings, depot grounds, and general business arrangements, has been made with the Lake Erie, Wabash & St. Louis Company, at the same place.

Your interest as stockholders in this company seemed to positively require the consummation of

this contract at an early day, in order to secure a continuous line of road from Philadelphia via Pittsburgh to Chicago, and from Pittsburgh to the latter place, of an unbroken gauge.

It is of the utmost importance to the speedy success of the work of the Company, that all the local stock should be collected as rapidly as possible. Every stockholder must be at once satisfied, that an enterprise of such magnitude cannot be successfully prosecuted without bringing into requisition every dollar of reliable subscription. We trust therefore, that every one, who has not made payments in full upon their stock, will feel disposed to render the Company all the assistance they have agreed to, by closing up their stock accounts without any further or unnecessary delay.

The financial condition of the company on the first of January was as follows.

Debtor.	
Capital stock, (paid) \$1,169,795 21	
do. (unpaid) 88,004 79	
	\$1,257,800 00
Mortgage bonds, (sold).....	1,000,000 00
Income bonds (unsold).....	500,000 00
Receipts from other sources	87,354 08
	\$2,845,154 08
Creditor.	
Capital stock, (uncollected).....	\$88,004 79
Income bonds, (unsold).....	500,000 00
Bonds Ohio and Pennsylvania Railroad Company	25,000 00
Cash in hands of Treasurer and agents	137,590 79
Engineer service.....	12,293 04
Taxes and expenses.....	9,071 20
Bills receivable, including township bonds	16,775 07
Construction, repairs, depots, and right of way.....	816,588 65
Engines, cars and expenses of same ..	61,866 96
Real estate taken on stock subscription	19,979 15
Iron, duties and transportation	891,696 10
Interest paid on county and mortgage bonds	52,638 33
Stock Fort Wayne and Chicago Railroad Company.....	213,650 00
	\$2,845,154 08

The officers for the ensuing year are as follows:

Directors—William Robinson, Jr., Pittsburgh, Pa. Willis Meriman, P. S. Marshall, Bucyrus, Ohio. Robert McKelly, Upper Sandusky, Ohio. T. K. Jacobs, Lima, Ohio. Samuel Hanna, Pliny Hoagland, Fort Wayne, Ia.
President—Willis Meriman.
Secretary—C. W. Butterfield.
Treasurer—George Quinby.
Chief Engineer and Superintendent—J. R. Straughan.

City Property in Ohio.

The Cleveland Plain Dealer publishes a list of the cities and towns in Ohio, the estimated valuation for 1853, of whose real estate (town lots and buildings inclusive) exceeds \$300,000. The principal places on the list are as follows:

Cleveland.....	\$13,723,411
Columbus.....	6,934,116
Ohio City.....	2,974,788
Sandusky.....	1,862,966
Cincinnati.....	56,265,430
Norwalk.....	342,090
Toledo.....	1,549,190
Dayton.....	5,309,928
Circleville.....	711,810
Tiffin.....	535,060
Canton.....	354,523
Massillon.....	497,735
Akron.....	613,110
Warren.....	346,721
Wooster.....	436,384

Indianapolis and Bellefontaine Railroad.

The statement of the earnings and condition of the above Railroad for the six months ending December 31, 1853, has just been published. We make the following extracts from the statement, which will show a very satisfactory result for the last half year.

"During the month of June last, the Bellefontaine and Indiana road was completed to Union, thus making the connection between Indianapolis and Cleveland, and, in fact, between Terre Haute and Lafayette, on the Wabash, and the cities of New York, Boston, Philadelphia, and Baltimore. It required time and expense to get into practical operation through passenger and freight arrangements, and to bring the new line to public attention. Two other lines were, in the mean time, opened between Indianapolis and Cincinnati, thus dividing the travel and traffic between those points. Our receipts for July were but \$9,000. For December they are \$22,800, and steadily increasing on our through business. Owing to the break of gauge at Muncie, our freight traffic is made more expensive to us, and our freight receipts for December have been seriously impaired by the conduct of the band of rioters at Erie, who, headed by city and county officers, and 'sympathised' with by the State Executive, have not only set at defiance, but trampled upon all law, wantonly destroyed the property of the Railroad companies, and interrupted the travel and trade of the country. We earnestly hope, not only for our own interests, but for the character of the country, that this state of things will soon be brought to an end, and that no other portion of our people will hereafter envy, or seek to emulate the spirit that has actuated, or the lawless and infamous acts that have been committed by the people of Erie.

Our break of gauge at Muncie continues to rest under the preliminary injunction granted by Judge McLean. We are satisfied of our legal rights in the premises, and unless otherwise relieved, shall press the final decision of the cause, by all proper means, to the higher legal tribunals. In the meantime we are not without hope that an amicable adjustment of the matter may yet be made.

The earnings of the road for the last six months are exhibited by the following statement:

Receipts from July 1st to Dec. 31st, 1853.	
From Passengers.....	\$73,398 85
„ Freight	38,790 90
„ Mails, Expresses, and Extra Baggage	5,828 68
Total.....	\$118,018 43
Expenses.	
Running Expenses.....	\$39,846 99
Interest on \$661,000 Foreign Bonds at 7 per cent.	23,130 00
Interest on \$44,896 Domestic Bonds, at 10 per cent.	4,489 60
	\$67,466 59

Net earnings..... \$50,551 84
Dividends of 4 per cent. on \$787,975 of stock..... 31,519 00

Surplus..... \$19,032 84

The stockholders will observe that the earnings would have borne a larger dividend than 4 per cent.; but the Board have well considered the future policy of the Company, and hold it advisable, while paying the stockholders a handsome equivalent upon the investment, to accumulate a surplus fund that shall be available for future emergencies, and at all times, the property of the stockholders, should no extreme necessity require its use. Such a policy they hold to be better for the Company in its future operations, and more advantageous for the stockholders.

The result of the last six months have more than equalled our expectations. Few roads in

their opening season have done so well. We confidently anticipate a very large increase of business during the coming year. At present the whole line is without a Western outlet beyond Terre Haute. During the next year it is considered certain that the Ohio and Mississippi railroad will be completed from St. Louis to Vincennes, and also that the road will be in working order from Vincennes to Terre Haute. This will constitute the first connection between Terre Haute and St. Louis. Within the next two years one or two additional and more direct lines will be opened between those points. Connections have also been made, through the Madison and Jeffersonville roads, with Madison and Louisville, and we confidently look forward to an increase of travel and trade from that quarter.

The road has been worked very efficiently and economically during the six months. For this the Superintendent, Mr. Nottingham, is entitled to great credit.

The Board cordially congratulate the stockholders upon the success of the work so strongly manifested at its very commencement, and assure them that under good management, and by steady adherence to the sound policy of fostering and encouraging its trade, and not straining or overtasking its earnings by extraordinary dividends, until it shall have acquired strength, it can be made, and will become, one of the best paying roads in the West. It is a link in the great chain of connection between the Eastern cities and the Mississippi river. It has been well and cheaply built. It must be a part of the great traveled line between the East and the West. Its grades are easy and its lines straight, so that it can be worked with speed and economy. When its promised connections are all made, no estimates now formed of its earnings and usefulness will equal the reality.

The subjoined note from the Superintendent exhibits a condensed statement of the sources of receipts and working operations of the road during the six months embraced in this Report.

By order of the Board of Directors,
JOHN BROUGH, President.

SUPERINTENDENT'S STATEMENT.

Indianapolis and Bellefontaine R. R. Co. }
Indianapolis, January 2d, 1854. }

John Brough, Esq., Pres't.—Sir:—Herewith I hand you statement showing the earnings of the road, from various sources, for the six months ending Jan. 1, 1854:

Months.	Passengers.	Freight.	Mails.	Express.	Extra Baggage.
July..	\$8,054 10	\$4,671 99	\$700	.....	.....
Aug...	16,060 40	3,374 05	700	\$229 47	5 60
Sept...	14,427 49	7,074 89	700	306 01	24 90
Oct. ...	13,381 31	7,825 20	700	312 51	24 65
Nov...	10,803 41	7,657 70	700	105 83	....
Dec. ...	10,692 04	11,227 07	700	305 06	14 65

Totals. 73,908 85 38,790 90 4,200 1,558 95 69 80

Expenses in operating the road for the above time:

July.....	\$2,178 87
August.....	7,637 71
September.....	6,461 13
October.....	6,606 41
November.....	7,615 00
December.....	9,347 87

Total.....\$39,846 90

Whole number of passengers carried during the above time..... 47,232

Number of miles run by passenger cars... 110,068

" " " " baggage cars.... 33,696

" " " " passenger engines 48,570

" " " " freight engines .. 20,707

" " " " gravel engines... 6,359

" " " " wood engines.... 1,198

There has been expended during the same time, for ballasting the road and constructing new build-

ings along the line, chargeable to construction account, \$22,419 49.

Included in the above, there has been an Eating House erected at Union, half of which belongs to this Company; a passenger house and wood shed erected at Muncie; a wood shed erected at Pendleton and one at Oakland; also, four wells have been dug and houses built to protect them; a large freight house has been erected at Indianapolis; also, a machine shop and engine house, both of the latter nearly completed. A portion of the above expenses have been appropriated to the latter buildings.

The Company have on hand at this date the following rolling stock:

Locomotive Engines.

- 3 first class 4 feet 10 inches gauge.
- 4 " " 4 feet 8½ inches gauge.
- 2 second class 4 feet 8½ inches gauge.
- 1 Pony Engine 4 feet 8½ inches gauge.

Passenger Cars.

- 9 first class cars.
- 3 " " with 9 months use.
- 3 new baggage and mail cars.
- 1 baggage and mail car, half worn.

Freight Cars.

- 36 box freight cars
- 25 stock cattle cars.
- 25 flat cars.
- 30 new gravel cars.
- 45 old gravel cars.
- 12 hand cars.

1,500 cords of wood on the road, measured and paid for.

J. NOTTINGHAM, Sup't.

Indiana Central Railroad.

The Second annual report of the President and Directors of this Company, has been published.—

With slight abridgement we have transferred it to our columns as follows—

OFFICE INDIANA CENTRAL RAILWAY CO., }
Centreville, Dec. 31, 1853. }

To the Stockholders of the Indiana Central Railway Company:

It is with great satisfaction that we avail ourselves of the close of the year to report to you the present condition and prospects of the highly important work entrusted to our charge.

The summer and fall of 1852 and the succeeding winter proved almost unprecedented for the quantity of rain that fell, which greatly retarded the grading and preparation of our road bed, so that we were only able to make a bad commencement of track-laying at the west end of our line during that year, and the same cause delayed the completion of the Dayton and Western Railway to the State line until near the first of March last, so that we were only able to commence track-laying at the eastern end of our line early in that month, and the breaking of the Whitewater Valley Canal in December, 1852, prevented our getting rails delivered at Cambridge city, where we had ten miles of grading, bridging and culverting nearly ready for laying the rails. So that nearly the whole of our track-laying and much of our heaviest grading was necessarily thrown over into this year. Notwithstanding all these drawbacks, early in April we announced that we would have our track all down by the first of October, now past, though we could find few who would credit the statement.— But by unremitting attention and exertions we were able to run a passenger train through our whole line on the 8th day of October last, coming within a week of the time set six months before, for having the entire track down, since which time we have been running a passenger train each way daily.

We have made a favorable arrangement with the Dayton and Western Railway Company, which went into operation on the 11th day of October last, by which our Company has and will continue to run the entire line between Indianapolis and Dayton, 108 miles, without any change of cars.— The distance is just about a fair one for a single engine and set of hands to run without stoppage,

to examine and clean up the engine and cars, and make any little repairs that may be needed, and it is much more economical to both Companies than for each to run its own train over its own line only, and making the two lines practically what they must become, one in interest in the Central through route between the East and the West.

During the past year we have been admitted to an equal interest in "The Indianapolis Union Railway Company," in common with four other railway companies who are interested in the Union Passenger Station house at Indianapolis, recently completed, and in the Union Railway track, over a mile in length through Indianapolis, and connecting the tracks of seven railways completed and concentrating at that city, to which track six railway companies have contributed and are equally interested in it, and the seventh company has recently been admitted to participate in the use of the track and to receive and discharge passengers at the passenger house. The advantages of this interest and connection are so manifest that they are well worth a much larger sum than the cost to our Company. Our trains arrive at Indianapolis before the departure of the trains for Terre Haute, and also for Lafayette, Michigan City and Chicago, and by a circuitous route connecting us with the interior of Illinois and St. Louis by Railway, except some twenty miles by steamboat between Alton and St. Louis. The connection with the present lines will always be very valuable to us. But doubtless within the present year we shall have much more direct railway connections with Central Illinois, St. Louis and Missouri, by means of the Terre Haute and Richmond Railroad, and the Alton and Terre Haute Railroad, the latter of which will doubtless be completed within the year, and afford a very direct line to St. Louis. We shall also have a very valuable connection with that city by means of the Ohio and Mississippi railway, which will be completed within the year from St. Louis to Vincennes and then by the Evansville, Terre Haute and Crawfordsville Railway, which will most likely be completed to Terre Haute within the year. That part of the line between Evansville and Vincennes is already completed and in running order, and we may always expect to receive a fair contribution of travel from this line.

We have a most valuable connection with Cincinnati and intermediate points by our connection at Richmond with the Richmond and Miami, Eaton and Hamilton, and Cincinnati, Hamilton and Dayton Railways, affording the best railway connection between the large, populous and wealthy cities of Cincinnati and Indianapolis, and through the pleasantest, best improved and most populous country of any route constructed, or projected between those very important points. And from the attractiveness of the route, the large number of towns and cities it runs through and connects, and the high state of cultivation of the country and the consequent business that must always be done along the line, it must always receive a liberal proportion of the travel between those cities as well as share largely in the through transportation of freight between those points, and the way travel and business that we must receive from those lines, and return, must be an enduring source of profit to ours as well as their lines.

By our connection with the Dayton and Western Railway at the State line, we have the shortest and only direct connection between Indianapolis and Dayton, 108 miles apart, and through a country unrivalled in the beautiful west for its natural beauty, its high state of agricultural improvement, and its numerous, improving, and prosperous cities and villages.

The cities of Indianapolis and Dayton, removed from any rivalry by their distance apart, and yet, when our track shall have been well settled, and adjusted within three hours travel of each other, present a spectacle not shown by any other two cities of the West. Each surrounded by a large extent of the very best lands in the west, in a high state of improvement, and each presenting most attractive features by the magnificent scale on which they are laid out. With their broad and

Philadelphia and Westchester Direct R. R.
The officers elected at Media on the 9th inst., are as follows:

President—John Rutter.
Treasurer—William F. Griffith.
Secretary—Samuel B. Thomas.
Managers—James M. Wilcox, Charles Kelly, H. Jones Brooke, J. Lacey Darlington, Wilmer Worthington, Lewis Brinton, Samuel J. Sharpless, George Presbury, John R. Wilmer.
The Chief Engineer is J. E. Sickels, and the resident engineer at Media, Joseph S. Gitt.

Cleveland and Medina Railroad.

This road commences at Grafton upon the line of the C. C. and C. R. R., passing directly through the townships of York, Medina, Lafayette and Guilford, and the towns of Medina and Seville. From Seville the road continues through the rich and fertile valley of the Chippewa and South-easterly Branch in Wayne county, to Dalton and Massillon.

During the past year the Directors have pushed forward the work upon the road as rapidly as the means at their command would permit. Nearly twenty miles of the road are graded, and much of the masonry finished. With the necessary means the Directors would have the entire road in running order by Sept. 1st, 1855.

The South-Western Railroad.

We have been favored with the following Comparative Statement of the receipts of this road. We take pleasure in placing it before our readers, many of whom are stockholders. The road has always paid dividends at the rate of 8 per centum per annum, and there can be no doubt (seeing the great increase of business since the 1st of August, the last dividend) of the ability of the Company to continue the same good rate. We know of no Stock which offers to capitalists, a better opportunity for investment.

Comparative Statement of the Business of the South-Western Railroad, for the years 1852 and 1853.

1852.	1853.	Increase.
Aug...\$6,151 94	Aug...\$11,081 52	\$4,929 58
Sept...11,696 62	Sept...16,846 62	5,150 00
Oct...16,742 14	Oct...20,497 53	3,755 39
Nov...12,719 65	Nov...23,373 83	10,654 18
Dec. to the 22. 7,490 36	Dec. to the 22. 19,308 06	11,812 70
\$54,800 71	\$91,102 56	36,301 85

Sav. News.

Dauphin and Susquehanna Railroad.

This road, according to an official announcement in to-day's *Journal*, will be opened on the 1st of February next, thus making among many other conveniences, a direct railway communication between this place and Harrisburgh. We are indebted to a friend for the following information respecting the number of miles of this road in and out of Schuylkill County, distances between different places on the line, &c.

The whole length of the Dauphin Co.'s Road is 53½ miles, of which 25 miles are laid in Schuylkill County, 26 in Dauphin and Lebanon, and a branch in Dauphin, 2½ miles, to connect with the Pennsylvania Railroad. From Auburn, the Eastern terminus of the road, on the Reading line, to the town of Dauphin, is 51 miles—to Harrisburg, 59; making the entire distance from Pottsville to Harrisburg, via the Dauphin Road, 70 miles.

The amount of Coal shipped by this Company in 1853, all by the Susquehanna, was 28,917 tons. —*Pottsville Journal.*

Railway Investments in New England.

The following table prepared by J. G. Martin, Esq., of Boston, shows the transactions during 1853 in the stocks of the principal roads controlled in Boston.

Railroads.	Par.	High-est Sales.	Low-est Sales.	Shares sold in 1853.	1853. Jan'y 1st.	1854. Jan'y 2d.	Div'ds. 1853.
Boston and Lowell.....	100	106	91¾	205	106	94	3 3
Boston and Maine.....	100	109¼	102	5,296	106	102	4 4
Boston and Providence.....	100	92½	85	2,810	90	85	3 3½
Boston and Worcester.....	100	105	100½	4,021	103	101	3½ 3½
Cheshire (preferred).....	100	58¾	40	984	56	40	2 2
Concord.....	50	57	51¾	1,776	55	52½	4 4
Concord and Montreal.....	100	45¼	30	1,494	44	33	0 0
Connecticut River.....	100	62½	52½	177	60½	54	2 2
Eastern.....	100	98¾	90	1,850	95¾	88¼	3 3
Fall River.....	100	107¾	104	263	104	102	4 4
Fitchburg.....	100	104½	93	3,337	102	94	3 3
Grand Junction.....	100	65	30	310	30	55	0 0
Manchester and Lawrence.....	100	101½	88	1,168	101	88½	3½ 3½
Michigan Central.....	100	118	104	2,767	103½	101	0 8
Nashua and Lowell.....	100	112	107	50	108	106	4 4
New York Central.....	100	115¾	113½	51	113½	0	0 0
Norfolk County.....	100	69	50	1,441	56	63	0 0
Northern (N. H.).....	100	65	44¾	4,846	59¾	52	2½ 2½
Norwich and Worcester.....	100	58¾	51¼	725	53	60	2 2
Ogdensburg.....	50	31½	12½	133,868	31	16½	0 0
Old Colony.....	100	95	77	3,809	80	91	0 0
Passumpsic.....	100	51	33¾	1,370	50½	33	0 0
Portland and Saco.....	100	102¼	96	602	99½	97	3 3
Reading.....	50	43½	43	165	49	39½	3 3
Rutland (old).....	100	42	10	2,643	38	11½	0 0
Rutland preferred 8's.....	100	94½	40	422	90	40	4 4
Rutland preferred 6's.....	100	70	15	169	64½	23	3 0
South Shore.....	25	10¼	8¼	1,914	9	8½	0 0
Sullivan.....	100	21	10	678	11	15	0 0
Vermont Central.....	50	21½	12½	510,833	18¾	13½	0 0
Vermont and Canada.....	100	107¾	99	1,969	105	99	4 4
Vermont and Massachusetts.....	100	22	16¾	21,241	21½	18¾	0 0
Wilmington.....	50	40¾	35½	25,370	37½	39½	2 3
Western.....	100	102½	97	4,470	101½	96	3½ 3½
Worcester and Nashua.....	100	63	54	1,551	59	58½	2½ 2½

1853.

Railroad Bonds.	High-est Sales.	Low-est Sales.	Amount sold in 1853.	1853. Jan'y 1st.	1854. Jan'y 2d.	Interest. When payable.
Cheshire 6's, 1860.....	99¾	95	\$3,100	99¼	96	Jan., July.
Concord and Montreal Mortgage 7's, 1860.....	100¼	99	53,000	99½	100	Fy15, An15.
Grand Junction 6's, 1870.....	85	78	67,200	77	79	Jan., July.
Michigan Central 8's, 1860.....	111¼	106	21,000	10½	108	April, Oct.
Norfolk County 6's, 1854.....	85	70	43,700	72	80	Jan., July.
Ogdensburg 1st Mortgage 7's, 1859.....	102¼	89	171,900	102	91	April, Oct.
Ogdensburg 2d Mortgage 7's, 1861.....	92½	62	963,000	89¾	66½	April, Oct.
Rutland 1st Mortgage 7's, 1863.....	100	87	205,400	99¼	90½	Feb., Aug.
Rutland 2d Mortgage 7's, 1863.....	74	67	46,000	..	67½	Feb., Aug.
Vermont Central 1st Mortgage 7's, 1861.....	96	83½	1,092,700	91	87	May, Nov.
Vermont Central 2d Mortgage 7's, 1867.....	85¾	64½	1,067,400	80	67¼	Jan., July.
Vermont and Massachusetts Mortgage 6's, 1855..	87	80	84,200	84	82	Jan., July.

Public Works of Ohio.

The following tabular statement exhibits the receipts and expenditures on the public works of Ohio since their completion, and the deficit in the interest fund that has to be made up by taxation, as near as the latter can be ascertained:

Years.	Gross Receipts.	Expenses and Repairs.	Deficit in Interest.
1845.....	\$466,596	\$307,640	\$1,001,748
1846.....	595,479	233,232	802,013
1847.....	790,793	315,178	687,893
1848.....	765,041	389,372	784,225
1849.....	720,275	440,089	867,669
1850.....	728,085	329,595	726,045
1851.....	809,929	367,560	579,468
1852.....	656,958	429,796	798,435
1853.....	605,163	449,871	866,545

According to this statement the public works are annually becoming less productive. In 1853 the gross receipts were smaller than any previous year since 1846, while the expenses and repairs were greater than in any previous year. There is not that difference in the deficit in providing for the interest fund, which these returns would warrant us in supposing on account of the reduction in the aggregate amount of interest paid.

Evansville and Crawfordsville Railroad.

This road is nearly completed to this place. The cars are running up to the depot, and the masonry is completed at White River Bridge; the superstructure is nearly finished, and in a very short time the cars will be running direct from Evansville to this city. The funds necessary to complete this road was raised by the stockholders' taking forty thousand dollars additional stock, this shows that the stock is considered good stock, when the stockholders stand right up to the chalk.—*Vincennes Gaz.*

Railroad Consolidation in Ohio.

We learn from the *Sandusky Register* that a consolidation of the Mansfield and Sandusky City the Huron and Oxford, and the Columbus and Lake Erie Railroads, has finally been accomplished.

On the 3d inst., the following Board of Directors was chosen: Jno. G. Camp, Jr., Ebenezer Lane, Sandusky; W. H. Wright, Huron; Jno. R. Robinson, Chas. T. Sherman, Mansfield; D. S. Norton, Mount Vernon; N. B. Hogg, Israel Dille and James R. Stanbery, Newark.

The Directors appointed the following officers: President, John G. Campbell, Jr., Sandusky; Superintendent, Jno. R. Robinson, Mansfield; Treasurer, Chas. T. Sherman, do.; Assistant Treas-

sure, A. M. Marshal, Sandusky; Secretary, Winthrop H. Wright, Huron.

American Railroad Journal.

Saturday, February 11, 1854.

Stock and Money Market.

The share and Money Market continues without material change. In the ordinary operations of business, money is reasonably abundant, and is gradually becoming more so. There is, however, no disposition to embark in new enterprises or to assume new liabilities. This feeling prevents any considerable activity in the stock or bond markets. The unsettled condition of European affairs reacts upon this country. Any considerable movement here will be consequent upon a similar movement abroad.

The earnings of Railroads continue to increase rapidly, the following statement will show the earnings for January, as far as received:

	1854.	1853.
New York and Erie...	\$368,544	\$301,151
Hudson River	203,406	99,085
Michigan Central	80,094	64,481
N. York and N. Haven...	60,120	56,633
Ohio and Pennsylvania.	62,314	26,159

Railroad Iron via Quebec.

We would call attention to the card, in our advertising columns, of John Anderson and Co. of Quebec, receivers and shippers of railroad iron to the Lake ports or other points in the Western States or in Canada. These gentlemen have done a business in this line, during the past year, amounting to nearly 40,000 tons. The advantages of Quebec as a receiving port for railroad iron are the low freights which suffice to cover the transportation in the vessels engaged in this trade and running to Quebec; and also in the facility of water communication with any of the Western Lake ports. The freights from Wales to Quebec have ranged, during the past year, at from 16 s. to 25 s., cargoes of 1500 tons having been received at Quebec at 16 s. From Quebec to ports on Lake Erie the freight is from \$3 50 to \$4 00 per ton.

This firm pay particular attention to the shipment of rails in Wales, and especially the assorting of cargoes, by which all lots are kept distinct on delivery.

Locomotives on Grades.

In completing the railroads between Turen and and Genoa, some important experiments have been made as to the ascent that could be accomplished by peculiarly constructed locomotives. The following result is given by a correspondent of the London Times:

"The experiments already made on the incline near Gleni, where there is an ascent of 1 in 28½, have been most satisfactory. With two locomotives attached together, drawing a train of six carriages loaded with sand, which weighed altogether about 56 tons, and each locomotive weighing about 22 tons, including the coal and water, a speed of 19 English miles an hour was easily accomplished, although, from the length of the tunnels and the dampness of the atmosphere, the rails were excessively greasy and slippery. The engines used were built by Messrs. Stephenson, after plans sent by the Piedmontese engineers."

An ascent of 1 in 28½ is equal to 185½ feet per mile, or 69 feet higher than the steepest grades of the Baltimore and Ohio Railroad.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,978,700	5,150,278	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	809,878	1,016,500	2,064,458	140,561	80,053	none	80
Kennebec and Portland.. "	72	952,621	291,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,469,384	208,669	6	6	96½
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	83
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	110
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	38
Northern	82	3,016,634	.....	3,287,782	163,075	6	6	60
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	8	90
Nashua and Lowell..... "	15	600,000	none.	651,214	182,545	51,513	6	106
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	21
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	30
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	11
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	13½
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	97½
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7	91
Boston and Maine	83	4,076,974	150,000	4,092,927	659,001	338,215	7	103
Boston and Providence	53	3,160,390	390,000	3,546,214	469,656	227,434	6	84½
Boston and Worcester..... "	69	4,500,000	425,000	4,845,967	758,819	381,296	7	100½
Cape Cod branch..... "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River..... "	52	1,591,100	193,500	1,810,946	229,004	72,028	5	55
Eastern	75	2,850,000	500,000	3,120,391	488,793	241,017	7	90
Fall River	42	1,050,000	none.	1,050,000	229,445	99,589	8	100
Fitchburg..... "	66	3,540,000	112,305	3,623,073	574,574	232,787	6	92
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County..... "	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony	45	1,964,070	282,300	2,293,534	322,213	101,510	none	92½
Taunton Branch	12	250,000	none.	307,136	137,406	24,399	8	.....
Vermont and Massachusetts.. "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	23½
Worcester and Nashua..... "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	58
Western	155	5,150,000	5,319,520	9,953,759	1,625,224	746,736	6	97
Stonington	50	.....	467,700	.....	240,572	110,892	.....	66
Providence and Worcester... R. I.	40	1,457,500	800,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	124
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	99½
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	52
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	56
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	85
Buffalo, Corning and N. York. "	182	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira.... "	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	77½
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	67½
Harlem	130	4,725,590	977,463	6,102,935	681,445	324,494	5	52½
Long Island..... "	96	1,875,148	516,246	2,446,391	205,068	44,070	none	30½
New York Central	504	28,085,600	10,773,823	33,859,423	.....	.....	.....	109½
Ogdensburgh (Northern).... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	1	30½
Oswego and Syracuse..... "	35	350,000	201,500	607,803	90,616	43,609	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,490	1,388,285	478,413	10	143
Morris and Essex	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey	31	2,197,840	476,000	8,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,528	265,827	106,320	8	5
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,937	2,480,626	1,251,987	7	78½
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,789	5	80

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.		Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97½
Philadelphia and Trenton....	"	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	"	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio.....	Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58½
Washington branch.....	"	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..	"	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....	Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	"	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	"	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	"	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg....	"	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	"	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	"	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	"	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	"	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac....	"	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.....	N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina.	S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.....	"	140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina.....	"	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..	"	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central.....	Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	115
Georgia.....	"	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western.....	"	101	1,013,088	163,000	1,277,334	278,739	149,960	9	100
Muscogee.....	"	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western.....	"	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River	Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.....	"	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	"	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..	"	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern.....	Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..	Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..	"	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.....	Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	64½
Frankfort and Lexington.....	"	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.....	"	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.....	"	.....	.....	.....	In prog.	.....	.....	.....	46
Cleveland and Pittsburgh....	Ohio.	100	1,979,100	1,142,200	3,279,908	432,632	267,278	10	92
Cleveland and Toledo.....	"	147	2,000,000	1,600,000	.....	.....	.....	.....	92
Cleveland, and Erie.....	"	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.....	"	135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Columbus, Piqua and Indiana..	"	46	.....	.....	2,000,000	.....	.....	.....	67
Columbus and Lake Erie.....	"	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton	"	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	106
Cincinnati and Marietta.....	"	.....	.....	.....	In prog.	.....	.....	.....	50
Dayton and Western.....	"	40	310,000	550,000	925,000	.....	.....	.....	75
Dayton and Michigan.....	"	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	"	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami.....	"	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro.....	"	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami.....	"	84	2,668,402	482,000	3,169,733	667,559	352,133	10	117
Mansfield and Sandusky.....	"	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie....	"	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	73½
Ohio Central.....	"	57	.....	.....	In prog.	.....	.....	.....	80
Ohio and Mississippi.....	"	.....	.....	.....	.....	.....	.....	.....	87
Ohio and Pennsylvania.....	"	187	1,750,700	2,450,000	.....	.....	.....	.....	.....
Ohio and Indiana.....	"	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley...	"	44	750,000	300,000	.....	.....	.....	.....	.....
Xenia and Columbus.....	"	54	1,291,000	300,000	1,257,714	317,000	158,500	10	116
Evansville and Illinois.....	Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central.....	"	.....	.....	.....	.....	.....	.....	.....	78
Indiana Northern.....	"	131	.....	.....	.....	.....	.....	.....	115
Indianapolis and Bellefontaine	"	83	.....	.....	.....	.....	.....	.....	86
Indianapolis and Cincinnati..	"	90	1,128,486	1,289,000	1,869,932	.....	.....	.....	69
Lafayette and Indianapolis...	"	62	.....	.....	.....	.....	.....	.....	82
Madison, Indianapolis & Peru	"	138	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Peru and Indianapolis.....	"	40	.....	.....	In prog.	.....	.....	.....	65
Terre Haute and Indianapolis	"	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.....	Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.....	"	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central.....	"	.....	.....	.....	.....	.....	.....	.....	136
Galena and Chicago.....	"	92	1,932,361	500,000	In prog.	473,548	286,152	.....	122
Michigan Southern and Ind. N. Mich.	N. Mich.	315	2,800,000	3,741,564	7,276,616	1,200,922	586,929	17	116
Michigan Central.....	"	282	4,856,700	3,977,563	8,618,505	1,146,598	582,816	8	101
Pacific.....	Mo.	83	1,000,000	none.	In progress	.....	.....	.....	.....

Consolidation of Railroads--Important Movement.

We learn that the contemplated consolidation of the Cincinnati and Marietta, and Cincinnati and Hillsboro Railroads, has been effected, and that the two roads will be henceforth practically under one management. The consolidation of the above interests will provide for the construction of only one road through Southern Ohio where two were contemplated, or a first class road, instead of two second class ones. We have no doubt that the consolidation will exert a favorable influence upon the bonds of the Marietta company, (under which the through road is to be constructed,) than which, no securities can be better.

Canandaigua and Niagara Falls Railroad.

We learn that the Canandaigua and Elmira Railroad company have taken a permanent lease of the Canandaigua and Niagara Falls Railroad. We presume the arrangement to be a very good one for the latter, and perhaps for both companies. As an inducement to the arrangement, we suppose the Erie Railroad company held out encouragement of a favorable business arrangement with the above roads. The latter, on account of its similarity of gauge, is the convenient channel of communication for them with New York.

We hope the above arrangements will not disturb the amicable relations between the Central and Erie companies.

Syracuse and Binghamton Railroad.

We learn that this project is very favorably received in this city, and that there is good prospect that its securities will meet a ready sale. The Company we understand have had a favorable offer of all the iron wanted for the road in exchange for the bonds of the company, but which was declined. When the merits of this road shall come to be understood no project will stand better in this market.

Fitchburg Railroad of Massachusetts.

The annual report of the Directors of the Fitchburg Railroad Company was presented to the stockholders at their meeting on the 31st ult. The present capital stock of the company is \$3,540,000.

Earnings for the past year have been \$645,451 37
Expenditures, dividends, etc..... 643,217 71

Surplus..... \$2,233 66
Surplus last year..... 50,985 56

Total surplus..... \$53,219 22

Of the amount included in expenses \$57,911 have been expended for new locomotives, new track, new freight cars, etc., not strictly chargeable to the running of the road for the past year. The debt of the company at the present time is \$194,257; and the assets, as stated, \$201,029 76. Of the debt \$91,500 is on account of the new buildings just erected by the company in Boston. The increase from passengers over last year, (eleven months,) has been \$104,022; increase of freight of freight 30,654 tons, notwithstanding the loss of freight by the partial failure of the ice crop.

Railroad Building from Local Material.

The road from Indianapolis to Vincennes has been let to Story, Fuller & Co., on favorable terms, one of which is that the contractors shall make the iron for the entire road, on the entire line of it where there is an abundance of iron ore and coal.

Seizure of the Franklin Canal Road.

The Governor of Pennsylvania has issued a proclamation declaring the Franklin Canal Company's charter annulled, has seized the road and placed it under possession of General Wm. F. Packer, as Superintendent in behalf of the State. The Governor's proclamation runs thus:

To the President, Directors and other Officers of the Franklin Canal Company.

GENTLEMEN:—It has become my duty to call your attention to the accompanying Act of the Legislature of Pennsylvania, entitled: An "Act to annul the Charter of the Franklin Canal Company", approved the 28th day of January, A. D. 1854.

You will perceive that for reasons presented in the preface to the said law, the Legislature have deemed it proper to exercise the power reserved to them in the act under which the railroad claimed by your Company was constructed, to wit: "That if the Company shall at any time abuse or misuse the privileges granted by said act of incorporation, the Legislature may revoke all and singular the rights and privileges granted to such Company."

In pursuance of this right, the Legislature have rescinded, revoked and utterly and forever annulled the Charter of the Franklin Canal Company.

You will also perceive that it is made the duty of the Governor to take such "measures as he may deem necessary" to carry out the true intent and meaning of this act; to take charge of the property of said Company, and to appoint such person or persons as he may deem proper to superintend the operations of said railroad, "until the same shall be further disposed of according to law."

You will therefore regard the railroad and appendages lately claimed by your company as in the possession of the Commonwealth, and give place to the person or persons appointed by me, under the authority of said act, "to superintend the operations of the road," for the time being.

WILLIAM BIGLER.

Executive Chamber, Harrisburg, Jan. 30, A. D. 1854.

Here is a new chapter in railway legislation in this country. A melancholy chapter it is too. It is the first instance in which a State has seized the charter and property of a railroad company.

What is the offence charged? Not that a soul has been injured by the above road; not that it is not the road having just the gauge, and occupying just the route desired by the State and by the Erie rioters. No different road is wanted by the very party who have seized it. Pennsylvania desires the Ohio gauge to come to Erie, for the purpose of securing a break at that city. The Erie people desire this; the Sunbury and Erie Railroad Company desire it. If the State should build a new road, it would merely repeat what the Franklin Company have done. This Company may have transcended its charter, though there is yet no evidence that such is the case. This question has not been finally decided by the legal tribunals. But to say that it has abused, or misused, its charter in the sense intended, is untrue. A misuse or abuse implies some injury done to other parties or interests, which is not even claimed or pretended. Suppose for instance it should turn out that the Montour Iron Company a chartered corporation in Pennsylvania, should have failed to comply with, or should have exceeded, some of the provisions of its charter. Would the Legislature in such case have dared to revoke it, or to have seized and confiscated the property of the company. Not at all. Such a flagrant act of rapine would have aroused the indignation of the whole country. The public sentiment would have said that "the Montour Company had not misused or abused

their privileges, the State and every individual in it having been vastly benefitted by the erection of the company's works. That such being the fact, any immaterial laches on the part of the company, or any mistake as to the extent of the powers it possessed, provided no wrong was done, or intended, should not be construed to incur forfeiture of franchise and property." The seizure of the Montour Co. would be a parallel case, except as compared with the Franklin Canal Company, the seizure of the Montour Company's property would be a mere bagatelle.

The issue made by the State is a false one. She is the only wrong-doer in the case. She wants the railroad just where it is, and as it is. She does not propose to render it a particle more useful to the public or more productive on its cost. There is no complaint that the road is not properly managed, even for the interests of Erie. In all the outrageous things said and done at that place, we have not discovered the first word of complaint against the usefulness and the management of the Franklin Company's road.

But as before stated, the State seizes the road for the purpose of becoming the "abuser and misuser" of the public and private convenience. In the controversy that has been going on at Erie, the State saw that the public convenience was about to get the better, and unless she interposed, common sense and correct principles would triumph over private and sectional greed:—That commerce between the East and the West would pass through the State without contributing to the fortunes of a rotten borough, or without being subjected to vexatious exactions invented to turn it into other channels. It was seen that the North East Company in whose charter no flaw could be picked, would ultimately succeed in changing their gauge, that the public convenience could not be interfered with, except by the interposition of the sovereignty of the State. The rights and property of an innocent and unoffending company were seized, for no other purpose but to hold the commerce of the country in its grasp, and allow local interests and private rapacity to levy an excessive and unlawful tax upon it.

Can anything be more ridiculous than the attitude assumed by Pennsylvania in this matter? Here is a whole State convulsed, about what? Why, whether or not, freight and passengers in passing between different sections of the country shall be moved from one car to another! A break of gauge simply to tax and hamper commerce! This is the question which has shaken the State to its centre. If their very lives depended upon the success of this folly, the people of this State could hardly have been more excited from the humblest laborer up to the Governor himself. Farmers, lawyers, clergymen, merchants, legislator, judges: all vying with each other in their zeal to maintain inviolate "the Pennsylvania policy". The Legislature act with a promptitude as if their salvation depended upon their speed. Judges volunteer their opinion. The Governor rushes to Erie to assure the people of that city of his sympathy, and appeases their wrath by reading to them the death warrant of the unoffending Franklin Canal Company. A victim is demanded, but none but a harmless one can be found. And what a farce is enacted before the very face of the Governor himself. Under the protection of the laws of the

United States, the North East Company bring their gauge into Erie, but are not allowed to connect with the road running West. The two gauges lap, but are not allowed to unite, for fear merchandize might pass through the city without paying toll. But there are 20 or 30 locomotives East of Erie, that have been detained a long time by the difficulties at that place; a detention for which the roads ordering them have suffered most seriously. By special favor these engines are allowed to pass from one road to another. For this purpose, the two roads for half an hour are joined. The moment the engines have reached the road running West, the connecting rails are removed with as much celerity as if a hostile army were approaching to attack the town. A hostile train, freighted with Western produce was perchance on its way from Cleveland, to New York, which, were the connection between the two roads maintained, might pass through Erie, without delay, annoyance or expense. But no. The approaching train must come here to a dead halt, no matter how urgent the necessity for speed. Every article composing the load, no matter how valuable nor how liable to be injured by handling, must be transferred from car to car. All this useless parade and labor, for the benefit of Erie! Of this folly is the Governor of the State the high priest, who officiates in his new calling to an admiring and applauding congregation. Can bigotry, or ignorance, or selfishness, outdo such conduct as this! If such are to be the lessons of commercial freedom that this country is to present to the world, well may we hang our heads in shame, and take back all the arguments that have been used to induce capital from abroad to aid our people in the construction of their public works.

We know it is claimed that there is another side to this Erie affair. But the justification offered only makes the matter worse. It is said that the Erie and Central Companies of New York are great over-grown and grasping monopolies, who, free to carry out their own designs, would crush Erie. This was the burden of Messrs. King and Lowry's story, in their late tour of the State. How crush Erie? Simply by running a train of cars through it. In no other way. The interests of these companies and that of the whole country are identical. It is the interest of both to reduce the cost of transportation to the lowest limit. The companies are mere agents of the public, and their action merely reflects the convenience of the former. A merchant in New York wishes to send 100 tons of goods to Chicago. He objects to having the goods change cars at Erie, on account of the cost of doing so. The railroad companies tell him, "if you will save us this cost, we will deduct the amount from our charges. Otherwise we must add it." A similar reply is made to the Western merchant sending produce to the seaboard. It is the public which in the end pays for the expense of break, as they do every other item of cost; not the railroad companies. Now we say that if a free passage through Erie will crush that town, it ought to be crushed. It is no more fit to live than a Barbary Corsair. Why should a merchant in New York, Boston or Cincinnati, be forced to sustain a city that has no other vitality than the plunder it wrings out of him. Why should he be compelled to use the harbor of that

city or have his goods detained there, unless it is for his interest? Admit the doctrine and see where it will lead to. If he may be compelled to change cars at *Erie*, he may at *Albany*, at *Utica*, at *Buffalo*, at *Dunkirk*, at *Cleveland*, at *Sandusky*, and *Toledo*. Why not at one place as well as at another. Is *Erie* to be the favored spot on this continent. Is she alone to have a patent for spoliation and robbery? What has she done that she is to be elevated above the heads of all her sister cities? But if all can rob, what is to become of commerce? It is destroyed. If every town upon the route of the road between Chicago and New York should insist upon "interposing their position to promote their own advantage", to use the language of Governor Bigler, by compelling the railroad through them to break gauge, then merchandize will not pay the cost of transportation. Commerce is at end. The value of railway and all other kinds of property is destroyed, and society relapses into a state of semi-barbarism.

Against such abominable doctrines we protest. If Pennsylvania makes such an issue, the world shall know it. If her influential citizens, standing at the head of railroad companies, sanction or connive at such folly, the world shall know this too. We are not going to let such doctrine get a foothold even in Pennsylvania without a struggle. With common sense, common justice, and every body out of Pennsylvania on our side, we do not fear the result.

But, however speedily this State renounces her folly, she has already done herself a great wrong. The depreciation in the value of her railroad securities alone, during the past 6 months, are ten times greater than all she could hope to make by the most rigid application of her policy for the next 50 years. A perfect mildew has struck them. A number of bankers in this city have notified railroad companies of that state for whom they have been acting, that the sale of Pennsylvania securities is at end, and expressing a wish to close useless and unprofitable agencies. Agents of foreign bankers are busily engaged in writing their apologies to their principals, for ever having taken "Pennsylvania Bonds". Every body holding them would sell, were there any body to buy. They do not wish to have anything to do with the securities of a State, the Governor of which encourages a mob, or announces a doctrine which carried out, would utterly destroy the value of their investments. Nor will they. If Pennsylvanians endorse such doctrines, they may retire from all markets but their own as speedily as possible.

Little Miami and Columbus and Xenia Railroad.

These roads are now run under one management, and for all purposes as one road, the distinctive charters and relations to stockholders being preserved as before. The Columbus and Xenia road was opened in February 1850, as a branch of the Little Miami railroad, and paid but 4 1-10 per cent. until the opening of the Lake Shore road in Nov. 1852. The C. & X. R. R. is 54 miles long, the L. M. R. R. to Xenia is 64½ miles and the entire earnings of the two roads for the last year were \$981,998 22. The division of profits to be made in the future business of the two roads will be two thirds to the Little Miami and one third to the C. & X. R. R.

"Break of Gauge."

BY ZERAH COLBURN.

Were the question of gauge still open, a width so singular as 56 1-2 inches would not probably be adopted. Not that this width would be necessarily increased, for it might, upon good grounds of mechanical merit, be even reduced; for the best width of gauge is strictly an equation, embracing the necessary capacity and steadiness of cars, and the *least resistance of motion*. A mechanically perfect gauge would be a *single rail*, or strictly no gauge at all. Such would involve the least resistance to the motion of an engine or car.

I am not aware that the preference for any gauge, wider than the usual gauge of 56 1-2 inches, has in any case been based upon the *mechanical superiority* of an increased width. None of those who have defended the wide gauge, in this country or in England, have ever done so upon other grounds than its assumed greater capacity, safety, and the facilities offered for a better arrangement of locomotives. It can be easily demonstrated, however, on strict principles, that a greater load can be moved with a given power, in proportion as the arrangement of load coincides with the direction of draught. The wide gauge is really and demonstrably inferior in point of capacity. I have so frequently explained the mechanical principles upon which this conclusion rests, besides having furnished the strongest collateral proof in the weight and capacity of the motive power on the respective gauges, that there is no necessity for going over the ground again.

As to the *safety* secured by widening the gauge, it is well enough known that *accidents* occur from collisions, breakages, misplacement of switchies and draws, obstacles upon the rails, and other similar causes, while there is never an instance of a train "flying the rails" at any attainable speed which may be consistent with the *condition* of the track. *There are reasons* why a wide gauge, with its increased weight of equipments, strain on track, and torsion of axles, may be more unsafe than a narrow gauge.

The arrangement of the locomotive is subject to constant changes in the progress of improvement. No better illustration of this fact could be found than in the improvements which have been made in the locomotive since the time at which the question of gauge was first agitated. The cumbersome and unsafe "inside connection;" the "independent cut off;" the "short stroke pump;" the double or threble framing and the "over hung firebox," have all given place to far more simple and efficient arrangements, by which the dead weight of the engine has been reduced and the ordinary width of gauge made available for the most ample dimensions required for any legitimate transportation. To recall these to the memory of engineers who have entered the field under the *new order*, it can be said that the outside connection is becoming generally adopted for its safety, economy, compactness and efficiency; the "link motion" is preferred for simplicity, safety as a reversing gear and for its regulation of the steam used; the "air chamber" has removed the difficulty of a full stroke pump working fast; the inside frame is safer, reduces weight, and occupies less room, while the friction is proportionally reduced. The "back drivers" have been added

to give support to the firebox without loss of adhesive weight. The merits of coupled drivers have become known, at least in America, and engines combining great power with a proper distribution of weight have been introduced, capable of moving maximum trains with the least possible wear of track.

The results of these improvements are before us. We have engines which will, singly, and with economy, take the largest loads which offer themselves in the ordinary course of business, and at the highest manageable speed; or say, trains of 100 tons at 60 miles an hour. We have engines which will move loads of 1000 tons at the most economical velocity, or about 10 miles an hour. Both of these classes are working out these results on the narrow gauge.

The most important railroads in the world are of the 56½ inch gauge. The London and North-western in England, and the New York Central in our own country, are the leading passenger roads of both continents. The Reading road, also of the narrow gauge, moves more tons per mile than any other road in the world. In both countries the roads of the greatest business capacity are invariably of the narrow gauge. These roads prove, by their capacity and economy, the entirely fictitious character of the issue raised by some railroad men as to the superiority of the wide gauge.

How ridiculous, then, appear the arguments which have been urged in some quarters in favor of a disturbance of the leading and best gauge in use. The assumption, for example, advanced during the discussion of gauge in Virginia, that an increase of merely 3 1-2 inches was attended with a gain of 18 per cent. in—(00?) and that, in substance, a denial of such increase inflicted a *curse* upon the State, to the *per centage* named!

Breaks of gauge have produced sad results. The break of gauge compels break of bulk everywhere, and this amounts to a *tax* imposed upon transportation. Continuity of gauge does not necessarily involve sending cars *through*, on long routes, and beyond the supervision of their owners. The objections to this practice apply with less force in the case of roads immediately connecting, and with which running arrangements are permanently established. In forwarding cars and engines, break of gauge is a serious and expensive difficulty, besides involving vexatious delays to the consignees of such equipments. Furthermore, local trade is always independent of local divisions of a railroad system, and the relative loss by breakage of bulk is inversely as the whole distance moved. An important means of economical management is had in working a long line. Hence, as a matter of economy, many independent roads, occupying a general route, have found it advantageous to *consolidate*. The advantages of consolidation, however, are very much diminished by a break of gauge in the consolidated line. Without a break of gauge there is no objection to sending the equipments of such lines *through*, where perhaps, before, the managers of the independent lines found it impracticable to do so.

The most unhappy results of this kind of disturbance of railroad routes are in the uses to which it has already been put in the West.

A mere question of gauge is even now disturbing the settled commercial policy of the entire country. The city of Erie has taken advantage of one such blunder in engineering, and has found in it the sole pretext for her persevering hostility to the business interests which seek connection through her territory. What is still worse, the mistaken principle for which she contends has received executive, and in substance, popular endorsement throughout a great State. The course of trade is to be determined by artificial obstruction. The stream of commerce is to be dammed up to grind the grist of every hungry adventurer upon its banks. And not satisfied with the *diversion* of the current, the grinders demand a partial *retention*; a toll, forgetting that the grist ground is their own. Thus the stream, checked wherever there is a will to stay it, flows on in diminished volume, and at last, exhausted in its own progress, discharges itself upon the bars which its own sluggishness has formed at its mouth. Such are already the consequences of break of gauge.

Beyond Pennsylvania, which has thus chosen to establish its commercial system on commercial obstruction, there are other interests suffering directly from break of gauge. The Indianapolis and Bellefontaine road is now restrained from laying down Ohio gauge west of Muncie. So at every intersection of the different *systems* of gauge. Between the Virginia and South Carolina systems and the Virginia and Kentucky systems, breaks are already interposed. Should the Mississippi be bridged, the war of the gauges will rage west of that river. The 6 feet gauge of the Illinois and Wisconsin road, the 4 feet 8 1-2 inch of the Rock Island and Chicago and the 5 1-2 feet gauge of Missouri and the South-west will meet on common ground.

Such clashing proceeds from having overlooked the ultimate connections of a national system of railroads. It is the result of the unexpected but necessary meeting of what were intended as independent routes.

But in a territory already filled with railroads a disturbing gauge becomes a firebrand of the most dangerous character. It opposes all the established lines, and, incapable of connection, it seeks none. The established and already well occupied systems of Ohio, Indiana and Illinois are to be assailed with a gauge of this description. The proposed line from near Warren, Ohio, through Ravenna, Galion, Urbana and Dayton to Cincinnati is of the 6 feet gauge, which is 14 inches wider than that of any of the numerous and important roads intersected. The construction of this line is not however commenced.

The Ohio and Mississippi road, seeking an *independent* route between Cincinnati and St. Louis, has already established its gauge (6 feet) different from that of the roads intersected on its route. It has aimed chiefly at a *through* business, but this has been disputed by extensions and connections of a line already far advanced to completion. The Lawrenceburg road, which might otherwise have been a feeder, will seek an independent entrance into Cincinnati; while a branch from Greensburg to Terre Haute will complete a through route affording connections with all the important roads of Indiana and Illinois.

The Ohio and Mississippi road can only compete with another route, possessing greater attrac-

tions, for a through business, while it can have no appropriate connections for local traffic without the construction of roads which will be, in every sense, rival projects to others already established in public favor.

The question of gauge, as it has been used in this country, is a humbug without palliation. It has been a fictitious basis to create strength for roads called for only upon such assumed superiority of gauge. The gauge has often embraced the entire scheme. A "great six foot project" is often urged, solely upon this assumed strength, for the connection of local and terminal communities already accommodated in a manner in harmony with a State or National system.

Springfield, Mount Vernon and Pittsburgh Railroad.

We have received the second annual report of the above company from which we make the following abridgement.

Since our report of last year, the road has been finally located, and let to its Eastern terminus, at Lakeville, on the Ohio and Pennsylvania railroad, a point about 150 miles West from Pittsburgh, 14 miles West from Wooster, and about 6 miles East from Loudonville. A contract has also been made for furnishing the ties, and for the track laying between Delaware and Mount Vernon. These contracts, with one before made, embrace all the work, and all the materials, excepting iron rails, spikes and chairs, and amount in the aggregate to \$560,000; or about \$9,000 per mile. Add to this, the cost of right of way: say \$30,000; and for iron rails, spikes, and chairs, about \$7,500 per mile: making in all \$1,055,000.

To meet this, the Company had subscriptions applicable to it of \$631,000, viz: Knox County Bonds, \$150,000; Brown and Porter Township Bonds, \$25,000; Individual subscriptions, \$256,000; Ohio and Pennsylvania Railroad Company, \$100,000; Pennsylvania Central Railroad Co. \$100,000 total, \$631,000. Of the above expenditure, upwards of \$150,000 has already been made and paid out of the means above stated, leaving about \$900,000 of expenditure, and about \$480,000 of means, and requiring about \$420,000 more in addition to present means to complete the road for use. Besides such loss in the subscriptions and upon the bonds as may be necessarily incurred.

Of the above means, however, some 100, or 150,000 will be required in finishing the 50 miles of road West of Delaware. But the Company will have about \$50,000 worth of iron, bought for the West end, to be transferred to the East end, and have invested in machinery which will be common to the whole road about \$150,000 more. How far the earnings of the 50 miles of road now coming into use will contribute towards supplying the amount thus wanted, it is difficult now to estimate. The Board have ordered an issue of \$700,000 of convertible bonds of the Company, bearing 7 per cent. interest. These Bonds are yet unsold, and it is believed may be sold so as to enable the Company to finish and equip the road complete.

The capital of this Company, as fixed by the charter, is two millions of dollars; of which, as already stated, one and a half millions has been subscribed, and the Company have sold bonds convertible into stock at the pleasure of the owner, to the amount of a half a million more. And as shown above, it will be necessary to raise some \$420,000 more. It will therefore be necessary to increase the capital stock of the Company, to enable the Board by the sale of other convertible bonds to finish the road.

A contract has been entered into between this Company and the Little Miami Railroad Company, by which the latter subscribed to the stock of this Company \$200,000, and the two roads are to be run in close connection, protecting each other's business. And similar contracts have been made with the Ohio and Pennsylvania, and with the

Pennsylvania Railroad Companies, each of said Companies taking \$100,000 of the stock of this Company. The officers of the Ohio and Pennsylvania Railroad have lately promised, that with the consent of their stockholders, their subscription shall be doubled, so as to make it two hundred thousand dollars.

The following statement will briefly show the population and resources of the counties penetrated by this road:

Counties.	Population.	Aggregate Valuation.
Clark	22,174	\$6,969,482
Champaign	21,257	5,029,675
Union	12,205	1,795,249
Delaware	21,870	4,114,681
Knox	28,567	5,750,186
Holmes	20,458	3,219,644
Ashland	23,825	4,678,996
Total	150,357	\$31,586,915

At Delaware our road intersects and crosses the Cleveland and Columbus Railroad, a distance of 50 miles from Springfield. As already remarked this 50 miles of road will be in use in a few days, and is closely connected by contract with the Little Miami Railroad, and your Board do not doubt but that in a short time an arrangement of a similar kind will be completed with the Cleveland and Columbus Railroad Company. When this shall be done, this 50 miles of our road will constitute a part of the best railroad line on distance, grades and curvatures between Cincinnati and Cleveland, that can be made. A line that can be run in less time and at less expense than any other line that can be constructed.

Watertown and Rome Railroad.

The earnings of the Watertown and Rome Railroad for the six months ending Jan. 1, were as follows:

Earnings	\$229,068 34
Expenses	89,785 88

Net earnings

Six months interest on

debt

Five per cent. discount on

stock

Surplus, after paying discount, or nearly 3 1/2 per cent. on the stock

	1852.	1853.	Expenses.
July	\$23,348	\$32,427	\$13,243
August	22,094	35,000	14,553
September	32,306	41,686	18,813
October	33,651	41,734	14,777
November	28,973	41,220	14,897
December	24,221	37,000	14,000
Total	\$164,594	\$229,068	\$89,783

Madison, Indianapolis and Peru Railroad Company.

The business of the Madison and Indianapolis Railroad for the year 1853 was as follows:

Passengers	\$149,931 64
Freight	201,812 71
Hogs	22,080 45
Miscellaneous	67,324 98
Total	\$441,159 78

EXPENDITURES.

Current expenses, repairs, etc.

Interest, etc.

Dividend July, 5 per cent.

.....

.....

.....

The Indianapolis and Peru road is nearly completed and in February the connection between the Ohio river and Peru, on the Wabash Canal, will be made. This connection is considered to

be a very valuable one for the Madison road. The Madison road was put into the consolidation at \$1,647,700. The debt is—

Mortgage Bonds.....	\$600,000
Income Bonds.....	33,000
Domestic.....	2,300

Total.....\$641,300

The stock of the Peru Road is \$1,000,000 and the debt \$600,000, making a consolidated stock of \$2,647,700 and a funded debt of \$1,241,300, with a road 159 miles in length. The floating debt, liability to State, needed to complete new terminus, etc., is \$800,000, against which the Peru Road has \$500,000 of unused assets.

Journal of Railroad Law.

DISSOLUTION OF CORPORATIONS.

The introductory clause of the preamble of the Act by which the charter of the Franklin Canal Company has been repealed, is as follows:—"Whereas, It is provided by the act entitled an Act regulating railroad companies, passed on the nineteenth day of February, Anno Domini, one thousand eight hundred and forty-nine, that if any company incorporated by special act of Assembly thereafter to be passed, shall at any time misuse or abuse the privileges granted by the said act, or by its own special act of incorporation the Legislature may revoke all and singular, the rights and privileges so granted to such company."

But the *proviso* with which the foregoing clause is coupled in the Act of the 19th February, 1849, has been purposely omitted by the framers of the Repealing Act first above mentioned.

The proviso, as will be seen by an inspection of said law of 1849, is thus expressed:

"Provided that in so revoking, altering or amending the charter of any company, no injustice shall be done to the stockholders, and that when said road is taken for public use, the stockholders shall receive due compensation."

Thus the authority of the Pennsylvania Legislature in regard to repealing charters, is by no means unrestricted, even if we look no farther than the Law of 1849, by virtue of which the charter of the Franklin Canal Company has been annulled, consequently, we may look for some supplementary legislation in regard to this subject, calculated to prevent any "injustice" from being suffered by stockholders of the company just dissolved.

The law on the subject of annulling charters is well and fully stated in the admirable treatise on corporations by Angell and Ames, p. 825. These writers say in substance, that—

"At Common Law upon the civil death of a corporation all its real estate remaining unsold, reverts to the grantor and his heirs; for the reversion of the property to the grantor, in such a case, is a condition annexed to the grant by law, inasmuch as the cause of the grant has failed. The personal estate in this country rests in the people. The debts due to and from it are totally extinguished; so that neither the members nor the directors of the corporation can recover or be charged with them in their natural capacities; according to that maxim of the civil law: "*A debt due to a corporate body is not due to individuals;—nor is the debt due from a corporate body the debt of individuals.*" Upon the dissolution of a corporation in any mode, the pending suits against it die. But the Common Law in this particular is frequently modified by charter or statute. It is a legiti-

mate and proper exercise of legislative authority to provide by law for the preservation of the property of a corporation for the benefit of its creditors, by remitting the penalties which attach to a judgment of forfeiture of its charter."

Upon the repeal of a Charter of a joint stock Company the effects are usually invested in trustees for the collection of the debts, and the division of its property among the stockholders, after the payment of its debt.

In such a case the right of a stockholder to transfer his stock, as such ceases. The interest of a stockholder, in the effects of the Company consists only in an equitable interest therein after the Company's debts have been paid, and after any debts due from the stockholder to the Company have been deducted. And so if the Assignee of the stockholder is indebted to the Company, his distributive share of the net assets of the Company must be charged with the amount of his indebtedness.

Such are the equitable principles upon which the affairs of defunct Corporations are now usually wound up.

The general Railroad Law of New York and of several other States contain express provisions in accordance with those modifications of the Common Law, which have been above indicated. And we suppose that in Pennsylvania corresponding ones must be adopted.

MICHIGAN SOUTHERN RAILROAD CO., vs. MICHIGAN CENTRAL CO.—INJUNCTION CASE.—The following is taken from the Chicago Democrat:

The great suit involving the right of the Michigan Central Railroad Company to construct and operate their road round the Lake, from Michigan City to the Illinois State line, was decided in the Supreme Court of the United States, on Monday last. The decision is adverse to the exclusive claims set up by the Michigan Southern Company. The appeal was dismissed, the United States deciding that it had no jurisdiction in the premises. To understand the condition of the suit as it is left by this decision, it is necessary briefly to recapitulate the proceedings which have heretofore been had in the case. The Michigan Southern Company obtained in an Indiana Circuit Court a preliminary injunction against the Central Company's proceeding with the building of their road; on the hearing of the application to make the injunction perpetual, it was dissolved and the bill dismissed; from this decision the Michigan Southern company appealed to the Supreme court of Indiana, where the judgment of the inferior court was affirmed; by some process the Southern Company now raised their suit into the United States Supreme Court, which court refusing to entertain the appeal, the judgment of the Supreme court of Indiana is left binding on the parties, and the questions therein involved settled beyond further controversy. If we rightly comprehend the extent and force of the decision which has been made in this suit, the Michigan Central company have the right under their charter of running their road around the lake, and the right is now secured to them beyond the successful interference of the Southern company for all time to come.

Cleveland, Zanesville and Cincinnati R. R.

The stockholders of this Company met at Akron, Ohio, January 11th.

The Directors made their third annual report from which we learn that already about one million of dollars have been expended on the work, and that the road will be opened at an early day to Millersburgh in the county of Holmes.

The Directors say that all the surveys are completed and the work ready for contract, and only awaits the subscription of a sufficient amount of stock to warrant its completion.

The meeting of the stockholders was large, over

\$400,000 of the Stock being represented, and the old Board, namely—Simon Perkins, J. W. McMillen, H. N. Day, John Cary, Wm. Gallagher, H. A. Miller and M. W. Henry, were unanimously re-elected.

At a subsequent meeting of the Board the following officers were chosen:

President—Simon Perkins.

Secretary—H. N. Day.

Treasurer and Financial Agent—J. W. McMillen.

Auditor—Fred. K. Wadsworth.

Statement of the Condition and Prospects of the Cincinnati, Logansport and Chicago Railroad Company.

"The Cincinnati, Logansport and Chicago Railway Company" was organized in November, 1850, under the title of the Newcastle and Richmond Railroad Company, for the purpose of constructing (under a charter granted by the State of Indiana) a railroad, from Richmond, Indiana, to Logansport on the Wabash river; a distance of 108 miles.

On the 26th of February, 1853, the name of the Company was changed, under authority of a law of the State, to the present name of "The Cincinnati, Logansport and Chicago Railway Company."

This road forms the central division of a direct line of railway from Cincinnati, Ohio, to Chicago, Illinois. The Southern division,—completed and in successful operation—is made by the "Cincinnati, Hamilton and Dayton Railroad" to Hamilton, and the Eaton and Hamilton Railroad from Hamilton to Richmond—a distance of 70 miles.

With these last named railroads, our road is consolidated by a contract for joint equipment, and business operation, for the period of twenty years. The Northern division is made by the "Logansport and Chicago Railway," from Logansport to Chicago—distance 102 miles,—to be furnished with machinery and run jointly with the central division, perpetually.

The whole line from Cincinnati to Chicago, to be of uniform gauge, and to be furnished and equipped by the several companies and run and worked as one road.

PROGRESS AND CONDITION OF THE WORK.

From Richmond to Newcastle, 28 miles—and the most expensive part of the graduation—the road is completed and trains are regularly running on it.

From Newcastle to Logansport the graduation has all been completed ready for the iron, except some short distances at intervals, all of which can readily be finished before they can be reached with the track; and which will not cost, including unfinished bridging, to exceed \$75,000.

The ties are all contracted for, and much the larger portion of them have been delivered on the line of the road and paid for, the residue will be delivered by spring.

The iron has all been purchased to complete the track, and nearly all shipped and landed in the United States. A considerable portion of it is now at Toledo and Sandusky. The residue will arrive in this country during the present winter.

The laying of the track will be resumed as soon as the weather will permit in the spring, at Newcastle and at Logansport, and the track will be completed as early in the season as the iron can be laid down.

RESOURCES.

There has been subscribed (by solvent parties) to the capital stock of the Company, including the amount paid on cross ties, &c.....\$1,001,700

Of which sum there was taken by citizens of Cincinnati, New York, and along the line of the road.....701,700

And by the Cincinnati, Hamilton and Dayton Railroad Company.....300,000

The Company under their former name, issued and sold \$300,000 of seven per cent. bonds, to run fifteen years, secured by a mortgage on that part of the road from Richmond to Newcastle; and since the change of name, have issued for sale, Sterling Bonds to the amount of £250,000 Ster-

ing, running thirty years, and bearing an interest of six per cent per annum, payable in London and Paris, secured by a mortgage on the entire road, of which but a small part have been sold. It is the intention of the Company, out of the proceeds of this last issue, to take up the first issue of \$300,000, and leave the last issue a first and only mortgage on the whole road.

The proceeds of the £250,000 Sterling Bonds, when the same shall be sold, and the stock subscribed when fully paid in, will be amply sufficient to build a single track and equip the road, from Richmond to Logansport, including side tracks, right of way, station grounds and all necessary buildings, and fuel equipment of locomotives, cars and other machinery to operate the road to advantage, and including all interest on bonds and discounts in the negotiation of securities, and all contingent and incidental expenses.

This estimate of cost may be relied upon as entirely sufficient, until the increase of business, which may be reasonably expected, shall demand a large increase of equipment and other enlargements, which while it may require much additional expenditure, will compensate us by adequate returns.

For the purpose of discharging the outstanding liabilities of the Company, and meeting the expenses of shipment, duties, &c., on the Iron, and of enabling the Company to hasten the Road forward to completion—in anticipation of the receipt of the unpaid stock subscriptions, (the great portion of which is not yet due,) and of the sale of the Sterling Bonds,—the Company have authorized the issue and sale of an amount, not exceeding \$300,000, of ten per cent. income bonds, payable five years from the first of January, 1854, with interest at the rate of ten per cent. per annum, payable half yearly, and convertible into the stock of the Company, at the will of the holder.

These Bonds are now offered for sale. The payment of the principal and interest is secured to the holder, by a pledge of the income of the Road, after the payment of the interest on the other bonds previously issued by the Company.

It is not expected or intended however, that the holders should be required to look to that source solely for either the interest or principal. The object in their issue and sale, is to anticipate the receipt of other means and resources of the Company, and complete the Road at the earliest day practicable, leaving the resources, so anticipated, to discharge the liability created by their issue.

These resources of the Company independent of the income of the road, are as follows:

Real Estate in the city of Cincinnati and vicinity	\$150,000
Unpaid Stock subscription, by solvent persons, payable in instalments	210,000
Unpaid Stock subscribed by the Cincinnati, Hamilton and Dayton Railroad Company	225,000
	\$585,000

None of these resources are covered by the mortgages executed by the Company on the Road, to secure the payment of the other bonds issued, or in other manner pledged or hypothecated to secure the same. Nor have the company issued, nor do they intend to issue any other bonds, of any description, than those enumerated.

The Real Estate owned by the company in the city of Cincinnati and its vicinity, was purchased in the fall of 1852 at a cost of \$150,000, its then appraised value. It is now worth in cash, more than the amount paid for it.

In the above exhibit of means nothing is included of funds to be derived from the annual revenue of the road.

Judging by the now abundant experience of the West as to railway profits, this item should occupy a conspicuous place in our list of resources. Very few western railways, operated under anything like favorable circumstances, pay less than ten per cent. upon their cost. Many of them much more expensive in their construction than ours, have uniformly paid more than that

The Madison and Indianapolis, the Little Miami, our own large stockholder, the Cincinnati, Hamilton and Dayton road, are substantial witnesses of this fact. Our road has connections and adjuncts at least equal to others—territory exclusively its own, much more extensive—and a country for fertility and capacity to produce business, unsurpassed by any of them. We may therefore claim for it, equal ability to pay dividends.

Thus when completed, and all the means arising from our stock have been applied, we shall have a bonded debt bearing 6 per cent. interest of, say \$1,250,000, and a capital stock of over \$1,000,000.

Our interest annually will then be \$75,000, while our nett receipts, if estimated as other roads produce, (at 10 per cent.,) would be 225,000, leaving after paying our interest annually, the sum of \$150,000 to be paid in dividends to our stockholders, or of course if necessary, in preference to that, an income fund applicable to the repayment of these income bonds.

This annual income alone, in the last four years of the life of these bonds would thus amount to \$600,000, or double the amount of the issue, and would pay their annual interest for the time they have to run and \$450,000 besides; and added to the resources of lands and unpaid stock would increase the fund to which the company can resort, if necessary, for their redemption, to the sum of \$1,065,000, or more than three times their amount.

J. T. ELLIOTT,
President.

Jan. 25, 1854.

What it costs to support Erie; and who pays.

The Erie people tell us that their city will be ruined by allowing an uniform gauge through it. Governor Bigler reiterates the same. Well, those worthies have their way. A transfer both of passengers and freight is made at that point. As the cake and beer trade is brisk, and the loafer portion of the population of Erie are able to turn an odd penny occasionally, by lifting pigs, sheep, produce, &c. from one car to another, we suppose everything goes merrily at that town. The railroads, if we are to believe the Erians, support their town. They dance, and commerce pays the piper. Not the whole bill however; only the merest fraction of it. There are certain railroad companies in the State whose works are in progress, who up to the time of the Erie troubles, were selling their securities in this market. It was the only way in which they could get money. But the agents of commerce, the monied men, all of whom are affected by the Erie quarrel, say to the applicants for more money: "Gentlemen, we cannot trust our money in a State which destroys one road and seizes upon another; all because the owners seek to transport passengers and merchandize at the lowest possible cost. Having done so once, you may repeat your outrages. If according to the doctrines of Governor Bigler, a State may compel breaks of gauges to add to the business, or sustain the fortunes of a sinking community, it will very likely result to the same process for the benefits of towns upon the line of road, the bonds of which you wish to sell. Your State may, at any time enact a law which may destroy the value of our investments altogether." This is the reply made here, to parties offering Pennsylvania securities. It is probable too that these securities will fare much worse in the foreign market than in our own. Suppose the bonds of a railroad company in a German State, the chief magistrate of which held the gauge doctrines of Governor Bigler; a State which for months tolerated a lawless mob,

in their destruction of one road, and which seized the franchise and property of another, for the purpose of throwing obstructions in the way of commerce, were offered in the Philadelphia market? Would they sell? We think this question needs no answer. Will Pennsylvania bonds sell in Europe? is a question as easily answered.

But we need not state the case hypothetically. The experience of railroad companies of Pennsylvania has already verified our statements. They find themselves suddenly without a market for their securities. These will not sell, no matter what their previous reputation. The bonds of the city of Pittsburgh are offered at 15 per cent. below their recent highest figure, with no purchasers at that! The people of that city must feel flattered at the state of their credit.

From this statement, it is easy to see how much a railroad company having \$100,000, \$200,000, or \$500,000 of such bonds, pays for "the support of Erie." This Erie business is a two edged sword, wounding most those who wield it. In the way we have stated, the State of Pennsylvania will pay more than \$1,000,000 for the support of Erie in the next five years. The greater portion of this sum, the railroad companies of the State will have to pay. They are now paying roundly, but only the first of the instalments that are to follow.

If there was ever an instance where a people, "who went after wool came back shorn," the gauge quarrel at Erie furnishes an illustration. Never did retribution follow more speedily the offence. All wrong-doing punishes itself, but in nothing is the effect of wrong-doing more strikingly illustrated than in loss of credit. Credit builds railroads, and railroads change the whole face of society. Their very name suggests to our minds all the pleasures of social intercourse. They transmute into gold what before was worthless and unvalued. Compare communities possessing railroads, with those without them, and the value of credit will then be seen. This credit, the State of Pennsylvania has parted with to sustain Erie. Who can measure the greatness of the sacrifice? For what? To vindicate a policy, which in every possible light in which it is viewed, can only be prejudicial to its framers.

Improvement in Building and Transporting Bridges.

A valuable improvement has been made in the erection of bridges over streams, by Thomas and Samuel Champion of Washington City. The method which they have already adopted with entire success is to build the bridge on the land, at about the level with its intended position, on a prepared road-way, on one of the previously prepared abutments, on which tracks are placed for the land part of the transportation. Which having been accomplished, a vessel or vessels of sufficient buoyancy for the burden to be imposed, having upon it a frame work of proper height is floated by the stream either under the already projecting end of the bridge, or against the abutment, for the purpose of having the bridge rolled upon it. The vessel being provided with a valve to receive, and a pump to discharge water, it may be ballasted therewith, and its buoyancy regulated as desired; after which, all things being in readiness by means of the Capstans with the ropes attached, the vessel and bridge upon it may be speedily and safely

drawn over its place, and lowered to its proper position, by letting water in the vessel, or by Jack-screws or other process.

By this mode all the danger incident to working over the water, all the cost and danger of raising such heavy structures from the water, is avoided, by means as simple and safe as they are effective.

This plan was adopted in placing a heavy iron bridge, of 130 feet span, over the canal crossing 14th street, Washington. The bridge over the Potomac, at Little Falls, is also about to be built and moved in the same manner.

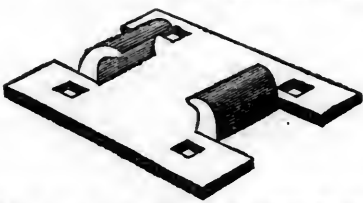
Land Grants to Western Railroads.

Senator Bright, of Indiana, has introduced a bill in Congress granting 400,000 acres of public lands to each of the following named railroad companies, who jointly are to construct a continuous railroad from Lake Erie to the mouth of the Ohio River, and to New Orleans and Mobile: The Ohio and New Orleans Railroad from Mobile and the Ohio Railroad in Tennessee, to Paducah in Kentucky. The Ohio River and Wabash Railroad, from Paducah to Vincennes, through Illinois. The South Western Railroad, from Vincennes to Indianapolis. The Toledo and Indianapolis Railway Company from Muncie, Indiana, to the Ohio State line, and the Toledo and Indianapolis Company in Ohio, from Indiana State line to Toledo at Lake Erie, making a total grant of 2,000,000 acres of public lands, and are to carry the United States mails free of all charge, and in time of war to transport troops and munitions free of cost. It was referred to the Committee on Public Lands.

NEW YORK

Wrought Iron Railroad Chair Company,

Office, 38 Exchange Place, New York.
A. B. LANSING, President.



THIS Company is prepared to receive orders for the manufacture of Wrought Iron Railroad Chairs of the best material, on a new and superior model, and by improved patented machinery.

The thickness of the Lips of the Chair increases through the bend, where the greatest strength is required, and diminishes towards the edge;—so that a less weight of metal may be used and a strength acquired equal, if not superior, to that of a heavier Chair of uniform thickness.

Rail Road Letting.



PROPOSALS will be received at the Office of the Company in the City of Evansville, Indiana, until 6 o'clock, P. M., of Wednesday, 15th day of February, 1854, for the Grubbing, Grading and Bridging of that part of the 1st Division of the EVANSVILLE, INDIANAPOLIS, AND CLEVELAND STRAIGHT-LINE RAIL ROAD,

Extending from Evansville to the Crossing of the Ohio and Mississippi Rail Road, in Daviess County, a distance of fifty-four miles.

The work will be divided into sections of about one mile each, and proposals will be received for one or more sections, or for the whole line.

Maps, Profiles and Specifications will be ready for the examination of bidders on and after the 1st of February, and all necessary information given on application to W. C. MOORE, Chief Engineer.

O. H. SMITH, PRESIDENT,
W. CARPENTER, VICE PRES.
Evansville, Jan. 2, 1854.

Valuable Engineering and Mechanical Works,

IMPORTED and FOR SALE by
JOHN WILEY, 167 Broadway.

DEMPSEY'S PRACTICAL RAILWAY ENGINEER. 1 vol. 4to, with 50 Engravings, bound in half Morocco.	\$11.00
SCOTT'S ENGINEERS' AND MACHINISTS' ASSISTANT, 2 vols. Quarto.	20.00
TREDGOLD on the LOCOMOTIVE ENGINE, half calf.	15.00
" on the MARINE ENGINE, half calf.	24.00
" on the STATIONARY ENGINE, &c., half calf.	24.00
TREATISE on the STEAM ENGINE by the Artizan Club.	6.00
WEALE'S THEORY, PRACTICE and ARCHITECTURE of BRIDGES, 3 large vols., half bound.	25.00
" SUPPLEMENTARY VOL. (just published), half bound.	14.00
TRAUTWINE on RAILROAD CURVES, turk.	1.00
" on EMBANKMENTS AND EXCAVATIONS.	1.00
WILMES' HANDBOOK of PLAIN and ORNAMENTAL MAPPING, and Engineering Drawing, for Civil and Mechanical Engineers.	7.50
WOOD'S PRACTICAL TREATISE on RAILROADS, 8vo.	5.00
RYDE'S TEXT BOOK for the USE of ARCHITECTS, ENGINEERS, SURVEYERS, &c. 1 vol Royal 8vo.	8.50
GREGORY'S MATHEMATICS for PRACTICAL MEN. 8vo.	6.00
BARLOW on the STRENGTH of MATERIALS and on CONSTRUCTION.	4.50
LARDNER on the STEAM ENGINE. New Edition.	2.00
SCRIBNER'S ENGINEER'S, SURVEYOR'S and CONTRACTOR'S POCKET TABLE BOOK.	1.50
SCRIBNER'S ENGINEER'S and MECHANIC'S COMPANION.	1.50
BUCK on OBLIQUE BRIDGES. Illustrated with Plans, &c.	4.00
EXAMPLES of RAILWAY MAKING. With PRACTICAL ILLUSTRATIONS.	3.50
SIMM'S on LEVELLING and SETTING OUT RAILWAY CURVES. 8vo.	2.25
SIMM'S on MATHEMATICAL INSTRUMENTS, 8vo.	2.25
HAUPT on BRIDGE CONSTRUCTION. 8vo.	3.00
QUESTED'S TREATISE on RAILWAY SURVEYING and LEVELLING. 8vo.	1.75
Together with an extensive assortment of Books in every department of science.	

LAWRENCE SCIENTIFIC SCHOOL, Harvard University.

THE next Term of this Institution will open on the second day of March, 1854, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical Exercises, according to the nature of the Study, will be given in:

Astronomy.	by Messrs. Bond.
Botany.	" Prof. Gray.
Chemistry, analytical and practical.	" " Horsford.
Comparative Anatomy and Physiology.	" " Wyman.
Engineering.	" " Eustis.
Mathematics.	" " Pierce.
Mineralogy.	" " Cooke.
Physics.	" " Lovering.
Zoology and Geology.	" " Agassiz.

For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

Cambridge, Mass., January 1854.

FULTON CAR WORKS, CINCINNATI, OHIO.

WE respectfully call the attention of Railroad Companies and Contractors in the West and South to our establishment. Our facilities for manufacturing are extensive, our work is made from the best material the country affords, and of the most superior workmanship. We are prepared to execute to order on short notice Passenger Cars of the most approved description and elegant finish; Baggage, Freight, Cattle and Gravel Cars, also Crank and Lever Hand Cars, Trucks, and Railroad work generally.

Washburn Car Wheels.

Having secured the exclusive right to make and sell this celebrated wheel in Cincinnati, Covington and Newport, we are prepared to furnish them in any quantity, either fitted with axles or separate. These wheels are made of the best of iron, mixed in most approved manner.

Cincinnati, Ohio, January 18th, 1854.

KECK & HUBBARD.

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 50 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

JOHN H. HICKS,

90 Beaver street.

2d Feby.

To Railroad and Canal Co.'s, Contractors, &c.

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics, &c. of any description, and also to inform them that they forward such men to whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.

No. 85 Greenwich street, New York.

Notice to Contractors.



CHIEF ENGINEER'S OFFICE,
Norfolk, Va., Jan. 8, 1854.

SEALED PROPOSALS will be received by the undersigned at this Office, from the 1st until the 20th day of March next, at sundown, for the "clearing" and "Graduation" on the line of the "Norfolk and Petersburg Railroad," between that portion of said road now under contract, and its terminus at Petersburg—covering a distance of about eighteen miles; also, for the "Culvert" and "Bridge" Masonry of the last section of said work.

At the same time, sealed proposals are invited for the "Abutment" Masonry of "Bridges" over the Eastern and Southern branches of Elizabeth River.

The work will be divided into sections of about three miles, and bids may be made for one or more of said sections.

The line, plan, profiles and quantities of work will be ready for examination on and after the 1st of March.

Specifications with forms of contract and proposal may be had of the undersigned after date.

Payments will be made in current funds during the progress of the work, in proportion of four-fifths of the amount due.

Of bidders personally unknown to the undersigned, evidence of their responsibility will be necessary; and of those to whom work shall be allotted, will be required bond and approved security in an amount not exceeding one-fifth of the amount of their contract, for the timely and faithful execution of the same.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

The line is easy of access, the country through which it passes abundant in supplies and of a climate highly favorable for the prosecution of work at all seasons.

The work here offered for contract is of a character well worthy the consideration of the most responsible contractors.

W. MAHONE,
Chief Engineer.

January 19.

BLAKE'S PATENT FIRE-PROOF PAINT.

THIS extraordinary substance has now been tested nearly *nine* years, and its **FIRE and WEATHER PROOF** qualities are most extraordinary. Instead of the action of the weather destroying the coating as it does ordinary paints, it only serves to turn it to a perfect *slate or stone*, protecting whatever covered from the action of *fire and weather*, as will be seen by the testimony of the following persons.

BORTON GREEN, being called in the case of Blake vs. Belknap, after being duly sworn, testifies and says, that he resides in Ohio. A few days since examined a house that had been painted nearly eight years with said paint, and to all appearance, it was as perfect as the day it was put on, and could even now see distinctly the brush marks upon the surface.

NORMAN RUDD being called, and duly sworn in the above-mentioned case, says that he was owner or part owner of a large Machine Shop situate in Newmarket, N. H., that the Shop took fire and burned down, loss, \$50,000. The roof of a large Foundry near by, was covered with this paint, a Cupola upon the Foundry was not painted, it took fire and fell on to the roof and burned up, without apparently injuring the roof, except to char the boards underneath.

Amesbury, Conn., August 18th, 1851.

We were present at the burning of the Amesbury Factory, which was struck by lightning on the 10th of July last, and which, with the surrounding buildings, was painted with Blake's Ohio Fire Proof Paint, and have no doubt but that all the surrounding buildings would have been consumed had they not been painted with said paint.

JOHN TALBOT, Superintendent.
DAVID TALBOT, Agent.

Akron, Ohio, May 22d, 1850.

This may certify that we have been acquainted with *Blake's Patent Fire Proof Paint* for some years, and are well assured that it is really what its name indicates—*fire-proof*. We consider it a better fire proof than tin or zinc, and will insure buildings covered with it at a much lower premium than those covered with the above-mentioned metals.

H. K. SMITH, Sec. Summit Mut. Fire Ins. Co.
DAN'L S. LEE, Ag't of Medina Co. Mut. Ins. Co.
D. R. HADLEY, Ag't of Stark Mut. Ins. Co.
R. F. CODDING, Ag't Portage & Farm's Ins. Co.
J. A. BEALES, Ag't Portage Ins. Co.
WHEELER, LEE & CO., Col. Ins. Co.

The best evidence of the value of an article, is from the fact of persons of practical skill, having used in years past large quantities, and still continue to order largely for future use.

OFFICE OF THE PHILADELPHIA & READING RAILROAD CO. }
Philadelphia, July 16th, 1850.

Dear Sir:—This Company have been and are using **BLAKE'S FIRE PROOF OHIO PAINT** extensively for Bridges and Buildings. In the course of time it becomes very hard, and seems to be both fire and water proof under any ordinary circumstances. We decidedly prefer it for the purposes named above, to any paint we have hitherto used, as it costs less and is much more durable.

JOHN TUCKER, President.

ENGINEER'S DEPARTMENT, P. R. R. Co. }
Philadelphia, Feb. 17th, 1850.

Dear Sir:—Having used Blake's Fire Proof Paint on this Road for two years past, I am sufficiently satisfied with its superiority to continue its application to all the structures and cars on the line of the Penna. railroad. Yours, very respectfully,

J. EDGAR THOMPSON, Chief Engineer.

OFFICE PENNA. R. R., April 20th, 1852.

Dear Sir:—Ship immediately the fifty barrels yet undelivered our order for one hundred Barrett Blake's Patent Fire Proof Paint, dated Feb. 15th, 1851, to care of Strickland Knies, Esq., Altoona, and care of John Covey, Esq., Pittsburgh.

Yours truly,

J. EDGAR THOMPSON.

GEORGIA RAILROAD, Augusta, Ga., November 27th, 1851.

Dear Sir:—Please furnish us with (30) thirty bbls. Blake's Fire Proof Paint, Chocolate Color. We have been using Blake's Fire Proof upon Freight Cars and Buildings for the last three years, and it gives me pleasure to state that we have found it both more economical and durable than any other kind of paint.

F. C. ARMS, Gen. Supt.

I fully concur in the above recommendation.

JESSE OSMOND, Supt. Car Factory.

Portland, April 11th, 1851.

Dear Sir:—I have requested Mr. Enory, Ag't and Supt. of the Y. & C. Railroad, to give you an order for twenty bbls. of Blake's Ohio Fire Proof Paint, for the use of this Road; and I take pleasure in adding, that I regard it as an article superior to any other introduced into the market and use, as also more economical in price, for coating Depots, Cars, and every other material of wood or metal, exposed either to fire or weather; and I can cheerfully concur in recommending it accordingly for most uses and roofs generally. Please forward the amount of Mr. Enory's order by the earliest conveyance.

F. O. J. SMITH, President York and Cumberland R. R.

CAMDEN & AMBOY RAILROAD OFFICE. }
Bordentown, March 4th, 1851.

In reply to your inquiry as to your opinion of Blake's Ohio Fire Proof Paint, I would state that we have used considerable of it during the last two years, and consider it a first rate article, and hereafter shall prefer it to any other paint, for Buildings, Bridges and Cars outside.

R. S. VAN RANSELLER, Superintendent.

ENG'S OFFICE, BALTIMORE & OHIO R. R.

Dear Sir:—Being satisfied with the testimonials you here produced, that Blake's Fire Proof Paint which you have for sale is a valuable article for the purposes which they mentioned, I now give you an order for 50 barrels, of 350 lbs. or thereabouts, of the paint; 25 bbls. of Black and 25 bbls. Chocolate color. Consign the paint to Jas. B. Jordan, Mount Clear Depot, Baltimore.

B. H. LATROBE, Chief Engineer.

OFFICE OF MASTER OF ROAD, BALTIMORE & OHIO R. R. }
Baltimore, Nov. 3d, 1851.

Dear Sir:—After using "Blake's Patent Ohio Fire Proof Paint" for the last year, I have concluded to give you an additional order for 40 bbls. I feel a pleasure in saying that I consider it the best material for covering Wood, Brick, or Iron, now in use.

Respectfully your Obedt. Servant.

W. BOLLMAN, Master of Road.

SUPERINT'T OFFICE, RICHMOND & FREDERICKSBURG R. R. }
November 6th, 1851.

Dear Sir:—In reply to your inquiry in reference to our satisfaction with Blake's Patent Paint, sold us last Spring, I would say that we are so well pleased with it that I should like to have you ship us seven bbls. more of the Chocolate at your earliest convenience.

Yours, &c.

THOS. SHARP, Supt. R. F. and P. R. R.

JUNCTION HANOVER COUNTY, November 1st, 1851.

The Virginia Central Railroad Co. have been and are using Blake's Fire Proof Ohio Paint extensively for Bridges, Car-pots, &c. We decidedly prefer it for the purposes named above to any paint we have ever used, as it costs less and is much more durable.

C. R. MASON, Supt.

PHILAD'A. WILMINGTON & BALTIMORE R. R. }
Baltimore, Sept. 10th, 1851.

I have used Blake's Ohio Paint for four years, and have found it to be an article of great economy and value, and calculated to supersede for most purposes all other paints, for Public Buildings and Private Residences.

J. R. TRIMBLE, General Agent.

ATLANTA, December 10th, 1851.

Dear Sir:—Please send me for the Atlanta and Lagrange Railroad Co., 20 bbls. Blake's Fire Proof Paint, Chocolate Color. I have used the paint for various purposes, and am well satisfied that it makes a good and durable coating.

L. P. GRANT, Eng. & Supt. A. & L. Railroad.

SUPERINT'T'S OFFICE, S. W. Railroad. }
Macon, December 5th, 1851.

Dear Sir:—Please ship us, care of Central Railroad Agent, Savannah, 2 bbls. Blake's Fire Proof Paint. I have used on the Central Railroad, and on this road a considerable quantity of the above Paint, in the last four years, and have no hesitation in pronouncing it the best ever for wood that I know of, as a protection from the weather or fire.

GEO. W. ADAMS, Supt.

MACON & WESTERN R. R., Macon, Dec. 6th, 1851.

Dear Sir:—You will please furnish for this Company 8 bbls. Blake's Patent Fire Proof Paint, (Black color,) and 4 bbls. Chocolate color—in all 12 bbls. We have heretofore used Blake's Fire Proof Paint on Freight Cars and Buildings with much satisfaction, considering it both economical and durable.

EMERSON FOOTE, Supt.

MONTGOMERY & W. POINT R. R. Co. }
Montgomery, January 21st, 1852.

We have been using Blake's Patent Ohio Fire Proof Paint for several years for painting Cars and Buildings, and have been highly pleased with it. You may send us twenty barrels of the paint; fifteen of the Chocolate color and five of the Slate color.

Respectfully,
SAM'L G. JONES, Engineer & Superintendent.

ALL ORDERS ADDRESSED TO

WILLIAM BLAKE, Patentee.

119 Pearl Street, New York.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the **BELLEVILLE IRON WORKS**, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans,

Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery, for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be

promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,

No. 61 Camp Street,

New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by
BOORMAN, JOHNSTON & CO.,
June 9, 1853. 90 Broadway, New York.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to

THOS. CHAMBERS, President.

63 Beaver st, N. Y.,

September, 1850.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X, No. 7.]

SATURDAY, FEBRUARY 18, 1854.

[WHOLE No. 931, VOL. XXVII.]

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Commercial Policy of Pennsylvania, Americanism of the Journal.....	97
Reading Railroad.....	99
Trade of St. Louis.....	100
Cleveland and Pittsburgh Railroad.....	100
South Carolina Railroad.....	100
Finances of New York City.....	100
Trade of Oswego.....	100
Terre Haute and Richmond Railroad.....	100
Trade of New York Canals.....	101
Alabama and Tennessee Railroad.....	101
Concentration of Power, as applied to the New England Roads.....	102
Stock and Money Market.....	104
Pacific Railroad.....	106-104
Great Western Railroad of Canada.....	107-105
Cincinnati, Union and Fort Wayne Railroad.....	106
Trade of Buffalo.....	107
Pennsylvania Railroad.....	107
Journal of Railroad Law.....	108
New Slide Valve for Locomotives.....	108
Boston and Lowell Railroad.....	109
Business of New England Railroads.....	110
Franklin Canal Railroad.....	110

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, February 18, 1854.

Commercial Policy of Pennsylvania.--Americanism of the Journal.

The following article from the Pittsburgh Gazette, comes to us with a request, over the initials of J. E. T. (which will not be difficult to recognize,) for its publication.

The American Railroad Journal.—Among all the abusive and unjust remarks concerning Pennsylvania, which have disgraced the New York press of late, the *American Railroad Journal* has furnished the worst. It has borne off the palm in the race of blackguards. Its articles have exhibited an unfairness, a malice and a meanness we have never seen equaled. Human language seems too meagre for the rampant hate and fiendish malignity of the editor. Even in the very last number of his mercenary and contemptible sheet, the editor has compared the people of this State to a nest of pirates and marauders, whose whole object is to intercept the trade of the West, for

the purpose of abstracting toll from it. He says that Pennsylvania "ingenuity has found out a new mode of turning the position of the State to account; and this is by compelling every pound of freight passing through the State, to be lifted from one car to another." The italics are the editor's own.—This sneer has reference to the efforts of the people of Erie to obtain the break of gauge, and is as unjust to Pennsylvania, as it is contemptible on the part of that paper, which no longer ago than April 10th, 1852, contended for a break of gauge at Erie, on the very grounds for which the people of Erie have lately been contending, as will appear from the following leading editorial article of the paper of that date, which was also edited by the same individual who now presides over its columns. We extract the whole article:

"From the American Railroad Journal, April 10, 1852.

Gauge of Railroad from Buffalo to Cleveland.—From Cleveland, Ohio, to Erie, Pennsylvania, the Ohio gauge of four feet ten inches is used. Upon the Erie and Northeast Railroad, extending from Erie to the New York State Line, a distance of some eighteen miles, the wide, or six feet gauge has been adopted. From the State line to Buffalo, the four feet ten inch gauge prevails.

To whom this arrangement is owing we are not informed, but the genius of all evil himself could not have framed a more inconvenient, or one better adapted to obstruct business or travel. With the exception of the Buffalo and State line road, the only gauges known in this State are the four feet eight and a half inches, and the six feet. Common sense would seem to dictate that one of these should have been taken by the Lake Shore road. As it is, there must be transshipments at Buffalo, Dunkirk, the Pennsylvania State line, and at Erie; making four where there should have been but two at most. Either the wide or the narrow gauge should have been carried to Erie. That would have been a convenient place of transshipment, and would probably have been selected as such, had there been no break of gauge even there. There must be a limit to the distance to be run by freight and passenger cars. It is found to be more economical and convenient to tranship freight from one train to another, than to run the train a given distance, on account of the difficulty of preserving order in the arrangement and distribution of the cars. We presume that under no circumstances whatever, would cars loaded at Cleveland be run through to this city. A break of gauge at some point upon the line between the above cities is not objectionable, provided it occurs at the most convenient point. But when there are three or four interruptions to the transit of merchandise and travel, within short distances, and at the most inconvenient places, they will be found to work a serious injury to traffic of all

kinds. We predict the evil will in a short time become so unbearable, as to work out its own cure. What the people of Erie were about, when an arrangement was completed, that completely prevented them from moving in any direction, is more than we can opine. At the Lake their road comes to a dead halt, and all through business has to be tumbled out of their own cars upon those of other companies. All these blunders must be remedied, and the sooner the better."

After reading the above, what confidence can be placed upon the assertions of a man who has been endeavouring for the last month to destroy the credit of Pennsylvania, to depreciate her bonds, and the bonds of her cities and railroads, and resorted to language which would disgrace the fishmarket, in speaking of the people of this great State. We have long entertained doubts of the statements of this paper in regard to railroads, fearing it was governed by its likes and dislikes, or more substantial reasons, but how any Pennsylvanian can hereafter put the least confidence in its statements, or countenance it in any form, and preserve his self-respect, we cannot see.

As a Railroad paper and laboring to promote the prosperity and security of Railroad interests, it ought to discountenance all illegal and fraudulent proceedings on the part of railroad companies. Instead of that, we find it defending the universally acknowledged fraud of the Franklin Canal Company, and lampooning Pennsylvania for the assertion of her sovereignty over her own territory! Such a Journal is wholly unworthy of the countenance of the great railroad interests of this country.

Is it? We will state the real issue presented in the Erie controversy, and then leave it for the public to pass sentence upon the question, whether we are true, or false, to the interests of American railroads.

The doctrine recently put forth by Governor Bigler, "that the territory of Pennsylvania extending from the Great Lakes to tide water, the State has a right to interpose her position, and make it available to promote the advantage of her own people", is not new. It is unfortunately a very old one. Neither is the present the first time in which it has been put in practice. When the Erie Railroad Company found that it could not get to Lake Erie, without traversing a small portion of the State, it applied for the right to do so. This at first, was refused in accordance with "Pennsylvania Policy"; but the privilege prayed for was at length granted upon the payment to the State, by the company, of an annual tax, of \$10,-

000! At the same time there is not the slightest doubt that the company have been the means of increasing the value of the taxable property of the State, at least \$30,000,000 and probably \$50,000,000. For more than 350 miles, the Erie road runs either upon, or within a short distance of the northern and eastern boundary of the State, affording a new and convenient outlet to an immense portion of its territory, previously excluded from market. The people of that portion of the State benefitted, were most eager to have the road brought to them. As an equivalent for the stipend by the company, neither the slightest privilege nor equivalent was yielded by the State. The latter saw that there was a chance to make some money out of her "position", and exacted it. The act is precisely the same in kind, with the toll levied by a marauding chieftain for allowing merchandize to pass through territory over which he exercises sway.

When the New York Railroads reached Lake Erie, the subject of their extension, *west*, was necessarily raised. It was then, that the people of Erie began to assert their intention to participate in the advantages of the Pennsylvania doctrines of "position". Encouraged by the successful levy made upon the Erie Company, they struck for higher game, which was no less than to make their city the terminus of the Railroad, of New York and New England running *west*; and to render their port the sole means of communication between these roads, and the commerce of the interior. The following article taken from the Erie Gazette, which was, and has always been, one of the organs of Pennsylvania exclusiveness, as it has been of the Erie rioters, published in the Journal Sept. 28th, 1850, will show the nature of the claims then put forth.

"This road" (the road running *East*) "so grand in conception and so vast in result, we would convert not alone to our general, but to our particular benefit. Having the power, we need only the disposition to do it. As our contemporary of the Observer has remarked, 'our county holds the key to the great western world and can turn the lock so as to forever shut off an eastern railroad connection with that world, if she chooses.' Will we not exercise this power firmly, fearlessly and judiciously, unintimidated by the menaces of blustering corporations abroad—unsuspected by the gilded bait of dollars and cents. A golden opportunity is now presented—the last, we fear, that will ever be offered of building up Erie, and placing her in a position of honorable and independent rivalry with other cities. Let us, as citizens, wake up from our lethargy, our culpable indifference, upon this important subject. Let us take a deeper interest in it—let us speak out boldly and fearlessly, and determine that foreign influence shall not assume and maintain the direction of an important thoroughfare through our county. Let us show a truly loyal spirit, and resolve that Erie shall be something more than a 'watering place' on the great lake shore iron-horse course."

Such was the ground taken by the people of Erie in 1850, which was nothing less than to cut off all communication between the east and west, except through their harbor! To the article quoted, are added the following comments, which show that at the time our views were in exact harmony with those more recently expressed:

"So, then, Erie is to constitute herself an impassable wall, which is to forever cut off all connection between the railroads of New York and New England, amounting to an extent of line of 4,000 miles, and those of the west. For the benefit of the Erie people the distance from that place to

the Ohio State-line is to be passed over both by passengers and freight by the old mode of conveyance; and a tribute, in the shape of the increased expenses of travel, is to be paid by the greater portion of the business men of the country. Erie, by virtue of her position, is going to tax every man and every pound of freight, that must pass through her town. The ground taken by this place is a most striking illustration of the necessity of free railroad laws in every State. The doctrine here asserted, if carried out, would put a stop at once to the whole internal commerce of the country. In the end, to be sure, it could not be sustained in any case, against the united sentiment of the whole community, but until public opinion could exert its corrective influence, great annoyance and inconvenience might be suffered."

Again. To keep New York outside her territory, the Legislature of Penn. in 1852 passed a law, prohibiting the introduction of the Erie gauge into her frontier. This act was hailed with extravagant manifestations of joy, by the Press of Philadelphia in particular. To show the objects proposed to be effected by the gauge Law, we copy the following from the Philadelphia U. S. Gazette, which is acknowledged to be the most influential and authoritative paper in the State:

"The Law it will be seen, keeps the New York influence outside of the State lines, and harmonizes the railroads of Pennsylvania into one complete system. It avoids transshipment within the State, and keeps our grasping neighbor within her own bounds; and, by binding together the interests of all counties, will foster everywhere a good feeling for Philadelphia. Where a difference in the gauge of railroads renders a transshipment at some point inevitable, it should be fixed near the boundary, for reasons so palpable and convincing as to require no comment. As every transshipment, forced by a change of gauge, is equivalent to fifty miles of road, it is quite apparent that it never should take place in the middle of Pennsylvania, for that would turn the trade of the northern half of the State away from us forever.

Philadelphia, to be strong over the whole western country, must first be strong in her own State. She must first be allied in interest and intercourse with all parts of the commonwealth, and thus acquire strength at home. Her ground plan of operation should cover the whole of the State of which she is the metropolis—her connections with the improvements of other States can then be made and controlled in such a manner as will fill her coffers and swell her commerce. Pennsylvania's soil should not be used as a highway leading to and from her rival and competitor—it should be ramified by railroads uniting in Philadelphia, as the human body is coursed by arteries centering in the human heart.

New York has long indulged the hope and expectation of running across eastern and northern Pennsylvania, to shorten her railroad distance to the Ohio and the lakes. It has been her aim to penetrate Pennsylvania on the north with the six feet gauge of track, and on the east with the New Jersey track of four feet ten inches gauge, and so, while running through the State, secure its local interior trade to the loss and injury of Philadelphia. But this cunning game has been effectually checked in the adoption of the gauge law above alluded to."

We give our comment then made upon the above article:

"Railroads are the agents of commerce, and we have always maintained the ground, that commerce should determine the direction and the manner in which they should be built, upon the same principle, that the wants of commerce determine the model of the ship, and its destination when freighted. The people of the State of New York, have recognized this principle to the fullest extent, in their railroad legislation.

The State of Pennsylvania on the other hand, sedulously pursues a different policy, and seeks to throw barriers in the way of commerce, and taxes

the transportation both of passengers and merchandize, for her own supposed benefit."

We invite comparison between the remarks made by us, two, and four years since, and those of a more recent date in reference to the Erie matters. They show a most perfect consistency of our views throughout.

We now come to the recent authoritative announcement of the Pennsylvania Doctrines by the Governor of the State.

"It must be clear to the impartial observer, that the Legislature never intended, by any previous act, to authorize the construction of a railroad between the City of Erie and the Ohio line. Indeed, the highest judicial tribunal in the State has expressed the opinion that no such authority can be found in the charter of the Franklin Canal Co.; and, in my opinion, the grant should hereafter be made on such conditions only, as will protect and advance the interest of the people of Pennsylvania, so far as they may be involved in the subject. It so happens that a Pennsylvania holds the key to this important link of connection between the East and the West, and it must unhesitatingly say, that where no principle of amity or commerce is to be violated, it is the right and the duty of the State to turn her natural advantages to the promotion of the views and welfare of her own people.

It may be said that a restriction that would require a break of railroad gauge at the harbor of Erie, would be the use of an illiberal principle. The answer is, that the necessity for a break of gauge between the Ohio line and the seaboard exists, as a consequence of a difference in the width of the New York and Ohio Roads. The only question to settle, therefore relates to the point at which it should occur. I have been able to discover no reasons, founded in public policy, why the break should be fixed at Buffalo, that do not apply with equal force in favor of Erie. Tonnage and passengers can be as well transhipped at the latter, as at the former city.

So far as concerns the benefits to either city, incident to a transshipment, the idea is unworthy of notice. But the effects of a break of gauge, and consequent transshipment east of Erie, upon the business of that harbor, must be paralyzing, if not fatal. It would virtually require shipments to be made either at Cleveland or Buffalo. Scarcely less embarrassing would this arrangement be upon the interests of the Sunbury and Erie Road, or any other avenue that may hereafter connect the lakes with the city of Philadelphia.

It may be that neighboring States, possessing similar natural advantages, would give them away for our benefit, but I have not been able to discover any fact in their former policy, to justify such a conclusion. I shall await your action with anxiety."

We have thus shown, by indisputable evidence, that the people both of the State, and of Erie, intended to cut off all communication between the Railroads of New England and N. York and the West except what was maintained through the harbor of that town. The right to build such road, to use the language of Governor Bigler, was steadily refused. It was the failure to get a new charter that led the parties interested in a through railroad route, to adopt the charter of the Franklin Canal Company, which was believed to confer sufficient authority for a railroad from Erie to the Ohio State Line. Under this charter, the road was commenced and has been built. Repeated attempts have been made to stop its progress by injunction, but the courts as often refused to interfere, on the ground that the complaints made did not show that any person had been injured by the action of the Franklin Company, consequently that no cause for action existed.

It was not until it was seen by the people of

Erie, that they could not cut off the East from all connection with the west, that they got up this break of Gauge doctrine, for the purpose of swindling commerce, which is the cause of all the mischief and disturbance which has since followed.

The article copied from the *Journal* by the *Pittsburg Gazette*, and about which such an ado is made, is in entire harmony with whatever we have said in reference to the Erie affairs. At that time, freight arriving to or going from New York, had to break bulk at Buffalo, Dunkirk, the Pennsylvania State line, and Erie; *four* breaks, where there should be only *one*. A much better arrangement would certainly have been, to have carried one of the two New York gauges to Erie, which would have given *one* uninterrupted rail to N. York. We regard the numerous breaks of gauges in this country as the crowning misfortune of our railroads, and we desired to see the evil which they caused done away with as fast as possible. The article shows that the idea of a break of gauge for the benefit of the *break*, never entered into our mind. We were condemning *all* breaks. In reference to such, we said, in the article quoted, that—

"Where there are three or four interruptions to transit of merchandise and travel, within short distances, and at the most inconvenient places, they will be found to work a serious injury to traffic of all kinds. We predict that the evil will, in a short time, become so unbearable as to work out its own cure. All these blunders must be remedied, and the sooner the better."

Notwithstanding the above, the article is quoted to show that we were in favor of a break at Erie!

In all the recent discussions which have taken place, the question whether Erie was, or was not, a convenient point for breaking bulk, for merchandise passing from East to West, has never been raised. As the Ohio gauge is carried into New York, it is clearly *not* the convenient point. The people of Erie, and Governor Bigler, admit this fact by claiming that a free passage through the town would ruin its business. The railroad companies and the public agree with Erie and Gov. Bigler. If it were the convenient point, the change would take place there without compulsion. It being admitted on all hands, therefore, that freight would not voluntarily stop, the people of Erie and the State determined to force it to do so, for the purpose of making money out of the labor a transfer involves, and of turning business from New York. It is against this doctrine, and this alone, that we have protested. We have made no other issue. The convenient point of transfer, or whether any transfer was required, has never been once alluded to. The substance of our reasoning has been this:—"If a break may be made for the benefit of one place, it may, with equal reason, be made at another; consequently commerce is at the mercy of every petty community through which it passes." Against such exclusiveness we have always, on all occasions, been a constant opponent, and have uniformly maintained the ground that commerce should be just as free to select its routes and instruments, as far as works of internal improvement were concerned, as it is to determine the model of a ship, its cargo or its destination. This is our Americanism. It ignores State boundaries altogether, and will wage eternal hostility with whatever seeks to oppress the business of

the country. On this point our tone has been uniform, and we can see but little probability of any change ahead.

The writer in the *Gazette*, (who by the way is not its editor, but a certain railroad official, not 1000 miles from him,) objects to the style of our articles. "Human language," says he "seems too meagre for the rampant hate and fiendish malignity of the editor." The following is the quotation, and the *only* one, adduced to sustain the above charge:—"Ingenuity has found out a new mode of turning the position of the State to account; and this is, by compelling every pound of freight passing through the State to be lifted from one car to another." If here is not a tumble from the sublime to the ridiculous, there never was one. We merely stated the result of the policy of Gov. Bigler, in the most meagre language possible. The quotation is characteristic of all our articles. The truth is, the writer in the *Gazette* sat for his own portrait when he thought he was painting ours. He has drawn a capital likeness, and which everybody recognizes at the first glance. We do not write *billingsgate*, nor do we let it into our paper when we can well help it, except occasionally to hold up a mirror for a person to see his own likeness in, as in the present case.

We have attacked the commercial policy of Pennsylvania, and shall continue to do so, so long as its obnoxious features remain. We utterly loathe and repudiate the whole ground upon which it is based. But while this is so the roads of no State in the Union have occupied a greater share in our columns than those of that State.—Even the Pennsylvania road, upon which it is admitted the salvation of Philadelphia rests, has occupied more space devoted to favorable notices, than the New York Central, Hudson River, and Erie roads, altogether! Our notices of this road have been *uniformly* favorable, both as to its business prospects, and management. It is well known, that in private conversation, we always expressed a belief that it would prove one of the best paying lines in the United States. Of a very different character have been our notices of two of the great New York lines.

The roads of Pennsylvania coming into this market for money, have received the best support and co-operation that we could give them. The same is true of the roads of Ohio and Indiana, which may be properly regarded as legitimate extensions of the Pennsylvania lines of improvement, such as the Ohio Central, Ohio and Pennsylvania, Cleveland and Pittsburg, Cleveland and Mahoning, Steubenville and Indiana, Cincinnati and Marietta, Ohio and Madison, Springfield, Mount Vernon and Pittsburg, and Chicago and Fort Wayne Railroads. These roads are regarded with peculiar favor by Pennsylvania, and many of them have been directly encouraged by the Pennsylvania Central and other interests. They are the roads particularly adapted to open up the trade of the West to Philadelphia. Yet the money to build all these roads has been furnished by New York capitalists. New York has opened the West to Pennsylvania. But for the money the former has furnished, the latter would have, in a great measure, been isolated from the Great Valley. All the Presidents of the above roads will do us the justice to say that we have done what we could to aid them in building Pennsylvania roads. This

is the anti-Americanism, or anti-Pennsylvaniaism, that we are called to plead guilty to.

If we are anti-American, there are a great many in the same category. Our course has met the warmest approval of the very parties who are likely to suffer the most from it:—The holders of Pennsylvania securities. The rapid fall in the market value of these securities, shows how decided has been the tone of the public condemnation of the Erie outrages. The editor of the *Gazette*, instead of admitting false and abusive articles into his paper, would do much better to spend his time in investigating the causes that have produced such a sudden and excessive decline in the value of Pittsburgh city, and Alleghany county Bonds. We are satisfied that he will find some other cause for this than paragraphs of a paper published in a distant city.

Reading Railroad.

The earnings for the year ending Nov. 30th, 1853, were from the following sources:

Earnings from passengers.....	\$225,763 33
Earnings from merchandise carried.....	180,611 80
Earnings from coal, carried at \$1 42 ½ per ton.....	2,254,694 17
Earnings from mail, etc.....	27,218 29

Total earnings.....	\$2,688,287 59
Deduct working expenses.....	\$1,056,551 53
Deduct drawbacks, etc.....	165,985 99
Deduct interest and renewal.....	678,888 23
	1,901,425 75

Leaving for dividend fund.....	\$786,861 84
Add balance dividend fund, 1852...	2,115 66

Total dividend fund..... \$788,977 50

Which has been disposed of as follows:

Dividend on preferred stock, July 1853, and January 1854.....	108,626 00
Dividend on common stock, July 1853.....	172,934 83
Paid State tax on dividend Dec. 1852, and July 1853.....	23,283 71
Paid sinking funds for bonds, 1836 and 1860.....	25,000 00
Paid sinking funds for bonds, 1849 and 1870.....	75,000 00
Paid for balance at the Dr. of interest account.....	101,400 29

\$506,244 83

Leaving for balance of dividend fund for 1853.....	\$283,732 67
--	--------------

A dividend of 3½ per cent. has since been declared upon the common stock, for January, 1854, which makes seven per cent. for the year, on all the stock, and leaving a surplus of dividend fund on hand of \$52,152 89. The sinking funds give a fund for distribution in common stock of 1½ per cent. on both stocks, in addition to the cash dividends, and leave a surplus of \$1,075 29 for the preferred; and \$43,094 97 for the common stock, for future division. The gross receipts for 1853 exceed those of 1852 by \$207,661 18.

Those from coal being in excess.....	\$104,017 00
Those from passengers, in excess.....	57,333 04
Those from merchandise, in excess..	41,648 19
Those from United States Mail, etc..	4,662 92

\$207,661 18

The expenses in each department are less than in 1852, giving increased net profits of \$213,762-78.

Trade of St. Louis and of Alton.

From the statistics of trade of St. Louis for 1853, we gather the following facts, showing the source of the products arriving at that city. Incidentally, it affords a statement of the business of Alton:

<i>Flour.</i>	
From the Missouri river, bbls.....	9,264
From the Illinois " ".....	45,131
From Alton " ".....	27,003
<i>Whiskey.</i>	
From the Missouri river, bbls.....	291
From the Illinois " ".....	20,335
From Alton " ".....	7,860
<i>Corn.</i>	
From the Missouri river, sacks.....	31,378
From the Illinois " ".....	163,813
From Alton " ".....	57,862
<i>Oats.</i>	
From the Missouri river, sacks.....	3,910
From the Illinois " ".....	121,939
From Alton " ".....	47,548
<i>Wheat.</i>	
From the Missouri river, sacks.....	104,817
From the Illinois " ".....	455,612
From Alton " ".....	42,390
<i>Hogs.</i>	
From the Missouri river.....	4,350
From the Illinois " ".....	2,679
From Alton " ".....	10,436
<i>Hay.</i>	
From the Missouri river, bales.....	7,069
From the Illinois " ".....	6,578
From Alton " ".....	6,578
<i>Potatoes.</i>	
From the Missouri river, sacks.....	675
From the Illinois " ".....	11,113
From Alton " ".....	43,489
<i>Horses.</i>	
From the Missouri river.....	231
From the Illinois " ".....	214
From Alton " ".....	383
<i>Cooperage.</i>	
From the Missouri river, pieces.....	16,140
From the Illinois " ".....	34,296
From Alton " ".....	23,203

Cleveland and Pittsburgh Railroad.

We have the sixth annual report of this company, and learn that the entire earnings of the road for the year ending December 31, 1853, were..... \$432,682 46
And the cost of operating..... 165,404 68

Leaving net earnings.....	\$267,277 78
The present amount of stock is.....	\$1,979,100 00
The funded debt.....	1,142,200 00
Balance of temporary bonds and other accounts.....	158,608 29

Total of receipts and expenditures..... \$3,279,908 29

Of the stock as above stated \$218,000 were issued as a loan to the Tuscarawas extension, leaving \$1,761,000 invested in the main line.

The Tuscarawas extension leaves the main line at Bayard and will run 31.1 miles to New Philadelphia. The estimated cost of Road-bed and superstructure is \$624,985 25. Six miles have been opened and six more are laid with iron, while nearly all the grading is finished. The estimate of work unfinished is \$42,797 58, which added to the amount expended falls nearly \$30,000 below the estimated cost.

Of the Beaver and Wheeling extensions, the former is 22¼ miles in length, from Wellsville to Rochester, and the latter 41 miles from Wellsville

to Bridgeport. The Beaver extension is estimated to cost \$515,657 67, and the Wheeling extension \$740,169 29. The amount expended for graduation on the Wheeling line, to Dec. 31, 1853 was estimated at \$108,416 89. The amount expended on the Beaver line was \$50,923 68.

Annual Report of the South Carolina Railroad.

The Charleston papers contain the annual report of the President of the Charleston and Hamburg Railroad, including the Columbia branch. According to the report, the income for the year from—

Passage, freight, mails, etc..... \$1,215,279 21
And the expenses of the management, ordinary and extraordinary, (the ordinary equal to 43 per cent.)..... 555,536 88

Leaving a balance of..... 663,742 33
Out of which have been provided interest on foreign and domestic debt, and for claims for damages, etc..... 199,773 72

And the remainder..... 463,968 61
Has afforded two dividends of 4 per cent. each, amounting to..... 311,376 00

And transferred a balance of..... \$152,592 61
To the credit of surplus income for the year.

Mr. Caldwell, the President of the company, says the road will require extensive improvements upon our business has been already sensibly felt, and we confidently look for a larger future accession to it, and for an increasing social and commercial intercourse between the two States. Our affairs have been conducted there with regularity and despatch."

Finances of the City of New York.

The operations in the sinking fund for the redemption of the city debt were as follows, during the year ending July 31, 1853:

Receipts.....	\$743,299 52
Balance, Aug. 1, 1852.....	713,292 41
	\$1,456,591 93

Redemption of water loans.....	\$799,850 00
Invested in fire indemnity stock.....	600,000 00
	26,718 43
	1,426,568 43

Balance on hand, Aug 1, 1853..... \$30,023 50

The operations in the sinking fund for the payment of interest of the city debt are as follows:

Receipts.....	\$933,191 32
Balance, Aug. 1, 1852.....	398,162 35
	\$1,331,353 67

Paid interest..... \$776,977 88

Redeemed revenue bonds..... 200,000 00

976,977 88

Balance on hand Aug. 1, 1853..... \$354,375 79

Total city debt Aug. 1, 1853..... \$18,960,856 00

Of which have been repurchased..... \$3,692,548 00

Also securities..... 942,490 22

\$4,635,038 22

Debt unprovided for..... \$9,325,817 78

The total receipts of the year ending Dec. 31,

1853, were \$8,823,857 17; expenditures, \$7,927,740 88; excess of receipts, \$896,110 20. The assets in the hands of the city amount to \$4,601,167 18; besides a sinking fund of \$484,959 33.

The assessed value of the real and personal property of the city in the years 1852 and 1853 was as follows:

	1852.	1853.	Increase.
Real estate, \$253,186,753	\$294,652,795	\$41,466,042	
Personal " 98,520,042	119,034,137	20,514,095	
Total, \$351,706,795	\$413,686,932	\$61,980,137	

Trade of Oswego.

The receipts of flour, wheat and lumber, from Canada, for three seasons, compare as follows:

	1851.	1852.	1853.
Flour, bbls....	259,875	193,190	113,007
Wheat, bu....	676,803	1,362,432	1,781,158
Lumber, ft....	62,527,843	75,600,000	123,535,747

The following statement shows the quantity of flour, wheat and lumber received at Oswego and Buffalo during the year 1853, with the total of both:

	Oswego.	Buffalo.	Total.
Flour, bbls..	391,215	975,557	1,366,772
Wheat, bu..	7,436,391	5,424,048	12,860,434
Lumber, ft..	135,434,235	80,295,789	224,729,024

Comparative statement of the total tonnage of property cleared from, and received at, Oswego, by canal, for three seasons:

	1851.	1852.	1853.
Cleared.....	395,447	400,695	495,552
Received.....	180,715	179,415	221,469

Total No. tons... 576,162 580,110 717,013

Comparative statement of the total value of property shipped from, and received at, Oswego, by canal, for two seasons:

	1852.	1853.
Property cleared.....	\$10,746,037	\$14,211,098
Property received.....	16,415,334	20,265,064

Total value..... \$27,161,371 \$34,476,162

Comparative statement of tolls collected at Oswego, for two seasons:

	1853	1852
.....	\$392,730 71	314,436 88

Increase in 1853..... \$78,293 83

Terre Haute and Richmond Railroad.

The income of the company for the last fiscal year, ending Dec. 31, 1853, is as follows:

Passengers.....	\$109,130 96
Freights.....	58,244 70
Mails and Expresses.....	10,600 31

Total receipts..... \$177,975 97

Expenditures for operating and repairs of road..... 66,331 37

Nett earnings, 1853..... \$111,644 60

Nett earnings, 1852..... 71,466 05

Increase..... \$40,178 55

Number of through passen-

gers..... 32,155

Number of way passengers... 56,666

Total number of passengers... 88,821

Number of miles run by passenger

train..... 50,306

Number of miles run by freight

train..... 47,020

Number of miles run by Gravel and

ditching trains..... 32,139

Total number of miles run..... 129,465

GENERAL ACCOUNT.

Dr.	
Construction.....	\$1,414,284.50
Union depot and track..	21,241.45
	\$1,435,525.95
Bills receivable.....	9,504.20
Mail transportation.....	1,825.00
Due from other roads...	4,091.06
Vigo county bonds.....	11,400.00
Treasurer (cash on hand)	8,240.83
	1470587.04
Cr.	
Capital stock.....	\$738,650.00
Seven per cent. bonds.....	600,000.00
Six per cent. bonds.....	28,600.00
	\$1,367,250.00
Certificates of interest on stock, outstanding....	484.86
Bills payable.....	38,774.20
Dividends unpaid.....	864.63
Dividend, No. 3.....	29,546.00
Sundry Accounts.....	4,962.32
Surplus.....	28,705.03
	1470587.04

Trade of New York Canals.

The following table shows the receipts from tolls on all the canals of the State, for the fiscal year ending on the 30th day of September, 1853:

Erie canal.....	\$2,833,970 70
Champlain canal.....	120,998 05
Oswego canal.....	97,297 99
Cayuga and Seneca canal.....	24,849 59
Chemung canal.....	19,603 18
Crooked Lake canal.....	1,391 06
Chenango canal.....	20,208 18
Genesee Valley canal.....	31,230 71
Oneida Lake canal.....	11,571 67
Black River canal.....	4,648 71
Cayuga Inlet and Baldwinsville canal.....	1,127 42
Oneida River Improvement.....	37,630 47
Total.....	\$3,204,718 05

The receipts from tolls during the past three years were as follows:

1851.....	\$3,329,304 60
1852.....	3,118,244 39
1853.....	3,204,718 05

There are 887 miles of completed, and 65 miles of uncompleted canals in the State. The total tonnage that has passed over the canals is 3,052,251 tons, showing an increase over 1852 of 295,908 tons; over 1851 of 607,145 tons.

1852. 1853.

The value of property arriving at tide water....	\$66,893,102	\$74,643,061
Value of property going from tide water.....	118,896,444	114,890,801

Total.....	\$185,789,546	\$188,533,862
Increase over 1852.....		\$2,744,316

The following were the expenditures of all kinds during the fiscal year; also from the 30th September to date:

	1853.	From Sept. 30.
Erie canal.....	\$39,685 19	\$12,092 17
Erie canal enlargement..	501,113 11	209,357 20
Black River canal.....	27,793 73	16,011 40
Genesee Valley canal.....	120,116 38	43,334 28
Champlain canal.....	2,217 55	1,237 55
Oswego canal.....	230,375 53	69,997 38
Chenango canal.....	254 16	650 00
Chemung canal.....	5,985 45	75 00
Chemung canal feeder...	6,877 29	
Cayuga and Seneca canal	14,323 25	18,580 00
Baldwinsville canal.....	2,982 33	

Total.....\$951,725 07 \$371,281 98

The amount expended during the year 1852 was \$824,533 63, and for the past fourteen years, \$8,116,121 65.

Alabama and Tennessee Railroad.

The annual report of this company, presented to the Stockholders on Dec. 5. 1853, gives the following general facts relative to the progress and condition of their work.

On the fourth of July last the road was opened to Montevallo, 55½ miles from Selma. From Montevallo to the East bank of Coosa river, 29¾ miles, the grading and masonry are under contract to be finished by the first of July next. From Coosa to Gadsden, 82¾ miles, all but 24¾ miles are under contract.

From Selma to Montevallo the graduation, masonry, bridging and superstructure have cost \$571,804 26, or \$10,334 43 per mile. The amount expended for depots, equipment, engineering &c., is \$145,272 51. From Montevallo to Coosa river, including the bridge across Coosa, it is estimated to require for graduation, bridging, masonry and superstructure \$527,841, of which \$122,051 have been paid in cash and stock, leaving \$405,790 to be expended.

From Coosa to Gadsden the estimate for the roadway, including the same items as specified for the other division, is \$606,695, of which \$165,662 have been paid, leaving \$441,033 to be applied to that portion of the work.

The earnings of the road in operation up to November 1st, 1853, were \$37,535 61, the expenses \$31,889 57, leaving net earnings of \$5,646 04. Besides these, the road has done a business in transportation of materials for construction, for which \$21,312 have been charged.

The road has received in cash on subscriptions.....	\$450,704 94
From State, in cash.....	178,016 24
Contracts in Stock, estimated.....	87,021 00
Donated lands from individuals....	13,000 00
	\$728,742 18

Sales of Bonds, 500 of Railroad and 50 of Selma city.....	\$512,494 12
Discounts, commissions, &c.....	37,505 88
	550,000 00

Bonds to be issued.....	\$338,450 00
Selma city Bonds due...	35,000 00
Stock subscriptions due	517,844 06
	891,294 06
	\$2,170,036 24

The entire road from Selma to Gadsden is estimated to cost, equipped.....	\$2,900,000
Of which there remains to be raised.....	948,345.
Of this sum there can be obtained on bonds unissued.....	\$338,450
And it is proposed to obtain a State loan of... 500,000	\$838,450
	\$109,895

Adding balances due on work in progress.....	170,575
--	---------

Leaving to be raised from other sources.....	\$280,470
--	-----------

It is believed that by suitable exertions this last sum can be raised by individual subscription; while the company might also reasonably hope to receive subscriptions from counties in the incorporate capacity, in view of the aid of this character which has been extended, both by counties in Ala-

bama and in other States, to similar enterprises. The value of real estate in the counties intersected by the Alabama and Tennessee railroad has been enhanced as much as the most zealous friends of the latter have ever anticipated.

The prospects of this road, are not, of course, to be measured by its present condition. Being only in the intermediate stages of construction it has not yet attained a position to accomplish results.

The discharge of the productions of the country which it has now reached, is *periodical*; not continuous. The heavy *down* business of last winter was forced into other outlets, in the absence of the railroad facilities which this work is just beginning to supply. Its opening to Montevallo, consequently, in July, was not contemporary with the flood of that tide which must, hereafter, flow with successively increasing volume through this channel. And again, the early date of the Report conceals the results of the business which is seeking the road at the present time.

But, that the road is destined to do an important business, there can be no doubt. It runs through a country abundant in natural resources, and has already reached a stage where these will become available. And it will command yet more important points before the next periodical flow of freight, by the extension of the road across the Coosa river. This is expected to be completed in September of this year. Besides the agricultural interest, at present the most important in Alabama, the coal, iron and lime accessible in Bibb and Shelby counties will soon become an important addition to the business of the road, and such as will be nearly continuous in movement throughout the year.

While this road has availed itself of those features of its route naturally favorable for cheap construction, it has been built in the most permanent manner, such as is characteristic of Northern roads. Much of the work has been done in "working out" stock subscriptions, by men whose homes and property are contiguous to the road. Indeed, both the capital and labor for the construction of the work have been well supplied from local resources, and when the road shall have been completed its bonds will be secured by an investment upon which nearly three times their whole amount has been economically and profitably expended.

Looking to the time when, besides the full development of its local resources, the Alabama and Tennessee railroad shall have completed its ultimate connections, and thereby secured its important position in the great lines of railroad connecting all the Northern and [the most important of the Western States and cities with Mobile and New Orleans, it may be safely said that no other part of these lines coincides more nearly with the natural direction of the trade which they aim to control, none upon which a larger or better business can be created, and few which have better facilities for cheap and expeditious operation and consequently with these combined advantages, a better promise to their stockholders.

Profits of Locomotive Building in the West.

The Menomonee Machine Shop, a small establishment in Milwaukee which has built most of the Equipment of the Milwaukee and Mississippi road, has declared a dividend to the stockholders, to the amount of 20 per cent, on the capital paid in.

Concentration of Power, as applied to the leading New England roads.

BY ZERAH COLBURN.

In the progress of railroads there has been a natural tendency to increase the capacity of the motive power, by which is understood an increase in the dimensions of the steam generating and steam consuming parts of the locomotive, and necessarily an increase of weight. But this tendency must soon find a limit, with a given construction of locomotive, in the *economical resistance* of the rails. The original locomotive had but a single pair of driving wheels, these being all that were then required to support half the engine and to afford the necessary adhesion. And although the weight of the locomotive has been since increased three or four hundred per cent, this general principle of the distribution of weight still governs the construction of passenger engines in England. Engines having from 11,000 to 14,000 lbs. upon a single driving wheel, and with some classes of engines, as much as 12,800 lbs. upon a single leading wheel, are not uncommon. For the ordinary class of express engines, a weight of 12,500 lbs. on each driving wheel is a common allowance. Every effort has been made to increase the *speed* of these engines, while from this reason and the increase of traffic, a much greater number of engines has been run than formerly. Hence the destruction of rails and road-bed which was originally measured by years is now the work of months or weeks. Indeed, by 1847, the "depreciation of permanent way" had become so alarming in England that stockholders begun seriously to doubt the value of their investments, and this as much as any other cause, disclosed the fatal results of the over construction of railways in Great Britain.

As a reaction upon this system a number of engineers at once advocated the use of "light engines", and many were built and tested, which under good circumstances performed well for trains of corresponding weight. But from the absence of that *surplus of power* which an important equipment of locomotives always requires, to be *reliable* under all circumstances, it was soon shown that the *power* must still maintain an ascertained ratio to the *resistance*, and that the essential parts of the engine could not be altered so as to involve much less absolute weight than before.

Yet it was true that, by the system of motive power partially established in our own country, a considerable reduction of weight for a given power could be made, while the absolute weight could be *distributed*, so that it should not exceed a minimum upon a single point. These important results were attained in the use of the "outside connection" of the piston and crank, and in the "coupled drivers". These two features were distinctive and might be claimed as the basis of the American system of motive power.

On many of the roads in this country, however, a construction of engine which was a *mean* between the extremes of both systems, had become generally established. This was the eight wheel plan, having two pairs of connected drivers and a truck frame. It was such a plan as was suited for the heavy passenger business of any road, but which, without possessing the merits of adaptation, had been also impressed into freight service. Where it was combined with the "inside connection" the power could not be materially increased

without involving considerable concentration of weight, and the result was an approach to those which had proved so disastrous in England: But while the result was nearly the same it was differently manifested. Instead of concentrating our power by the desperate English means of a concentration of weight, our engines were kept at the ordinary limits imposed by the double crank, and by that of "four tons to a wheel", while to make up for this deficiency, as a matter of course, a greater number of engines had to be employed. The first reaction of the English system extended to our own, and many railroad men were content to believe that "light and frequent trains" were the true conservators of economical operation.

While I shall hereafter show all the advantages which can be claimed for the system last named, I shall now proceed to examine the *cost* of its application to the working of interior roads, and those relying upon a *through* business. I shall also show its operation on undulating roads having severe grades.

The system will be considered especially with reference to working freight.

The *cost* of transportation governs the profits both of transporting and often those upon the articles transported. The cost of railroad transportation is increased less with the capacity of motive power and of trains than with the *number and mileage of engines*, and the *speed* at which they are worked. The chief items, forming much more than one-half, of the cost of running trains are the repairs of road, repairs of engines, wages of engine and train hands, and fuel. For instance, in 1852 the cost of running a freight train of 222 tons, or 73 tons of freight, for 100 miles upon the Erie road was as follows

Cost of maintaining way.....	\$12 19
Repairs of locomotives.....	7 52
Engine and train hands.....	12 70
Fuel and cost of preparing.....	13 87
Oil for engines.....	2 19
	\$48 47
All other expenses.....	25 32
Total.....	\$73 79

Again, the transportation of freight upon the Baltimore and Ohio road, for the year 1852, shows the following result per ton per mile:

Repairs of road and bridges.....	295 cent.
" " engines.....	104 "
Wood and coal including labor.....	094 "
Oil and waste for engines.....	036 "
Engine and train hands.....	161 "
	690 "
*All other expenses.....	243 "
	933 "

* It is necessary, before proceeding any farther, to state that although the power or capacity of the Baltimore and Ohio engines is greater than that of the Erie engines, yet the grades and curves of the former road are so severe as to offset the advantages of concentrated power. The whole expense per ton moved, of operating the engines and maintaining the road are generally no greater upon the Baltimore and Ohio road than upon the Erie; in fact, a portion of these expenses is less; but from the different character of much of the freight moved on the former road, and the better construction of freight cars, the expenses, other than those of the road and engines, are much less, so that the first class of expenses, although not absolutely greater than on the Erie road, is *relatively* so.

Of that class of expenses which I have shown to form from one-half to three-fourths of the whole cost of moving freight, the increase is not proportional to the capacity of the engine or trains, but is almost wholly dependent on their number and mileage, more especially upon their *number*.

The wear of road and bridges is caused, to a great extent, by the locomotive, the weight on the wheels of which is twice per wheel of those of the cars, while the engine has to *force* itself over the rails by its *adhesion*, instead of being *drawn*. Again, the engine, being at the head of the train, gives the *blow* which first disturbs the resistance of the rails and road bed. Except the weight be excessive upon a *single* wheel, a great part of the wear would be no more with an engine of thirty tons weight, than with another of twenty. With the same engine, however, the wear is increased in a rapid proportion to the *speed*, while the useful load is at the same time diminished.

The wear of engines is well known to be more in proportion to the number and disposition of their parts, than to their size. There is so much room to reduce the cost of repairs of freight engines by using the outside connection, iron tubes, chilled tire, etc., that a great increase of power could be obtained with these advantages without increasing the ruling rates of engine repairs. In practice, those roads which use the heaviest eight or ten driver-engines, conduct their repairs the cheapest.

Fuel is not consumed, in practice, in proportion to the expenditure of steam. A very large proportion of fuel is almost necessarily *wasted*; being lost in getting up steam, in waiting at stations, by blowing off steam, by priming, by leakage in the boilers, by condensation of steam, by the entrance of cold air in firing, and by other causes, nearly all of which sources of loss are exactly proportionate to the number of engines. The carelessness, and consequently the waste of firemen is proportionate to their number.

So with oil and waste, the expenses for which are nearly proportional to the number of parts to which they are applied, and the *number of hands* applying them.

The wages of enginemen and firemen are almost exactly in proportion to the number of engines.

The number of train hands is nearly in proportion to the number of trains run. One conductor is required on every train, no matter how short; a single brakeman can control more brakes on a long train, while every train requires one brakeman on the *last* car.

The capital invested in engines, engine houses, turn tables, turn outs, shops and stationary machinery, and very often in second track, is nearly proportional to the number of engines used. While the destructive, and often fatal results of accidents, increase, under a given system, in a close proportion to the frequency of trains.

In comparing the expenses of heavy against

By "a better construction of freight car," I mean that those of the Baltimore and Ohio Railroad have outside bearings which permit the use of oil tight boxes, and a consequent great saving in removing boxes and in oiling. These cars have also a "through draw rod," by which the whole train is connected by a continuous iron bolt, and no car is strained beyond its own weight. Again, the narrower gauge of the Baltimore road saves something in wear of wheels and axles, especially on curves of equal radii on both roads.

light engines; or engines intended for slow speeds with those which run at a rapid rate, the usual reference to the "miles run" is not correct, as the heavy or the slow engine does perhaps *twice the work*, and therefore *earns twice as much per mile* as would the other engines in the same distance. If it costs \$1 00, per mile run, by trains carrying 200 tons of freight, and it costs 67 cents for trains carrying 50 tons, the full train is of course the cheapest.

If a large proportion of power is to be absorbed by heavy and continuous grades, such as cannot easily be surmounted by a moderate increase of pressure or reduction of speed, then engines of greater power should be used instead of dividing the trains. An undulating road with severe grades, and aiming to control a heavy business, must be equipped throughout with what I have termed concentrated power.

I have been thus particular in stating the general principles which control the cost of freight transportation, because there are so many roads in New England which stand so palpably in need of their application. A large share of the soundest and most essential capital of that section has been invested in great lines of railroads, aiming to secure a western business, besides the development of a local trade. These roads have encountered natural difficulties such as cannot be profitably controlled except by concentrated power.

The Western R.R. of Mass., for example, has a rise and fall of over 3500 ft. in a length of 156 miles. It has, besides others, three summits, respectively 906 $\frac{3}{4}$, 1456 $\frac{1}{2}$, and 954 $\frac{1}{2}$ feet above the base line of the road. There are, in all, 224 planes. Of the entire length, 22,924 miles, or 15 per cent., are on grades of between 50 and 83 feet rise per mile, while 88,365 miles, or 57 per cent., are inclined above 30 feet per mile. There is a continuous grade of 74 feet per mile for 5 $\frac{3}{8}$ miles; one of 79 feet per mile for 4 $\frac{1}{8}$ miles; and one of 83 feet per mile for 1 $\frac{1}{2}$ miles.

The standard freight engine of the Western road is "inside connected"; has 16 by 20 inch cylinders; 4 $\frac{1}{2}$ feet wheels; weighs 23 tons and has about 4 tons to each driving wheel. It expends 3,481 cubic feet of steam per mile; [the ultimate power being equal to about 650 tons on a level, or 180 tons on an 83 feet grade. 130 tons is about the weight of eight eight-wheel cars, well loaded, and this is all that could be drawn over such grades by these engines, without an average pressure of steam in the cylinder of more than 75 pounds per square inch, and an adhesion greater than two-ninths of the driving wheels. In the months during which the motive power is in the fullest use this amount of adhesion cannot be always relied on except by an injurious use of sand.

The cost of moving one ton one mile upon the Western road has averaged, for several years, 1.4 cts. The charge has been 2.8 cts. per mile. The following table shows the tonnage for each year since 1846, and the receipts from freight,

Year.	Tons moved one mile.	Rechts. from freight,	Receipts per ton per mile
1847	28,037,628	\$785,345 66	2.8
1848	24,656,129	745,909 76	3.02
1849	25,307,146	745,393 81	2.9
1850	25,206,308	740,493 53	2.9
1851	23,304,050	714,362 92	3.06
1852	23,724,070	685,062 85	2.9
1853	28,153,554	786,215 87	2.8

It has been the continual effort of those interested in New England roads to devise means for attracting to them the great through business, for which the natural water routes at their western termini are successful competitors. The only plans which have been urged were the construction of roads with easier grades and less distance and the adoption of lower charges for freight. But upon the Reading road, having the most favorable grade for cheap transportation, the concentration of power, or use of heavy engines has been carried to great extent, and has been one of the most important means of reducing the cost of carriage. Ninety cars carrying 475 tons (of 2,000 lbs.) of coal is the usual load for the latest class of engines upon this road.

By the other proposed system of lower charges what would be gained? More business would offer, and more engines of the present kind would be required to do it. The wear of road and machinery, and the expenses of the operating force and of fuel, oil etc., would be increased, nearly in proportion. Allowing the increase of business this result must follow.

In the mean time the through business moving Eastward on New England roads is rapidly falling off. That of the Western road was but one half in 1852 what it was in 1847. In 1853 an improvement occurred in the amount of business, but the charges and the cost remained substantially the same per ton.

If this road, by a different system of motive power could operate maximum trains, say of 100 tons of freight, they might reduce the cost to 1 cent and the charge to 2 cents per ton of freight per mile. Instead of 28,153,554 tons of freight moved one mile in 1853, 39,310,793 tons could have been moved, an increase of about 40 per cent. With this increase of freight the road could afford to receive even a less proportion of profit on its transportation, by reason of the travel which would be thereby attracted.

But it will be said that the business of the Western road has long been below the capacity of their engines. This is only true in averaging the weight of trains in a year's business, in which the result is aggravated by the preponderance of Eastward bound freight, which last year was twice that of the Westward bound freight. On the Reading road the coal cars are wholly empty in returning, and yet the trains the other way are fully up to the capacity of the motive power.

The freight trains moving East on the Western road, in the summer and fall months are certainly as heavy as the engines can control, and the press of business is such that frequent trains are run; showing conclusively that the important business is not below the capacity of the engines. Indeed, looking at the physical features of the Western Railroad, and to the vast business which it seeks to control, all of which is contested by shorter and naturally cheaper routes, it is undeniable that the motive power of this road is decidedly of an inferior character in point of capacity.

The means of economical increase of capacity must lie in the simplest construction of machinery and especially in the distribution of the weight thereof. The Western railroad equipment could be changed for freight engines having 18 by 24 inch cylinders and 54 inch wheels, weighing 30 tons, and having three fourths of that weight for adhesion,

there being six connected drivers and a truck frame; the whole power being 50 per cent. greater, while the weight on each wheel would be the same. It is not necessary to discuss the details of such engines as these general proportions and arrangements are already in successful use on some of the leading freight roads in the world.

The adaptation of power for most roads has been determined more by the preferences of the builders than upon any other authority. For instance, the motive power of the Western road is substantially that of all of the other roads in Massachusetts, New Hampshire and a part of Vermont, and without any especial reference to length of road, grades, curves, or character of traffic. The doctrine of "light and frequent trains," applicable only to the suburban passenger communication of a metropolis, being ruinous for any interior road aiming at a heavy business, and especially at a through trade,—a doctrine established in the circumstances enumerated at the commencement of this article, has materially influenced the cost of transportation on New England roads, and directly benefitted those rivals which seek the New York Market.

As a necessary and only means of reducing the cost of freight transportation on New England roads, and of arresting the rapid decline of their foreign business, a prompt and judicious application is necessary of the principles of concentration of power.

Improvement of the Red River.

The work of blowing out the falls at Alexandria has been commenced. The plan adopted by the contractors, is to deposit a tin canister, by means of a rope and guiding rod, on the surface of the rock to be removed, containing from 50 to 150 lbs. of powder. To this is attached a wire, connected with a galvanic battery, which, at the pleasure of the operators, fires the powder. The explosion shatters the rock beneath, and the process is repeated until the concussions have displaced the rock to the desired depth. Neither drilling, dredging, nor dragging is employed. The channel will be made from 40 to 60 feet wide, instead of 30 feet, as before reported; but even from 40 to 60 feet will be too protracted for steamboat navigation. The softness of the rock and low stage of the water act as slight drawbacks on operations, but good progress is made with the work. A channel will first be blasted through the lower rapids, and the effect on the river above be ascertained, before going to work on the impediments above.—*Shreveport Southwestern.*

The contractor is Professor Maillifert, who blasted out the rocks at "Hell Gate" in New York harbor.

Pennsylvania Railroad Tunnel.

The tunnel which has just been completed on the line of the Pennsylvania Central Railroad passes through the summit of the Alleghany Mountains at a point known as Sugar Run Gap. It lies in the counties of Blair and Cambria—the summit being the dividing line. It is 3,612 feet long, 2,685 feet of which is arched, containing 7,700 perches of cut stone and 6,400 perches of brick masonry, and 927 feet is cut through the solid rock where arching is unnecessary. Eight feet of the arch on each side is built of cut stones 22 $\frac{1}{2}$ inches thick, resting on abutments of rock range work of the same thickness, and the crown consists of five courses of hard burnt brick—the whole laid with hydraulic cement. At grade, the width of the tunnel in the clear is 21 feet—ten feet above the grade, 24 feet. The height above the grade is 23 feet.—The greatest elevation above tide is at the west end of the tunnel, where the height is 2,161 feet. The grades ascending the eastern slope commence at

Altona, and in a distance of 12 miles, where the west end of the tunnel commences, the height overcome is 998 feet, or 823 $\frac{1}{4}$ feet to the mile.

American Railroad Journal.

Saturday, February 18, 1854.

Stock and Money Market.

The share market shows a slight improvement since our last issue. Everything dances attendance upon the Eastern question. The last steamer reports were regarded as more favorable than than those of the preceding. It is useless, however, to expect that any active demand can spring up for our securities, till peace, or war is determined upon. Either event by putting an end to a period of suspense, would probably help matters on this side. In the securities of new works next to nothing is doing. Money is easy on call, and sufficiently abundant in the business channels, and is daily becoming more so from the absence of speculative movements.

E. F. JOHNSON UPON THE PACIFIC RAILROAD.

We have published, and have for sale, E. F. Johnson's recent work upon the Pacific Railroad. Mr. Johnson is admitted to be one of the first Engineers in this country, and his reputation is a good guaranty that the subject under discussion has been thoroughly considered and discussed. The work is illustrated by a large map, showing all the proposed routes, a profile of the Northern Route, a map of the mountain chain traversed by it, and seven lithographic views of various points upon its line. The whole work is elegantly got up, and makes a volume of 176 Pages, Octavo.

Persons wishing to procure copies of the above work, by forwarding one dollar to our address, can have a copy of the same with the maps, forwarded by mail post paid.

Central Ohio Railroad.

This company, as we learn, have contracted for 24 additional engines, to be delivered, all, previous to January 31st, 1855. This will make 41 with those now in use. The estimated amount of graduation uncompleted in October last, was \$464,000. The road is expected to be opened to Cambridge, 50 miles from the Ohio river, by March.

Artesian Wells.

At Selma, the Alabama and Tennessee Railroad Company have dug an artesian well for the supply of water for their engines. This well discharges 240 gallons of water per minute, at a height of 22 feet. An attempt was made to bore an artesian well on the line of the road, 32 miles from Selma, but without success.

Debt of San Francisco.

The funded debt of San Francisco is \$1,500,000 and the California Legislature will probably pass a law authorizing its liquidation so fast as means can be accumulated for the purpose. The floating debt, over \$490,000, the city has already taken means to pay by the sale of city property valued at near \$700,000.

Mobile and Ohio Railroad.

We learn that the Legislature of Alabama has voted to make a loan to the above road to the amount of \$400,000.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Total cost of road and equipment.	Gross Earnings for last official year.	Net Earnings for last official year.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence. Maine.	150	1,538,100	2,978,700	6,150,278	254,743	113,520	none	83
Androscoggin and Kennebec. "	55	809,378	1,016,500	2,064,458	140,561	80,053	none	40
Kennebec and Portland. "	72	952,621	1,071,80	2,514,067	168,114	100,552	none	31
Port., Saco and Portsmouth. "	51	1,355,500	123,884	1,459,384	208,669	6	96	96
York and Cumberland. "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	83
Concord. "	35	1,485,000	none.	1,485,000	305,805	141,836	8	111
Cheshire. "	54	2,078,625	720,900	3,002,094	287,768	55,266	5	38
Northern. "	82	3,016,634	.....	.....	328,782	163,075	5	59
Manchester and Lawrence. "	24	717,543	.....	.....	.....	.....	6	90
Nashua and Lowell. "	15	600,000	none.	651,214	132,545	51,513	8	106
Portsmouth and Concord. "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan. "	26	.....	.....	673,500	.....	.....	none	21
Connecticut and Passumpsic. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	80
Rutland. "	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	11
Vermont Central. "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	13
Vermont and Canada. "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	ent.	97	97
Western Vermont. "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley. "	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell. Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7	91
Boston and Maine. "	83	4,076,974	150,000	4,092,927	659,001	338,215	7	103
Boston and Providence. "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	84
Boston and Worcester. "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	100
Cape Cod branch. "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River. "	52	1,591,100	193,500	1,801,946	223,004	72,028	5	55
Eastern. "	75	2,850,000	500,000	3,120,391	488,793	241,017	7	89
Fall River. "	42	1,050,000	none.	1,050,000	229,445	99,589	8	100
Fitchburg. "	66	3,540,000	112,305	3,623,073	574,574	232,787	6	91
New Bedford and Taunton. "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County. "	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony. "	45	1,964,070	282,300	2,293,534	374,897	122,816	none	92
Taunton Branch. "	12	250,000	none.	307,136	137,406	24,399	8	.....
Vermont and Massachusetts. "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	23
Worcester and Nashua. "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	58
Western. "	155	5,150,000	5,319,520	9,953,759	1,525,224	746,736	7	97
Stonington. R. I.	50	.....	467,700	.....	240,572	110,892	.....	65
Providence and Worcester. "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal. Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven. "	72	2,350,000	800,000	3,150,000	689,529	294,269	10	124
Housatonic. "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer. "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven. "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	101
Naugatuck. "	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	52
Norwich and Worcester. "	54	2,121,110	701,600	2,696,488	267,561	116,965	4	57
Buffalo and New York City. N. Y.	91	900,000	1,550,000	2,650,500	Recently opened.	.....	none	85
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line. "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira. "	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna. "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie). "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	79
Hudson River. "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	69
Harlem. "	130	4,725,250	977,463	6,102,935	681,445	324,494	5	54
Long Island. "	95	1,875,148	516,246	2,446,391	205,068	44,070	.....	324
New York Central. "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	110
Ogdensburg (Northern). "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	1	29
Oswego and Syracuse. "	35	350,000	201,500	607,803	90,616	43,609	.....	70
Plattsburg and Montreal. "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga. "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington. "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington. "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland. "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston. "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome. "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy. N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex. "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey. "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	181
New Jersey Central. "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley. Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East. "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster. "	36	830,100	713,227	1,702,623	265,327	106,320	8	.....
Philadelphia and Reading. "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	76
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,265	868,038	541,769	5	80

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97½
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna.. "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.... "	140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	115
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	100
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia.. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga.. "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	482,682	267,278	10	83½
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	97½
Cleveland and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	118
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	104½
Cincinnati and Marietta.... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	109½
Mansfield and Sandusky.... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	87
Ohio and Pennsylvania.... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley... "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Xenia and Columbus..... "	54	1,291,000	300,000	1,257,714	317,000	158,500	10	107
Evansville and Illinois.... Ind.	31	.....	.....	In prog.	237,506	.....	.....	77½
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	115
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	87
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently opened.	.....	.....	69
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,932	.....	.....	.....	82
Lafayette and Indianapolis... "	62	.....	.....	.....	.....	.....	.....	70
Madison, Indianapolis & Peru "	138	2,647,700	1,241,300	2,400,000	516,414	268,075	10	108
Peru and Indianapolis..... "	40	.....	.....	In prog.	.....	.....	.....	65
Terre Haute and Indianapolis "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	136
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	122
Galena and Chicago..... "	92	1,932,361	500,000	In prog.	473,548	286,152	.....	119½
Michigan Southern and Ind. N. Mich.	315	2,800,000	3,741,564	7,276,616	1,200,922	586,929	17	108½
Michigan Central..... "	282	4,856,700	3,977,563	8,618,505	1,145,598	582,816	8	108½
Pacific..... Mo.	38	1,000,000	none	In prog.	Recently opened.	.....	.....	.....

Great Western Railroad of Canada.

A valuable addition to the railroad system of the country has been made by the opening of the above road. It is the direct prolongation of the New York Central line to Detroit; and by the Michigan Central, to Chicago, the great city of the North-West. The road extends from Niagara Falls, via. Dunkirk, to St. Clair river, opposite Detroit, a distance of 228 miles. Its cost is high for a new work, but we understand that it is very substantially constructed.

The public, however, are chiefly interested in the results that are to follow its construction, rather than in the peculiarities of the rail. As far as its connections are concerned, it is most fortunate, being the connecting link between two of the most productive roads in this country, the New York, and the Michigan, Central roads. The three, in fact, form one line, and the Great Western receives efficient support from its two associates. The interests of the three being identified, they must materially assist each other. With such assistance the road can hardly fail to be productive.

The route traversed by the above road, the Peninsula of Canada, is one of the most fertile portions of this Continent, and is well filled with an active and wealthy population, for whom the road runs in the convenient direction. We see no reason by which its local business will not be fully up to the average of western roads. Its value will soon be increased by the opening of the Grand Trunk of Canada, which will connect it with Montreal and Quebec. The road also connects with Buffalo, the most important market for the Peninsula, through the Buffalo and Brantford road, now in operation. Through the last named line it will be brought into connection with all the roads connecting at Buffalo.

Breakage of Railway Axles.

The present season appears to prove fatal for railway axles in the latitude of Albany. The Albany papers of only the last week report three breakages of engine shafts and fifteen of car axles upon the Central and Northern roads. The value of the best material, form and mode of construction of railway axles may be inferred therefrom.

The reports of the Reading Railroad contain annual statements of the accidents and their causes, which have occurred during the year. In 1852 there were 223 accidents from broken axles, and from July 1, 1848, to Nov. 30th, 1852, there were one thousand and sixty one (1061) accidents from this cause. In the same time there were 163 accidents caused by broken wheels, and 198 from wheels becoming loose on their axles. The rolling stock of the Reading road, on Nov. 30th, 1852, comprised 38 wheel and 4,576 4 wheel, coal cars; 145 8 wheel freight, 517 4 wheel freight, and 30 eight wheel passenger baggage, mail, and express cars. The number of locomotives was 103.

Affairs at Erie.

The affairs at Erie have, we think, assumed a more favorable aspect. Both roads have now the same gauge, though they are not allowed to connect. The cars, however, run along side of each other, so that the whole question is narrowed to a single point; whether a break shall be compelled where none exists in the gauge. We shall refer to this matter again next week.

The Pacific Railroad.

THE NORTHERN ROUTE.—Gov. Stevens has published in the *Oregon Pioneer*, the following in regard to the Northern route which he surveyed:

The geographical importance of the region of country between the Basin of the St. Lawrence, the head waters of the Mississippi and Puget Sound, its adaptation to settlement, its railroad routes, its emigrant roads and the nomadic tribes within its borders will be the subject of the following articles. Resting on the two great rivers of the eastern and western coast, the Missouri and Columbia, it connects by a navigable stream with the Hudson's Bay and the Arctic Ocean. Between the upper tributaries of these two rivers, the Rocky Mountains are broken into spurs, filled with beautiful and fertile valleys, furnishing several good passes much lower than the southern passes, and one being by barometric measurement more than 1,500 feet below the South Pass. The head of navigation of the Missouri is only about 700 miles from the waters of Puget Sound, inexhaustible is its lumber, its coal and its fisheries, and in the distance there is one long reach of the Columbia navigable for steamers.

From this head of navigation in 200 miles and in ten days, the emigrant reaches that beautiful valley in Washington Territory, at the base of the mountains which even the honest and simple minded Flathead Indians have filled with cattle, and raised wheat and potatoes for their own use. Through this valley all the Indians, from the Cascades to Rocky Mountains, pass on their way to the vast Buffalo plains between the Missouri and Yellowstone, where with the Crows and Blackfeet, they lay in their stores of meat and robes, and which has been the scene of many sanguinary conflicts. The best natural wagon roads connect the head of navigation of the Missouri with the fertile valleys along all the streams issuing from the Rocky Mountains to the head of the Yellowstone—valleys so mild cattle need not shelter in winter, rich in buffalo grass, abounding in wood, and the water of the purest quality, and game, buffalo, elk, deer, big-horn antelope, black bear in the greatest abundance. The passes are yearly traversed by the Flathead Indians between Christmas and New Years on horseback, and March is the favorite month for the breaking up of the buffalo hunt by the Washington Territory Indians, and their return across the mountains to their homes on the plains and in the valleys of the Columbia river and its tributaries. From the head of navigation of the Missouri through the territory of Minnesota and the region occupied by the Asseniboines, the Grosventres and the Blackfeet, the emigrant will find grass over every mile of the route, and water at never greater distances than fifteen and scarcely ever at greater distances than ten miles. Myriads of buffalo occupy this vast region, and their numbers have not sensibly diminished, though 2,000 Red River hunters, each on his fast buffalo horse, four months each year pour death into their ranks, and they are almost the only subsistence of some 25,000 Indians.

Four routes within the Territory of Washington are pursued by the Indians in passing from the valley at the western base of the Rocky Mountains to the plains and valleys between the Cœur d'Eleiene and Cascade Mountains. The Cœur d'Eleiene Mountains, an extension of the Blue Mountains to Clark's Fork of the Columbia, north of which the range is known as Konteny Mountains, occupy the whole width of the Territory for a distance of from 100 to 120 miles, is covered with heavy timber and numerous well grassed though narrow valleys. The Nez Perez, the Spokanes, the Peude d'Oleilles, the Cœur d'Eleienes, and other tribes, in crossing these mountains have three to four horses for each man, woman and child, and even children of a year and a half old will be seen guiding their horses, one hand only on the rein, entirely unconscious they were exciting the wonder and admiration of the passer-by.

The Cascade Mountains have two good passes, and on Puget Sound is found a climate of extraordinary salubrity, milder than that of Virginia, and

the same average temperature, though more equable than that of San Francisco, and a soil which yields rich returns to the husbandman. The strawberry is often in blossom in December and February, and ice has to be imported from the colder regions of the north.

The country between the Cascades and the Cœur d'Eleiene Mountains is generally well adapted to grazing or tillage, and much of it is exceedingly well watered. Many of the Indian tribes are known to be rich in horses, and they have made considerable advance in the cultivation of the soil.

Such is the general character of the country connecting Puget Sound the great roadstead of the Northern Pacific, with the great basin of the St. Lawrence. Tapping the magnificent valley of the Upper Mississippi, having within its borders the Missouri and Columbia, the tributaries of its wagon roads and its railroads, and themselves great channels of communication, the Rocky Mountains broken into spurs and filled with valleys, the other mountains having practicable passes, it adds not a little to its interest that it was the scene of the labors of our first, our most dauntless explorers, Lewis and Clark. The sagacity of Jefferson saw that here was a great natural route, and he placed the men at the work who made it known to the nation. Public attention has now become fixed upon this field of the country's first great exploration, accomplished nearly half a century ago. This field we will examine and describe in a series of articles.

Cincinnati, Union and Fort Wayne Railroad.

The following is the report of the President and Directors of this company to the stockholders.

Gentlemen:—In laying before you the first annual Exhibit of the affairs of the company, it may not be amiss to briefly review its history.

In May, 1852, the Cincinnati, Hamilton and Dayton Railroad being completed and running from Cincinnati to Dayton, and the Greenville and Miami Railroad in a forward state of completion from Dayton to Union, and its completion during that year, expected, and the Indianapolis and Bellfontaine railroad, being also in a forward state of completion to Union, and its completion expected during that year, the men having these roads in charge, conceived the project of making this line of railroad from Union to Fort Wayne, thereby extending the Cincinnati, Hamilton and Dayton, and the Greenville and Miami Railroads, to Fort Wayne, and making a Fort Wayne connection for the Indianapolis and Bellfontaine Railroad; and it was then determined to organize this company, so soon as the General Railroad Law of Indiana, then just passed, should, by publication, become the law of the land. The law, however, was not published until the fall following. In October, 1853, books were opened along the line for subscriptions of stock, to organize the company. The necessary amount being raised, articles of association were agreed upon and signed, and filed in the Secretary of State's Office on the 15th day of February, 1853, and the company thereby incorporated. At that time, the stock subscribed amounted to \$53,800.

The company was organized on the 22d of February, 1853, and immediately entered upon the work. An engineer corps was put in the field, under the superintendence of Robert M. Patterson, Esq., the able and efficient Engineer of the company and the whole line located on air lines from point to point named in the articles of association. The grubbing of the entire line was let at \$18,895, being \$287.50 per mile; and the grading of the entire line was let on the first day of September, to experienced and efficient contractors, at 16 cents per cubic yard, for excavation, and 18 cents per yard, for embankment. All the contracts are payable one-third in the stock of the company, and two-thirds in money.

In computing the cost of the road, the engineer has taken the contract prices as to the grubbing and grading, and estimated as to the bridging. From his report it will be seen that the graduation

and bridging of the entire line, 65.72 miles long, will cost \$198,779, being only \$3,024 per mile. This is very low, considering that tangents alone were used in the location. If roads pay elsewhere, in less fertile countries, the roadbeds of which cost from \$20,000 to \$30,000 per mile to prepare them for the superstructure, we may reasonably anticipate that ours, costing but little over \$3,000 per mile, to prepare it for the superstructure, will be a good paying road.

The company has taken lauds in subscription for stock under the provisions of the law authorizing the same. They were not taken, however, at fancy prices, but at their cash valuation, ascertained by an appraisal made under oath, by an appraiser appointed by the company, who did not include perishable improvements in the valuation: nor did he take into consideration the prospective increase of value of the lands, on account of the construction of the railroad. Lands so appraised, amounting to \$100,000 have been conveyed in trust, to Stephen S. L'Honnmedieu, Esq. of Cincinnati, to secure the payment of \$80,000 of bonds, that the Board have directed to be issued, based on said lands. Sixty thousand dollars of these bonds, bear interest at seven per cent. and twenty thousand dollars of them, bear interest at six per cent. Owing to the stringency in the money market, no portion of these bonds has yet been offered for sale. Having an entirely safe basis, I have no doubt they can be negotiated on favorable terms, as soon as bonds again become in demand in the market. As they are receivable for our lands, many of them will be taken by our contractors, and others on the line, for labor on the road.

In addition to the lands so conveyed in trust, the company has other lands which have been received since that conveyance was made, and is still receiving lands in subscription.

Our stock subscriptions now stand thus:

Land subscriptions, closed by conveyance to the company.....	\$103,760
Land subscriptions, unclosed, about...	30,000
Cash subscriptions, closed up by note or payment.....	47,300
Cash subscriptions, unclosed, about..	50,000

Total.....\$231,060

It will thus be seen that our subscription, if it can be made available, is sufficiently large to prepare the road-bed for the iron, and we are still receiving additions to our stock.

The right of way, eighty feet in width, has been procured over the greater portion of the line. In most cases it has been conferred voluntarily, the citizens through whose property the road passes, acting in the spirit of men who appreciate the advantages to accrue to themselves, as well as the public, from the construction of the road. In some cases the right of way has been purchased by the company on equitable terms. The Board desire to deal justly with all: and from a desire to secure the good will of land owners along the line, and to avoid litigation, have endeavored, in a spirit of liberality and justice, to compromise all claims for damages. A few persons, however, have obstinately persisted in such exorbitant demands as will, if continued, compel the Board to resort to legal means to procure the right of way. Some of those, too, who so persist, have hitherto occupied such a position in society, and had such a reputation for intelligence and public spirit, as led us to expect better things of them.

About one-half of the line is grubbed, and a considerable portion of grading is done on the first section, between Union and Portland.

Depot grounds at Fort Wayne, have been secured, in direct connection with the great railroad lines of that place. Machine-shop grounds at that point, have also been verbally contracted for. Depot grounds at Decatur, and machine-shop grounds at Union, have been secured.

Under the authority given me by the Board, I have contracted for a small number of ties, to be paid for in the stock of the company.

Our road is the last and finishing link in the

chain of railways connecting the cities of Cincinnati and Dayton, with Fort Wayne. It is not quite 66 miles in length; and passes through a country of unsurpassed fertility. It diverges something from a direct line to pass by the county seats of the two counties of Jay and Adams, but increases the distance only about a mile, by so doing. Its general direction is in the direct line between Fort Wayne and Cincinnati, and it will always do a large through business between those cities, and almost an equally large one between Fort Wayne and Dayton. But experience has shown that local business, in general, is as profitable to railroads as through business. The local business of our road will be equal to that of any road in the West. The whole transportation, both out and in, of Adams and Jay counties will pass over our road, and a great portion of that of Randolph, Wells, and Allen, in Indiana, and of Van Wert and Mercer, in Ohio. At Fort Wayne, our road will, by its terminus, be in direct connection with the Fort Wayne and Chicago Railroad, the Fort Wayne, Lacon and Platte Valley Air Line Railroad, the Wabash Valley Railroad, and the Ohio and Indiana Railroad, all of which railroads have their depot grounds in juxtaposition with that secured by this company. Business arrangements can be secured with all these companies. At Union, the southern terminus of our road, we will be in direct connection with the following railroads, in addition to our through connection with Dayton and Cincinnati, to wit: the Indianapolis, and Bellfontaine, the Bellfontaine and Indiana, the Columbus, Piqua, and Indiana, the Marion and Mississinewa Valley, the Evansville, Indianapolis, and Cleveland Straight Line, and the Sandusky, Fremont, and Union. No railroad has more varied or extensive connections than ours will have.

On the second day of April last, an agreement was made by this company with the Cincinnati, Hamilton and Dayton Railroad Company, the Twin Creek Railroad Company,* and the Greenville and Miami Railroad Company, for through tickets and freight bills, from Fort Wayne to Cincinnati, and for a uniform gauge over the whole line. This agreement has been ratified by all the companies, and is perpetual by its terms, and secures a continuous line, of uniform gauge, for all time to come, between the cities.

All of which is respectfully submitted, by order of the Board.

JER. SMITH, President.

January 4th, 1854.

Connection of Lakes Erie and Ontario.

Measures have been taken at Hamilton to organize a company for the construction of a railroad from that place to Port Dover, on Lake Erie. A railroad, on a route as direct as possible, connecting the navigation of the two lakes and with that of Grand River is an object at present of the greatest importance to the business interests of Hamilton.

Appointment.

We understand that Wm. M. Stockton, Esq., has resigned his office of chief engineer on the Charlotte Road, and has accepted the same position on the South Carolina Railroad.

Appointment.

We learn that Philo Hurd, Esq., late Vice President and superintendent of the Naugatuck Railroad has received and accepted the appointment to a similar post on the Madison, Indianapolis and Peru Railroad.

* This company is making a railroad, twenty miles long, from the Junction of the Greenville and Miami Railroad with the Dayton and Western Railroad, across to Carlisle, on the Cincinnati, Hamilton, and Dayton Railroad, by which the distance to Cincinnati will be made some ten or twelve miles less than to go by Dayton.

Trade of Buffalo.

From the Buffalo Republic we gather the following facts.

The population of the city is now 75,000. The city limits embrace 23,710 acres. The total value of real and personal estate is estimated at \$24,455,752.

The total value of the imports by Lake, during the year, is put down as \$36,881,230, being an increase over 1852 of \$1,937,375. The value of the produce brought in by the State line Railroad is estimated at \$2,234,273. This makes the total imports from the West amount to over \$39,000,000. Added to the imports from the East, it shows a commerce of over \$125,000,000.

The receipts of flour in 1853 were 983,837 bbls., showing a decrease of 315,676 from the year before. 218,296 bbls. were manufactured in the city.

The receipts of wheat have been 5,424,043 bu. Of corn, 3,665,793 bu. The aggregate quantity of grain of all descriptions received during the season was 11,078,751 bu.

The exports to Canada during the year amount to \$992,406. The imports from thence \$392,719.

The value of the exports by the Erie Canal was \$22,652,408, on which tolls were collected amounting to \$695,364. By the breaks of the last season the State lost tolls it would otherwise have received on property from Buffalo to the amount of at least \$150,000.

The value of imports by Canal was \$64,612,102, with an aggregate tonnage of 438,786.

The number of vessels that have arrived and cleared is set down at 8,298, with an aggregate tonnage of 3,252,978 26. Their crews amount to 131,000.

There are twelve Banks with an aggregate capital of \$1,475,000.

Pennsylvania Railroad.

The receipts of the Pennsylvania Railroad, for the year, ending Dec. 31st, 1853, were.....\$2,774,889 37

The expenses of transportation were 1,673,681 29

Leaving net earnings\$1,101,208 08

The expenses of operation were but \$346,879 35 more than last year. The relative reduction of expenses is due to the completion of the road, and the consequent dismissal of the boats and wagons formerly used on the Western division; together with a reduction in the rate of tolls over the State roads.

The total amount paid for tolls upon the State roads, Harrisburgh and Lancaster and Baltimore and Susquehanna railroads, has been \$779,611 62, all of which is included under the head of expenses of transportation. Of this amount \$213,775 62 was paid for the use of the Portage R. R.; besides which, \$20,000 were expended for wages of extra brakemen, required in crossing the planes, over what will be annually required for the same amount of business since the opening of the tunnel.

The through tonnage between Philadelphia and Pittsburgh has increased from 32,185 tons in 1852 to 73,499 during the past year, and the local tonnage from 36,793 to 86,133 for the same periods—making the total tonnage moved 159,632 tons, against 68,978 last year;—an increase of over 100 per cent. While the receipts from this source have increased from \$780,892 19 to \$1,507,520 50.

The cost of the equipment has been up to the end of 1853, \$2,652,676 37. There are 79 locomotives, 1,274 eight wheel and 137 four wheeled freight cars; 69 eight wheel passenger, and 24 eight wheel baggage and mail cars. 32 locomotives and 5 passenger cars already contracted for, re-

mained to be delivered on the 1st of January, the cost of which is estimated at \$325,000.

The treasurers accounts show that the receipts from Stockholders in payment of the capital stock of the company, was, at the close of last year.....\$11,228,020 00
The receipts from loans, &c..... 5,084,947 91

Amount.....\$16,312,967 91

Which has been expended as follows:

Graduation and masonry, single track.	\$6,271,705 90
Superstructure, including iron rails, chairs, cross-ties, ballast, &c.....	3,053,613 65
Engineering	376,826 44
Land damages, and real estate in Pittsburgh and on line of road	474,684 15
Real estate in Philadelphia city and county	244,341 62
Harrisburgh Railroad	7,173 41
Graduation & superstructure of 2nd track	1,152,852 59
Machine shop, shop machinery, station and warehouse...	991,966 36
Locomotives	658,329 14
Freight cars	745,401 81
Passenger cars	232,382 94
Road and hand cars.	24,596 12
Balance of interest account, chargeable to construction.....	26,763 51
	<hr/> \$14,360,637 64

Subscription to the Stock of the Ohio and Penn'a R. R.	\$150,000 00
Do. Ohio and Indiana Railroad	300,000 00
Do. Marietta and Cincinnati R. R....	650,000 00
Do. Maysville and Big Sandy R. R..	100,000 00
Do. Springfield and Mt. Vernon R. R.	100,000 00
	<hr/> \$1,300,000 00

Leaving in the hands of Treasurer...\$652,330 27

The amount received by the Treasurer during the year 1853, from the business of the road, &c., was.....\$2,768,769 72

Of which there has been paid during the year to stock and loan holders, for interest and for expenses of working the road, &c. 2,466,259 50

Leaving a surplus which has been credited to interest account, of....\$302,510 22

Great Western Railway of Canada.

The following are the names of the Directors and managing officers of the Great Western Railway:

President—Robert W. Harris.
Managing Director—C. J. Brydges.
Directors—Isaac Buchanan, W. T. McLaren, Richard Juson, George S. Tiffany, Henry McKinty, J. W. Brooks, Erastus Corning, John M. Forbes, Sir Allen McNab.
Chief Engineer—Roswell Benedict.
Second Engineer—John T. Clark.
Resident Engineer from Niagara Falls to London—Mr. Reed.
Resident Engineer from London to Windsor—Mr. Scott.

Journal of Railroad Law.

THE CASE OF THE BELLEVILLE AND ILLINOISTOWN RAILROAD COMPANY.

In October last we published the decision of the Circuit Judge Underwood, of Illinois, declaring that this company had no right to extend their road to Alton. This decision has now been reversed by the Supreme Court of Illinois, and the extension of the road sanctioned, the Chief Justice dissenting from his brethren.

The controversy turns upon the true construction of what the enemies of the company unanimously designate as the "spider," the "snake," the "serpentine," the "crawling" 17th section of the charter, which does not upon its face give proof of much that is ugly or venomous, whatever hidden mischief it may contain. It is as follows:

"Said company shall have the power to extend to, and unite its railroad with, any other railroad now constructed, or which may hereafter be constructed in this State; and for that purpose full power is hereby given to said company, to make and execute such contracts with any other company as will secure the objects of such company."

The Supreme Court declares in reference to the clause above cited, that its obvious and natural interpretation is its only true one, and that admitting it to be possible that the Legislature of Illinois really intended to prevent the extension of the road in question to Alton, they could not have used language more appropriate to such a purpose than that of the clause above cited.

It was upon the argument strenuously urged in opposition to this mode of construing the charter, that a full consideration of the different provisions thereof, showed that the Legislature intended to confine the operations of the road to the county of St. Clair. The charter provides that the awards of the Commissioners, in relation to damages for lands taken, must be filed in the Clerk's office of that county; that the notice of application to the Governor for the appointment of Commissioners must be advertised in a newspaper of that county; that in case of an appeal from the decision of the Commissioners, the bond required in certain cases, must be acknowledged before the Clerk of St. Clair county.

But the Court decided that these provisions restricted the operations of the company, as contended by those who were opposed to it. The principal object of the charter was regarded by the Court as being the charter of a road in the county of St. Clair from Belleville to Illinoistown. This being the principal object of the charter, it was natural that as the principal office of the company was to be at Belleville in that county, so the legal proceedings in regard to the laying out of the road, should be instituted there, so far as the provisions of the charter indicate. The principal object contemplated by the Legislature, was laying out the road from Belleville to Illinoistown, and they shaped the charter accordingly, but nevertheless, they clearly contemplated the possibility of an extension of the road beyond the county of St. Clair, and with this view the 17th section above cited was introduced with the bill.

Such does the Court understand the legal intention of the Legislature to be, as fairly inferred from the language they have employed. It was urged that it never could have been designed by the Legislature to authorize the extension of the

Belleville and Illinoistown road to any and every railroad, in Illinois, at its pleasure. But if not, they should not have used such language as compels the court to draw an inference which was not intended. The Court cannot inquire into the details of Legislative history contemporaneous with the enactment of laws. The law, when once enacted, must speak for itself; it is the exponent of the will of the Legislature, and must not be frittered away by the Courts. Although the language of a statute may be directly contrary to what the Court may privately know to have been the actual purpose of and intention of the Legislature which enacted it, provided the language of such statute is unequivocal and explicit, the Court is bound to enforce it. Accordingly, when the Legislature of Illinois passed an act to increase the punishment of manslaughter, and at the same time repealed the old laws in regard to this offence, the Court was reluctantly obliged to discharge several prisoners who stood indicted for manslaughter, because by the unavoidable interpretation of the statute, the law, by virtue of which they had been imprisoned, was annulled. Yet this result was due, not to the actual intention of the Legislature, but only to an oversight of theirs in the framing of a statute.

The Court also overruled the Constitutional objections to the charter, as embracing different subject matters. The object of the charter was to authorize the construction of a railroad, and the particular appellation of a company, as in this case, the Belleville and Illinoistown was to be regarded rather as a matter of fancy than of exact description. The charter sanctioned the construction of a road and of nothing foreign thereto.

Very many charters were far more complex; sometimes providing both for the construction of branch roads and for the appropriation of immense tracts of land in carrying out the main design of the incorporation.

In conclusion, the Court reversed the judgment of the Circuit Court and remanded the cause to that Tribunal for its final disposition.

Steam Carriages on Common Roads.

The *Scientific American* takes exceptions to all advocacy of steam carriages on highways, on the ground that railways are more economical in operation. The legitimate conclusion upon these premises would therefore be that highways should be dispensed with altogether, as incompatible with "science and common sense." The *American* either mistakes the question at issue, or else the purpose of highways. We assume that highways are necessary for a great amount of business, but which at the same time would not support a railroad. All omnibus business is of this description. If this be granted the question is not one of road but of power. It is not that of highways against railroads but of steam against horses. The result may be embraced in the question "how in the name of science and common sense can the *American* advocate horse power in these days of railways and cheap locomotion?" If highways are indispensable to a large business of uniform movement why not give them the advantage of steam?

In the following article, copied from the *American*, we will admit that not less than a 300 or perhaps 350 horse engine would be required on a common road to do the work (load \times by speed) of a 40 horse engine on a railroad.

"We see that steam carriages for common roads, are being again advocated and commented upon by a number of our cotemporaries. How in the name of science and common sense they can do this is surprising to us, in these days of railways and cheap locomotion. It might have appeared sensible to advocate steam carriages for common roads before railroads were invented, but not now. When it is considered that heavy rails and straight lines lessen the running expenses of railroads about 40 per cent.; and when it is considered that a 40 horse power engine will draw as much on a railroad as a 200 horse power engine on a common road, the idea of using them on common roads is preposterous. The question is one of economy, and the man who advocates locomotives for common roads, when such superior advantages are obtained from railroads, forgets, that Rip Van Winkle sleeps no more.

New Slide Valve for Locomotives.

The capacity of the steam ports, for supplying steam to the cylinders of locomotives, is influenced materially by the adjustments of the valve. With the link motion, in general use for effecting variable admissions of steam to locomotive cylinders, an unavoidable consequence is the contraction of the steam openings with successive reductions of the motion of the valve. Assuming that the general allowance of 1-14th the area of the piston is the proper proportion for the steam opening, we may compare the results derived from the link motion and obtain an idea of the necessity for their improvement.

The following table shows the successive contractions of the steam openings, attendant on increased expansion, in the later engines of Rogers, Ketchum & Grosvenor's manufacture, and having cylinders of 16 inches diameter and 22 inches stroke, and ports of 14 inches by 1 1/4 inches.

Steam admission in inches, of 22 inch stroke.	Opening of steam port.	Area of opening	Diam. of circle of equal area.	Proportion of opening to area of piston.
in.	in.	sqr. in.	in.	
19 $\frac{5}{8}$	1 $\frac{1}{4}$	17 $\frac{1}{2}$	sc. 4 $\frac{3}{4}$	1.12
18	1 $\frac{1}{8}$	15 $\frac{3}{4}$	sc. 4 $\frac{1}{2}$	1.13
16	$\frac{3}{4}$	10 $\frac{1}{2}$	fl. 3 $\frac{3}{8}$	1.19
14	9-16	7 $\frac{7}{8}$	fl. 3 $\frac{1}{8}$	1.25
12 $\frac{1}{2}$	$\frac{1}{2}$	7	3	1.29
11	7-16	6 $\frac{1}{8}$	2 13-16	1.33
9 $\frac{1}{2}$	$\frac{3}{8}$	5 $\frac{1}{4}$	2 9-16	1.40
8	5-16	4 $\frac{3}{8}$	2 $\frac{3}{8}$	1.46

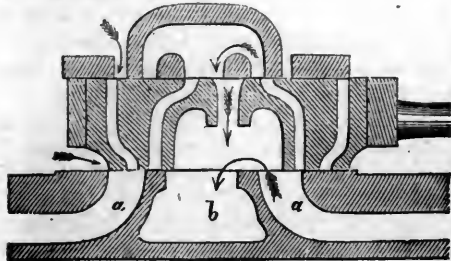
The contraction of the exhaust ports is not to so great an extent, but as the exhaust should be made in the shortest interval of time a double opening with a given throw of valve, would tend to relieve it. The "double exhaust," as Hackworth's valve is usually misnamed, only retains the steam within the valve for a certain time, after which it allows exhaustion through two ports not in immediate connection with the cylinder. The escape of steam from the cylinder is not materially expedited by its action, nor is that made an object of its use. Its primary object was to pass a portion of the exhaust steam from one end of the cylinder to the other, to save steam for "lead," but in some applications of this valve to engines built at Manchester, N. H., we know that the cavity or "throat" of the valve was narrower than the distance between the inner edges of the steam ports, so that this effect was lost.

To avoid the contraction of the induction ports, John V. Gooch, of the London and South Western Railway of England, applied a stationary plate to

the back of the valves of his engines, having openings adjusted to match other openings in the valve, so that admission of steam occurred at two points at the same time. This is shown below.



Zerah Colburn has arranged a valve in combination with this plan, to effect a double exhaust, and also, if necessary, to avoid "compression" of steam between the piston and cylinder head, after the valve has closed the port for exhaust and just previous to the admission of steam. The valve is shown below.



The upper portion (grained downwards in the cut from right to left) is a stationary plate, resting upon the back of the valve, and having steam openings for induction, and a cavity with bars for extra exhaust. The central portion of the stationary plate is similar in form to a Hackworth valve. By adjusting the width of the bars, and of the exhaust passages in the valve, all "compression," such as has been before spoken of, may be avoided. Or, by making the bars of sufficient width to close the exhaust passages in the valve, when the cylinder port is closed by the valve, the usual "compression" will be preserved.

Mr. Colburn, of this Journal, will send working drawings of this valve to parties desiring them.

Mr. Robertson, of the firm of Palm & Robertson, of St. Louis, merits the credit of an invention for the same purpose as the above, and quite nearly the same in principle, except that another wearing surface is involved. Mr. Robertson has already applied the double induction to some of the locomotives building at his works, and, as we learn, with an improved result in working.

With the improved means for the passage of steam, the link motion is destined to become universally used for efficiency, economy and safety. Some of the new engines of the Erie road, as we learn, are being fitted, however, with the separate cut-off; a step backwards as we should judge which none but a strict conservative would take.

Copper from Lake Superior.

The copper export from the Lake Superior mines for the season of 1853, is stated at 2,535 tons, of the gross value of \$1,014,000. About 1,600 tons were shipped to Cleveland, and 935 direct to New York. The value of the smelted copper at Cleveland, when it is prepared for the Western markets, is about \$600 per ton.

Belvidere Railroad of New Jersey.

The first train over the Belvidere Railroad reached Phillipsburg, opposite Easton, Pa., on Friday, Feb. 3. About 500 passengers went through from Philadelphia, while at Lambertville, N. J. the train received an accession in the Governor and Legislature of New Jersey.

Annual Meeting of the Boston and Lowell Railroad Company.

The Annual meeting of this Corporation was held at the office of the Treasurer, in Boston, on Wednesday Jan. 4.

The report of the Directors for the year ending 30th November, 1853, was presented. The gross receipts for the year have been \$434,599 99, of which \$172,882 01 was from passengers, and \$261,717 98 from freight. The receipts for the year ending Nov. 30, 1852, were \$388,108 37.—Showing an increase of income for the year 1853, of \$46,491 62. The running expenses for the year 1853 were \$316,869 23; to which should be added balance of interest account, \$3,632 42 and the result is that the net profits of last year's business has been \$114,098 34, or about 6½ per cent. on the capital paid in.

Of the income about 62½ per cent, or \$271,791 22 have been derived from business confined to the Boston and Lowell Railroad: and 37½ per cent, or \$162,808 77, from that done in connection with other railroad companies. Of the former, amounting to \$271,791 22, a little more than one half, \$137,808 58 has been for the transportation of passengers, and \$133,982 64 for that of merchandise; while, of the \$162,808 72 received for work done in connection with other roads, \$35,073 43 were for passengers, and \$127,735 34 for merchandise.

As already stated, the gross income has been \$46,491 62 larger than for the preceding year; the passenger receipts having increased by \$15,712 06 and the freight receipts by \$30,779 56. The net profits in 1852 were \$130,881 04; in 1853, \$114,098 34.

Some progress has been made in the work of extending the road from East Cambridge to Market street in Boston. The amount charged to that account is \$35,646 87.

The whole amount of the debt of the Corporation is \$205,500. The balance to the debt of the agent, for wood, rail iron, and other materials on hand, and for uncollected freight is \$45,194 13.

The total number of passengers carried in the cars has been 657,391. Number carried one mile, 9,576,208; tons of merchandise carried in the cars, 802,630; tons carried one mile, 7,542,574, rate of speed adopted for express passenger cars, including stops, 34 66-100 miles per hour; average rate actually attained, including stops, 34 1-10 miles per hour; rate of speed adopted for accommodation trains, 26 miles per hour; speed actually attained, 25 29-100 miles; average rate of speed adopted for freight trains, 12 miles per hour.

The year of largest receipts was in 1848, \$461,339 35; of largest net receipts, 1847, \$195,147 24. From 1839 to 1851, the annual dividend was 8 per cent, in 1852 6½ per cent., and in 1853 6 per cent. The surplus of 1853 was \$4,298 34. Total surplus on hand, \$99,742 37.

The report was accepted and the following Board of Directors were chosen:—George W. Lyman, William Sturgis, Eben Chadwick, Isaac Hinckley, and G. Howland Shaw.—*Boston Traveller.*

Railroad Iron via Toledo.

The total amount of railroad iron cleared at Albany by the Erie Canal during the year 1853, was 73,660 tons. The amount received by Lake at Toledo, the same season was.....45,020 tons
In 1852.....33,208 "

Increase.....11,812
Or 38½ per cent.
Of this amount there were shipped by Canal from Toledo, in 1853.....29,035 tons
In 1852.....20,966 "

Increase.....8,069 "
Or 38½ per cent.
Supposing the amount received the past season to average 60 pounds to the yard, the quantity is sufficient for the construction of 426 miles of road. At 56 pounds, which is perhaps nearer the average, it is sufficient for 466 miles.

Car Building in Madison, Indiana.

The following article, copied from the Madison Banner, shows the extent and efficiency of one of the most important manufactures established in that place.

SOUTH WESTERN CAR SHOP.

Prominent among the large manufacturing establishments, involving heavy capital and many equipments, in our city, is the Southwestern Car-shop of Wm. Clough.

We were not, until recently, at all aware of the large extent of this establishment and of the business done by it. The smoke of its forges, the ring of hammers, and the din of machinery, the piles of lumber, and the number of workmen, however, soon assured us of its dimensions and its prosperous business. We found, on inquiry, that Mr. Clough has executed orders, by constructing cars, passenger or freight, or both, for nearly every road in Indiana—that his work is familiar on the Terre Haute and Richmond, the Lafayette and Indianapolis, the New Albany and Salem, the Indianapolis and Bellefontaine, the Jeffersonville, and the Indianapolis and Lawrenceburg roads. This fact, of itself, best evinces the good and wide repute, for workmanship, of the Southwestern Car Shop. We know no better combination of tact, skill, capital and industry than in this shop. We have taken some pains to know some of the details of this "institution" as it is called.

The principal shops are constructed in the form of three sides of a hollow square, with an East front of one hundred and twenty feet and a front on Jackson and High streets of each one hundred and sixty feet. The machine shop is seventy by one hundred feet, and the truck shop forty by eighty feet. In addition to these are the dry house and steam room for preparing lumber, and numberless auxiliary buildings, sheds, &c., which should be computed by the acre.

As it is the proprietor's design to excel in superiority of work, he has provided himself with all the latest and most approved machinery, including the best specimens of machines for tenoning, wood boring, grooving and moulding, wheel boring and punching, scroll and circular saws, drill presses, bolt cutters, and very many other machines of which we know not the names. The blacksmith shop has twelve forges and the necessary appliances for rapid work.

The number of hands employed is about one hundred, receiving weekly wages of from nine to fifteen dollars. The house accommodations for those hands and their families, grouped around and near the shop, constitute, of themselves, a village and an important suburb to the city, recently grown up.

The machine and manual capacities and all appliances are adequate to the construction of three hundred freight and twenty-five passenger cars per year.

Grand Trunk Railway of Canada.

Earnings for week ending Jan'y 7th, 1854.

3,881 passengers.....	\$3,226 98
1,816½ tons merchandize.....	3,384 78
117,072 feet lumber.....	156 60
Other earnings.....	1,233 36

Total equal to £1,644 8s 9d.....\$8,001 72

Week ending Jan'y 14th, 1854.

2,233½ passengers.....	\$2,466 24
2,463½ tons merchandize.....	3,945 85
327,516 feet lumber.....	499 64
Other earnings.....	1,959 83

Total, equal to £1,822 18s. 6d.....\$8,871 56

Week ending Jan'y 21st, 1854.

3,706 passengers.....	\$3,019 79
1,493½ tons merchandize.....	4,514 44
488,822 feet lumber.....	831 10
Other earnings.....	2,268 15

Total, equal to £2,184 19s 3d.....\$10,633 48

New England Railroads.

We would call attention to the article in another column, headed "Concentration of Power." Although somewhat elaborated, we believe it contains facts of the greatest importance to the interests of many of the New England roads. We think that while Mr. Colburn has shown the elements which enter into the cost of transportation, he has also shown that a large proportion of the latter is affected only to a moderate extent by the application of the principle advocated, and that the *net earnings* would be largely increased in the case of its application. Taken in connection with his previous articles on the economical working of grades, it demonstrates that the Western road, and others having similar characteristics,—need not require, in comparison with more level roads, a working expenditure in proportion to their total rise and fall. It shows that, were there a large business open to competition, the mere reduction of *grades* by a rival road could not warrant the expenditure for its construction.

The article to which we have referred discusses a *principle*, but omits the full examination of the present system of working the Western road. From some tables, however, prepared by Mr. Colburn, may be gathered an idea of its results. These are annexed below.

Table of Movement of Freight.

Year.	Tons of freight moved one mile.	Per cent of Eastern bound freight moved.	Per cent of Western bound freight moved.	Miles run by freight trains.
1847....	28,037,628	75	25	513,772
1848....	24,656,129	70	30	454,272
1849....	25,307,146	70	30	460,941
1850....	25,206,308	72	28	453,111
1851....	23,304,050	71.4	28.6	459,323
1852....	23,724,070	69	31	510,468
1853....	23,153,554	66.6	33.3	589,314

Table of Number and Capacity of Trains.

Year.	Through trips each way, equal to miles run.	Through trips each way daily, for 313 days.	Average weight of East bound freight, pr. train, tons.	Do. of West bound do. per train, tons.
1847....	1,646	5.26	81.9	27.3
1848....	1,456	4.65	76.00	32.6
1849....	1,477	4.71	76.86	32.94
1850....	1,456	4.65	80.07	31.13
1851....	1,472	4.70	72.44	29.02
1852....	1,636	5.23	64.13	28.81
1853....	1,888	6.00	64.00	32.

Table of Receipts and net Earnings; from all sources.

Year.	Gross Earnings.	Net Earnings.	Per cent. of net Earnings.
1847....	\$1,325,336 06	\$648,646 31	49
1848....	1,332,068 29	679,711 18	51
1849....	1,343,810 57	755,487 99	56
1850....	1,366,252 47	761,964 32	56
1851....	1,363,894 63	756,138 43	56
1852....	1,339,373 09	683,194 92	51
1853....	1,525,223 02	746,736 00	49

By a table contained in the article referred to it will be seen that the average charge per ton per mile has been nearly 2.8 cents for several years. Allowing the passenger business to be as profitable now as in 1847, the above tables show that in those years wherein the capacity of freight trains

was greatest and their number, the least, the net earnings were, compared with the relative amount of net earnings for other years, nearly 15 per cent. the greatest.

While this result has been presented the depreciation of iron, at least, has been much greater than was estimated in 1852 and allowed for in the outlays since made. In the report of the investigating committee, dated Feb'y 11th, 1852, it was estimated that the duration of the iron, then in the single track would be about eight years. At the rate of present renewals the whole will be taken up after an average use of not more than 4 years—perhaps not so much.

It appears that the motive power of 1853 is the same as that of 1847; that, as the business has increased, more trains have been run, and the expenses have increased in proportion, or even in a greater proportion as has just been shown. Competition has increased and, with increase, has employed better facilities, and the consequence is the diminution of eastward bound business on New England roads.

To reduce the expenses of transportation, and thereby the charge on the freight transported; to invite a freight business by lower rates affording equal remuneration, and thereby to secure the travel which follows trade, Mr. Colburn proposes heavier engines. The expedient is the same as is already adopted by the Reading, Pennsylvania Central, Baltimore and Ohio, and, to an extent, by the Erie roads, and involves no new principles or untried applications. The merit of Mr. Colburn's labor is in the complete exposition he has given of its advantages, such as, we feel assured, the class of roads similar to the Western must yet secure.

Franklin Canal Company.

The following statements are from the report of the Franklin Canal Company, presented to the Pennsylvania Legislature:

The Company have expended on that portion of their railroad which they have constructed and now own, extending from the City of Erie and the west bank of Crooked Creek, in Springville township, a distance of about twenty miles, the sum of \$602,252 57. This sum includes cost of ballasting and fencing the road and station building. The gross earnings of said Company's road for one year, commencing Dec. 1, 1852, and ending on the first day of December, 1853,

Amounted to.....\$129,906 87
Deduct running expenses
and repairs of track...\$50,274 35
Interest on rolling stock
on the road—taxes on
\$500,000 capital stock
—interest on \$66,000
bonds issued by the
Company 14,271 38

64,545 78
And interest on \$36,252 57 due the
C. P. and A. R. R. Co..... 65,360 64

From this sum should be deducted the estimate of annual deterioration on such parts of the Company's works and fixtures as are liable to decay or destruction by time or use, as set forth in the report of the Directors, and it leaves the net earnings a fraction over 74 per cent. on the capital of \$500,000.

The Company have issued \$66,000 Bonds, secured by mortgage on the road, and which are still outstanding. The Company also owes the Cleveland, Painesville and Ashtabula Railroad Co., for cash advanced, \$36,252 57, making the entire indebtedness of the Company \$102,252 57.

Improvement in Steam Hammers.

The advantage of steam over other hammers is in their power of action, and in the control which may be had over their movements. The latter point is of particular importance in finishing forged work, as without it, accuracy of form cannot be obtained, and there is great waste of iron and labor in turning and planing. Power of action is also essential in making sound forgings.

We learn that Mr. Robert R. Taylor, of Reading Pa., has made an important improvement in the valves and passages of steam hammers, and has built hammers with these improvements, so sensitive to the valve as to allow of placing a watch upon the anvil, and of breaking only the crystal, without injuring the dial. The claim attached to his patent shows the importance of the points to which his improvements tend. It is as follows:

"I claim the arrangement, as described, of the steam ports and passages, the variable automatic valve for directing the steam alternately above and below the piston, and for admitting a variable quantity of steam beneath the piston, and the adjustable hand valve, to exclude altogether the steam from above the piston, or to admit a greater or less quantity of it, both valves being adjustable while the hammer is in operation, so that the steam can be made to act with a variable force on either the up and down strokes of the piston, or of both, or prevented from acting on the down stroke, without interrupting the action of the hammer, as set forth."

We may allude to this improvement again.

South-Western Car Shops,
Madison, Indiana.

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West, W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
Feb. 18. 1m.

To Railroad Engineers and
Contractors.

WANTED, a corps of efficient Engineers and Contractors, for the construction of a Railroad in one of the Southern States. Apply to DUFF GREEN.

New York, Feb. 14th, 1854.

Wm. J. Young

HAS removed his Engineering and Surveying Manufactory to No. 33, North Seventh Street, Philadelphia.

Railroad Letting.

PROPOSALS will be received by the undersigned at the Engineer's Office, Dover, Delaware, until March 14th, inclusive, for the Graduation, Masonry and Superstructure of the DELAWARE RAILROAD, extending from the New Castle and Frenchtown Railroad to Seaford, a distance of 70 miles, through a healthy region, and convenient to procure hands and supplies.

The work will be divided into sections of about 4 miles each.

Maps, profiles, and specifications will be ready for the examination of contractors, after the 1st of March.

Bidders personally unknown to the undersigned, will be expected to produce satisfactory evidence of their responsibility.

Feb. 18-1m14

D. H. KENNEDY,
Resident Engineer.

FULTON CAR WORKS,

CINCINNATI, OHIO.

WE respectfully call the attention of Railroad Companies and Contractors in the West and South to our establishment. Our facilities for manufacturing are extensive, our work is made from the best material the country affords, and of the most superior workmanship. We are prepared to execute to order on short notice Passenger Cars of the most approved description and elegant finish; Baggage, Freight, Cattle and Gravel Cars, also Crank and Lever Hand Cars, Trucks, and Railroad work generally.

To Railroad and Canal Co.'s, Contractors, &c.

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics, &c. of any description, and also to inform them that they forward such men to whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

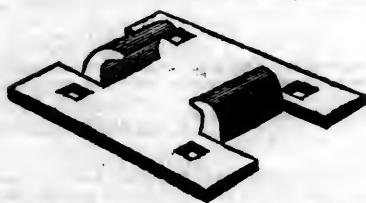
JOHN J. HELLING & CO.
No. 85 Greenwich street, New York.

NEW YORK

Wrought Iron Railroad Chair Company,

Office, 38 Exchange Place, New York.

A. B. LANSING, President.



THIS Company is prepared to receive orders for the manufacture of Wrought Iron Railroad Chairs of the best material, on a new and superior model, and by improved patented machinery.

The thickness of the Lips of the Chair increases through the bend, where the greatest strength is required, and diminishes towards the edge;—so that a less weight of metal may be used and a strength acquired equal, if not superior, to that of a heavier Chair of uniform thickness.

Rail Road Letting.

PROPOSALS will be received at the Office of the Company in the City of Evansville, Indiana, until 6 o'clock, P. M., of Wednesday, 15th day of February, 1854, for the Grubbing, Grading and Bridging of that part of the 1st Division of the EVANSVILLE, INDIANAPOLIS, AND CLEVELAND STRAIGHT-LINE RAIL ROAD,

Extending from Evansville to the Crossing of the Ohio and Mississippi Rail Road, in Daviess County, a distance of fifty-four miles.

The work will be divided into sections of about one mile each, and proposals will be received for one or more sections, or for the whole line.

Maps, Profiles and Specifications will be ready for the examination of bidders on and after the 1st of February, and all necessary information given on application to W. C. MOORE, Chief Engineer.

O. H. SMITH, PRESIDENT,
W. CARPENTER, VICE PRES.
Evansville, Jan. 2, 1854.

Ontario, Simcoe & Huron R.R. CANADA.

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day. On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

Valuable**Engineering and Mechanical Works,**

IMPORTED AND FOR SALE by
JOHN WILEY, 167 Broadway.

DEMPSEY'S PRACTICAL RAILWAY ENGINEER. 1 vol. 4to, with 50 Engravings, bound in half Morocco.....	\$11.00
SCOTT'S ENGINEERS' AND MACHINISTS' ASSISTANT, 2 vols. Quarto....	20.00
TREDGOLD on the LOCOMOTIVE ENGINE, half calf.....	15.00
" on the MARINE ENGINE, half calf.....	24.00
" on the STATIONARY ENGINE, &c., half calf.....	24.00
TREATISE on the STEAM ENGINE by the Artizan Club.....	6.00
WEALE'S THEORY, PRACTICE and ARCHITECTURE of BRIDGES, 3 large vols., half bound.....	25.00
" SUPPLEMENTARY VOL. (just published), half bound.....	14.00
TRAUTWINE on RAILROAD CURVES, turk.....	1.00
" on EMBANKMENTS AND EXCAVATIONS.....	1.00
WILMES' HANDBOOK of PLAIN and ORNAMENTAL MAPPING, and Engineering Drawing, for Civil and Mechanical Engineers.....	7.50
WOOD'S PRACTICAL TREATISE on RAILROADS, 8vo.....	5.00
RYDE'S TEXT BOOK for the USE of ARCHITECTS, ENGINEERS, SURVEYERS, &c. 1 vol Royal 8vo.....	8.50
GREGORY'S MATHEMATICS for PRACTICAL MEN. 8vo.....	6.00
BARLOW on the STRENGTH of MATERIALS and on CONSTRUCTION.....	4.50
LARDNER on the STEAM ENGINE. New Edition.....	2'00
SCRIBNER'S ENGINEER'S, SURVEYOR'S and CONTRACTOR'S POCKET TABLE BOOK.....	1.50
SCRIBNER'S ENGINEER'S and MECHANIC'S COMPANION.....	1.50
BUCK ON OBLIQUE BRIDGES. Illustrated with Plans, &c.....	4.00
EXAMPLES of RAILWAY MAKING. With PRACTICAL ILLUSTRATIONS..	3.50
SIMM'S on LEVELLING and SETTING OUT RAILWAY CURVES. 8vo.....	2.25
SIMM'S on MATHEMATICAL INSTRUMENTS, 8vo.....	2.25
HAUPT on BRIDGE CONSTRUCTION. 8vo.....	3.00
QUESTED'S TREATISE on RAILWAY SURVEYING and LEVELLING. 8vo....	1.75

Together with an extensive assortment of Books in every department of science.

LAWRENCE SCIENTIFIC SCHOOL, Harvard University.

THE next Term of this Institution will open on the second day of March, 1854, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical Exercises, according to the nature of the Study, will be given in:

Astronomy.....	by Messrs. Bond.
Botany.....	" Prof. Gray.
Chemistry, analytical and practical.....	" " Horsford.
Comparative Anatomy and Physiology.....	" " Wyman.
Engineering.....	" " Eustis.
Mathematics.....	" " Pierce.
Mineralogy.....	" " Cooke.
Physics.....	" " Lovering.
Zoology and Geology.....	" " Agassiz.

For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

Cambridge, Mass., January 1854.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Norfolk, Va., Jan. 8, 1854.

SEALED PROPOSALS will be received by the undersigned at this Office, from the 1st until the 20th day of March next, at sundown, for the "clearing" and "Graduation" on the line of the "Norfolk and Petersburg Railroad," between that portion of said road now under contract, and its terminus at Petersburg—covering a distance of about eighteen miles; also, for the "Culvert" and "Bridge" Masonry of the last section of said work.

At the same time, sealed proposals are invited for the "Abutment" Masonry of "Bridges" over the Eastern and Southern branches of Elizabeth River.

The work will be divided into sections of about three miles, and bids may be made for one or more of said sections.

The line, plan, profiles and quantities of work will be ready for examination on and after the 1st of March.

Specifications with forms of contract and proposal may be had of the undersigned after date.

Payments will be made in current funds during the progress of the work, in proportion of four-fifths of the amount due.

Of bidders personally unknown to the undersigned, evidence of their responsibility will be necessary; and of those to whom work shall be allotted, will be required bond and approved security in an amount not exceeding one-fifth of the amount of their contract, for the timely and faithful execution of the same.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

The line is easy of access, the country through which it passes abundant in supplies and of a climate highly favorable for the prosecution of work at all seasons.

The work here offered for contract is of a character well worthy the consideration of the most responsible contractors.

W. MAHONE,
Chief Engineer.

January 19.

Norfolk, Feb'y 10th, 1854.

Sealed proposals will be received between the dates mentioned in the above notice, for the construction of two Iron Bridges with stone abutments and piers, one over the Eastern Branch of the Elizabeth River, 630 feet long, and containing about 3,300 cubic yards of masonry, and the other over the Southern Branch of the same stream, about 400 feet long, and containing some 1,700 cubic yards of masonry. Plans of bridges, with quantities of material and working drawings, will be ready for inspection after the 1st March.

From this date proposals will be entertained for the Clearing and graduation of several sections not included in the 18 miles mentioned in the above notice, and also for the bridges and culvert masonry upon said sections,—of the former about 3,560 cubic yards, and the latter 670.

W. MAHONE,
Chief Engineer N. & V. R. R.

Washburn Car Wheels.

Having secured the exclusive right to make and sell this celebrated wheel in Cincinnati, Covington and Newport, we are prepared to furnish them in any quantity, either fitted with axles or separate. These wheels are made of the best of iron, mixed in most approved manner.

Cincinnati, Ohio, January 18th, 1854.

KECK & HUBBARD.

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 50 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

2d Feb'y.

JOHN H. HICKS,
90 Beaver street,

BLAKE'S PATENT FIRE-PROOF PAINT.

THIS extraordinary substance has now been tested nearly *nine* years, and its **FIRE** and **WEATHER PROOF** qualities are most extraordinary. Instead of the action of the weather destroying the coating as it does ordinary paints, it only serves to turn it to a perfect *slate* or *stone*, protecting whatever covered from the action of *fire* and *weather*, as will be seen by the testimony of the following persons.

BORTON GREEN, being called in the case of Blake vs. Belknap, after being duly sworn, testifies and says, that he resides in Ohio. A few days since examined a house that had been painted nearly eight years with said paint, and to all appearance, it was as perfect as the day it was put on, and could even now see distinctly the brush marks upon the surface.

NORMAN RUDD being called, and duly sworn in the above-mentioned case, says that he was owner or part owner of a large Machine Shop situate in Newmarket, N. H., that the Shop took fire and burned down, loss, \$50,000. The roof of a large Foundry near by, was covered with this paint, a Cupola upon the Foundry was not painted, it took fire and fell on to the roof and burned up, without apparently injuring the roof, except to char the boards underneath.

Amesbury, Conn., August 18th, 1851.

We were present at the burning of the Amesbury Factory, which was struck by lightning on the 10th of July last, and which, with the surrounding buildings, was painted with Blake's Ohio Fire Proof Paint, and have no doubt but that all the surrounding buildings would have been consumed had they not been painted with said paint.

JOHN TALBOT, Superintendent.
DAVID TALBOT, Agent.

Akron, Ohio, May 22d, 1850.

This may certify that we have been acquainted with Blake's Patent Fire Proof Paint for some years, and are well assured that it is really what its name indicates—*fire-proof*. We consider it a better fire proof than tin or zinc, and will insure buildings covered with it at a much lower premium than those covered with the above-mentioned metals.

H. K. SMITH, Sec. Summit Mt. Fire Ins. Co.
DAN'L S. LEE, Ag't of Medina Co. Mut. Ins. Co.
D. R. HADLEY, Ag't of Stark Mut. Ins. Co.
R. F. CODDING, Ag't Portage & Farm's Ins. Co.
J. A. BEALES, Ag't Portage Ins. Co.
WHEELER, LEE & CO., Col. Ins. Co.

The best evidence of the value of an article, is from the fact of persons of practical skill, having used in years past large quantities, and still continue to order largely for future use.

OFFICE OF THE PHILADELPHIA & READING RAILROAD CO. }
Philadelphia, July 16th, 1850.

Dear Sir:—This Company have been and are using **BLAKE'S FIRE PROOF OHIO PAINT** extensively for Bridges and Buildings. In the course of time it becomes very hard, and seems to be both fire and water proof under any ordinary circumstances. We decidedly prefer it for the purposes named above, to any paint we have hitherto used, as it costs less and is much more durable.

JOHN TUCKER, President.

ENGINEER'S DEPARTMENT, P. R. R. Co. }
Philadelphia, Feb. 17th, 1850.

Dear Sir:—Having used Blake's Fire Proof Paint on this Road for two years past, I am sufficiently satisfied with its superiority to continue its application to all the structures and cars on the line of the Penna. railroad. Yours, very respectfully,

J. EDGAR THOMPSON, Chief Engineer.

OFFICE PENNA. R. R., April 20th, 1852.

Dear Sir:—Ship immediately the fifty barrels yet undelivered our order for one hundred Barrett Blake's Patent Fire Proof Paint, dated Feb. 15th, 1851, to care of Strickland Kneass, Esq., Altoona, and care of John Corvoly, Esq., Pittsburg.

Yours truly,

J. EDGAR THOMPSON.

GEORGIA RAILROAD, Augusta, Ga., November 27th, 1851.

Dear Sir:—Please furnish us with (30) thirty bbls. Blake's Fire Proof Paint, Chocolate Color. We have been using Blake's Fire Proof upon Freight Cars and Buildings for the last three years, and it gives me pleasure to state that we have found it both more economical and durable than any other kind of paint.

F. C. ARMS, Gen. Supt.

I fully concur in the above recommendation.

JESSE OSMOND, Supt. Car Factory.

Portland, April 11th, 1851.

Dear Sir:—I have requested Mr. Emory, Ag't and Supt't of the Y. & C. Railroad, to give you an order for twenty bbls. of Blake's Ohio Fire Proof Paint, for the use of this Road; and I take pleasure in adding, that I regard it as an article superior to any other introduced into the market and use, as also more economical in price, for coating Depots, Cars, and every other material of wood or metal, exposed either to fire or weather; and I can cheerfully concur in recommending it accordingly for most uses and roofs generally. Please forward the amount of Mr. Emory's order by the earliest convenience.

F. O. J. SMITH, President York and Cumberland R. R.

CAMDEN & AMBOT RAILROAD OFFICE. }
Bordentown, March 4th, 1851.

In reply to your inquiry as to your opinion of Blake's Ohio Fire Proof Paint, I would state that we have used considerable of it during the last two years, and consider it a first rate article, and hereafter shall prefer it to any other paint, for Buildings, Bridges and Cars outside.

R. S. VAN RANSELLER, Superintendent.

ENO'S OFFICE, BALTIMORE & OHIO R. R.

Dear Sir:—Being satisfied with the testimonials you here produced, that Blake's Fire Proof Paint which you have for sale is a valuable article for the purposes which they mentioned, I now give you an order for 50 barrels, of 350 lb. or thereabouts, of the paint; 25 bbls. of Black and 25 bbls. Chocolate color. Consign the paint to Jas. B. Jordan, Mount Clear Depot, Baltimore.

B. H. LATROBE, Chief Engineer.

OFFICE OF MASTER OF ROAD, BALTIMORE & OHIO R. R. }
Baltimore, Nov. 3d, 1851.

Dear Sir:—After using "Blake's Patent Ohio Fire Proof Paint" for the last year, I have concluded to give you an additional order for 40 bbls. I feel a pleasure in saying that I consider it the best material for covering Wood, Brick, or Iron, now in use.

Respectfully your Obedt. Servant.

W. BOLLMAN, Master of Road.

SUPERINT'T OFFICE, RICHMOND & FREDERICKSBURG R. R. }
November 6th, 1851.

Dear Sir:—In reply to your inquiry in reference to our satisfaction with Blake's Patent Paint, sold us last Spring, I would say that we are so well pleased with it that I should like to have you ship us seven bbls. more of the Chocolate at your earliest convenience. Yours, &c.

THOS. SHARP, Supt. R. F. and P. R. R.

JUNCTION HANOVER COUNTY, November 1st, 1851.

The Virginia Central Railroad Co. have been and are using Blake's Fire Proof Ohio Paint extensively for Bridges, Car-tops, &c. We decidedly prefer it for the purposes named above to any paint we have ever used, as it costs less and is much more durable.

C. R. MASON, Supt.

PHILAD'A. WILMINGTON & BALTIMORE R. R. }
Baltimore, Sept. 10th, 1851.

I have used Blake's Ohio Paint for four years, and have found it to be an article of great economy and value, and calculated to supersede for most purposes all other paints, for Public Buildings and Private Residences.

J. R. TRIMBLE, General Agent.

ATLANTA, December 10th, 1851.

Dear Sir:—Please send me for the Atlanta and Lagrange Railroad Co., 20 bbls. Blake's Fire Proof Paint, Chocolate Color. I have used the paint for various purposes, and am well satisfied that it makes a good and durable coating.

L. P. GRANT, Eng & Supt. A. & L. Railroad.

SUPERINT'T'S OFFICE, S. W. Railroad. }
Macon, December 6th, 1851.

Dear Sir:—Please ship us, care of Central Railroad Agent, Savannah, 2 bbls. Blake's Fire Proof Paint.

I have used on the Central Railroad, and on this road a considerable quantity of the above Paint, in the last four years, and have no hesitation in pronouncing it the best acoring for wood that I know of, as a protection from the weather or fire.

GEO. W. ADAMS, Supt.

MACON & WESTERN R. R., Macon, Dec. 6th, 1851.

Dear Sir:—You will please furnish for this Company 8 bbls. Blake's Patent Fire Proof Paint, (Black color), and 4 bbls. Chocolate color—in all 12 bbls. We have heretofore used Blake's Fire Proof Paint on Freight Cars and Buildings with much satisfaction, considering it both economical and durable.

EMERSON FOOTE, Supt.

MONTGOMERY & W. POINT R. R. Co. }
Montgomery, January 21st, 1852.

We have been using Blake's Patent Ohio Fire Proof Paint for several years for painting Cars and Buildings, and have been highly pleased with it. You may send us twenty barrels of the paint; fifteen of the Chocolate color and five of the Slate color.

Respectfully,

SAM'L G. JONES, Engineer & Superintendent.

ALL ORDERS ADDRESSED TO

WILLIAM BLAKE, Patentee.

119 Pearl Street, New York.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the **BELLEVILLE IRON WORKS**, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans,

Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be

promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. **BARSTOW & POPE**, Pine Street, New York.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by

BOORMAN, JOHNSTON & CO.,
June 9, 1853. 90 Broadway, New York.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to

THOS. CHAMBERS, President,
63 Beaver st, N. Y.,

September, 1850.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.
SECOND QUARTO SERIES, VOL. X., No. 8.] SATURDAY, FEBRUARY 25, 1854. [WHOLE No. 932, VOL. XXVII.

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Gov. Bigler's Message to the Legislature upon the affairs at Erie.....	113
Public Works of Virginia.....	116
Finances of the several States.....	116
Washburn Patent Car Wheels.....	117
The Chilled Tire in Vermont.....	118
Gov. Matteson on Pennsylvania Policy.....	118
Railway Construction in the West.....	119
Stock and Money Market.....	120
Toledo and Indianapolis R. R.....	120
Fitchburg Railroad.....	120
E. F. Johnson's Report.....	121
Duties on Railroad Iron.....	121
Adaptation of Locomotives.....	122
Cost of Railroads.....	123
New York Central Railroad.....	124
Rutland and Washington R. R.....	124
Railroads of New York—Annual Report of the State Engineer.....	124
Receipts of R. R. Iron at Cleveland.....	126
Providence and Worcester R. R.....	127

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.
Saturday, February 25, 1854.

Governor Bigler's Doings at Erie, and his Report to the Legislature.

Governor Bigler has returned from Erie, whither he went to seize the Franklin Canal Company's road, and has made return of his doings to the Legislature. From the intimate connection of his message with the Erie affair, and for the purpose of presenting both sides of the controversy, which by the Governor's own showing, has but *one* side, we give *all* that portion of the message relative to the question at issue.

The Governor commences by giving an account of his seizure of the road and the arrangement entered into with the Ohio company for running it. He then goes on to say—

It affords me unaffected pleasure to inform you, that notwithstanding the violent controversy which had been maintained for months past, between the railroad companies and the people of Erie, and the high degree of excitement incident to such a contest, *I encountered but little difficulty*

in accomplishing the objects of the law. No serious disposition was manifested at any time to resist the authority of the State.

Encountered but little difficulty! Why, the people of Erie were, of all others, the fiercest in their demands for the abrogation of the Franklin Canal Company's charter! Yet the Governor tells us that they offered but *little* opposition to the seizure of the road! As there was a *little*, there must have been *some* opposition.

This is the method that the governor uses to tell his constituents that he had quelled the *Erie* mobs. He had not the ingenuousness to speak the truth boldly, but talks all the time about the *Franklin*, when he wishes to be understood as referring to the North East company. Such double dealing and evasion are contemptible in the Governor of a great State. It would be downright misrepresentation did not every one see through the veil of gauze behind which the Governor tries to hide.

The paragraph in the message next to the extract already given is of the same sort.

Forbearance and prudence appeared to distinguish the conduct of the mass of people, as well as the action of all the parties directly concerned in the adjustment of this unpleasant affair. While, therefore, it is hoped that the *settlement of the difficulty in the manner just indicated may prove satisfactory, the restoration of peace and quiet to the community will doubtless be a subject of gratulation throughout the country*; as it certainly should be of special gratification to you and the other authorities of the State. With an unflinching determination on the part of the people of Erie to maintain their rights before the Courts, and to insist upon measures of legislation for the promotion of their welfare, I feel assured that they are equally prepared to restrain, and if needs be to resist any act of violence to persons or property, or other acts in derogation of the law.

We invite attention to the italicised portion of the paragraph: "*The difficulties settled in the manner indicated, etc.*" The Franklin Canal company have been no party to the *difficulties* spoken of by Governor Bigler. They have been mere spectators. Their conduct has not even been complained of by the Erie rioters. Their road was attacked by them, to be sure, but only in a kind of a phrensy of madness, when they saw that they could not prevent the change of gauge on the North East road. The Franklin company have

not only been in no way connected with the Erie "*difficulties*," but they have in reality committed no real offence whatever; for in the very next paragraph Governor Bigler recommends that a suitable and competent charter be given for the road already built; a curious punishment for a grave offence. In our view, the above extracts place the candor and firmness of the Governor in no enviable light. All that part of the message quoted, is a direct attempt to mistake the real question at issue, and to convey the impression that it was the Franklin company that created all the difficulties referred to.

The next paragraph, for we are giving them consecutively, is as follows:

The claim of the State to the route from the city of Erie to the Ohio line having been thus maintained, the inquiry naturally arises, shall a grant for a road between these points be made, and on what conditions? I have no hesitation in expressing the opinion that the grant should be made, and as promptly as convenient, and thus put the controversy at rest. The State should certainly do this, or make provision for payment to the stockholders of the Franklin Canal company of a fair compensation for the railroad constructed by them, and keep it herself. *Of these propositions I am inclined to prefer the former.* Should the grant be made to a corporation, such conditions can be annexed as will meet the wishes of the people of Erie, promote their welfare, extend the business and usefulness of the harbor at that place, and advance the general prosperity of the State, without subjecting travel or commerce to more than an incidental or unavoidable inconvenience.

Among the conditions should be one requiring this road to connect with the harbor at Erie; and such other forms as the General Assembly may deem right and proper.

This is the punishment for the terrible offence committed! A good charter instead of a *worthless* one. The Franklin company ought to be everlastingly obliged to Governor Bigler for the *discipline* he recommends. Here is a company who, in his language, have committed high offences, one of which has been the invasion of the right of Eminent Domain. They are arraigned, tried, and convicted! What is the punishment recommended by this champion of an insulted sovereignty! Why that a *patent* be granted allowing the company repeat with impunity the offence for which they stand condemned. If the sublime

here does not melt into the ridiculous in a twinkling, then we are no judge in such matters.

Again—

With these remarks, under other circumstances, my duty might close. But the manifest misrepresentations which have characterized the discussion of this unpleasant controversy in certain sections of the country, have induced me to present a brief statement of the facts of the case, as a defence of the State and her representatives.

Still at the old work of misrepresenting. The Franklin Canal company have been party to no unpleasant controversy, and no unpleasant feeling. They have been quietly at work, serving the public in their own way. The Erie people have really nothing against them. They want the road with the Ohio gauge. They threatened to destroy the road, and did destroy some portions of it, but then they were impelled by a sort of blind fury, exasperated by the failure of their designs against the North East company. The Franklin company is in no manner implicated in the Erie difficulties. Yet Governor Bigler speaks of them as the sole authors of all the troubles that have happened, and that in taking possession of the road *he met with some opposition from the people of Erie*. If such palpable misstatements are not contemptible in a person occupying the position of Governor Bigler, we do not know what is. But let us hear some more of the message.

The commonwealth, says Governor Bigler, has had no controversy with the citizens or corporations of other States, *nor has she been inclined to interfere with their rights or interests, or to unnecessarily interrupt the travel or commerce of the country*. She has been dealing with a refractory creature of her own, which had most palpably "misused and abused" the privileges conferred upon it by law; a corporation that had attempted the usurpation of power, that had infringed the sovereignty of the State, and invaded her rights of eminent domain. *If in this contest she was brought into collision with citizens and corporations of other States, the difficulty was not of her own seeking*. The vindication of her honor and dignity was a duty which she could not neglect; and I have no hesitation in saying, without any reference to the difficulties at Erie, that it was right and politic on the part of the State to exercise the power which she had reserved over this corporation. The act, I doubt not, will exert a wholesome influence in future over the conduct of similar bodies. If neglected in a case so manifestly proper, it would be idle to insert reservations and conditions in similar corporations for the protection of the public, as it would also be useless to grant additional railroad charters. Under such a latitudinarian construction as claimed by the Franklin Canal company, those already in existence could occupy every feasible route in the State.

The refractory creature then, by the recommendation of Governor Bigler, is to be allowed by law to repeat its abuses and misuses *ad infinitum*. A most lenient Governor this! We insist that he is too kind. As this "refractory" subject has kept the whole State in a ferment for years past, at a direct cost, we have no doubt, of more than \$100,000, and probably \$200,000, in addition to the expenses of the Governor's journey to pronounce sentence against it, we suggest that it should pay the cost of execution if no more. If the whole parade and fuss which this "creature" has caused, is to come to such a pitiful conclusion, the swelling drama that was promised has turned out to be a most contemptible farce.

The Governor next goes on to enumerate the enormities committed by the aforesaid "refractory" subject:

"In 1844, this Corporation was created for the purpose of improving the French Creek Division of the Pennsylvania Canal, the State reserving the right to re-possess said canal, at any time thereafter, by repaying the Company the amount of money expended in its improvement, with 6 per cent. interest.

In April, 1849 the Company was authorized to construct a railroad on the banks of said canal, and to extend the same from the head of the canal north to Erie, and south to Pittsburgh; the Legislature expressly reserving the right to revoke the charter of the Company, should the privileges granted be at any time "misused or abused." The Company made no attempt to improve said canal, nor to construct the railroad from the termini of the canal to Pittsburgh or Erie. In 1850, however, they commenced the construction of a railroad from the Ohio State line to the City of Erie, parallel with the lake, and nearly at a right angle with the route assigned to them by the Legislature.

They were early admonished against this attempt. In 1851, the Pittsburgh and Erie Railroad Company instituted proceedings against the Franklin Canal Company, in the Supreme Court, on the ground that they had no right to construct a road on the location which they were attempting to occupy.

In the spring of 1852, the Attorney General made complaint against said company before the Supreme Court, in the name of the Commonwealth, and prayed for an injunction to restrain the construction and use of said railroad. The opinion of the Court in this case was delivered in January, 1853; and while the injunction prayed for was refused on the technical ground that the Commonwealth could not, under the law, give security for damages, the views of the Court literally annihilated the rights of the company to construct a road on the route which they were then occupying, and in this opinion the Circuit Court of the United States, at Pittsburgh, has fully concurred.

The Legislature of 1853 repealed the law requiring the Commonwealth to give security for damages, and thereby removed the only obstacle in the way of a final decree against the company, in the case then pending. But inasmuch as the railroad, in the mean time, had been completed, and the only effect of the decree would be to restrain the use of the road, it was deemed proper to await the meeting of the Legislature, the only power that could properly and permanently dispose of this controversy.

The Legislature did act, and by virtue of the reservations contained in the charter already referred to, revoked and annulled all the rights and privileges granted to said company. This railroad with all its appurtenances, is therefore, in the possession of the State, and its operations under the direction of an officer of her own selection.

This brief history will be sufficient it is hoped to vindicate the commonwealth against the charge of having misled this company, by indulgence in their manifest inclination to assume rights not granted by law. Those familiar with the subject, I am confident, will agree with me in opinion that the attempt on their part to usurp the right has delayed an express grant. The company were admonished at every step that they were transcending their legitimate province; but the only effect seemed to be to stimulate them to greater indignity to the State, and increased fatality in the consummation of their own destruction.

The above, which is the bill of indictment, trial and conviction of the refractor, does not call for particular comment.

We have now given the narrative, or historical portions of the Governor's message. We come now to the apologetic or vindictory part of it.

"It has been frequently alleged that the State in her controversy with this corporation was actuated by a selfish motive, that she desired to interrupt the transit of persons and tonnage over that part of her territory.

The answer to this allegation is that her author-

ities could long since have had a final decree against the company and restrained the use of the road; and it will also be perceived that as soon as she did get control of it arrangements entirely agreeable to the public were made for its use.—She was also willing to remain quiet until the Legislature assembled and disposed of the whole controversy; but it seems that her indulgence has not been properly appreciated. Prudence and a just respect for the State should have dictated to the railroad companies the adoption of a similar liberal policy.

True, it may be said that the repeal of the gauge law gave the companies owning the roads east of Erie the right to change their gauge; but it is equally true that the opinion of the Supreme Court, delivered in 1852, was notice to them that the State had not granted the right to make a road of any gauge from the Erie to the Ohio line, and this fact was not overlooked in considering the repeal of the gauge law. *Was it prudent then, on their part, to change the width of their road to suit that of one constructed in known violation of law?* Was it not, to say the least of it, presumptuous to conclude that the State would confirm this fraud upon her rights? Would it not have been the part of wisdom to have rested quietly until the State had legalized a route from Erie west? I know that the affirmative of this is held by gentlemen connected in interest with the railroads. To this unfortunate movement, more than to any other, may be attributed a degree of excitement and resistance on the part of the people of Erie County, for which the State has been so much censured."

We invite particular attention to the preceding paragraph in which Governor Bigler both accounts and apologises, for the Erie riots, and if it does not stamp him with disgrace no act can. What is the apology offered for the long continued outrages committed against the North East Company. Not that they were doing an unlawful act, but in pursuance of law, and of a law to the enactment of which Gov. Bigler was himself a party, a law, the express object of which as he well knew, was to allow the North East Company to change their gauge to correspond to that of the Franklin Canal Company, they were about to make such a change! Such is the apology offered by the Governor of the great State of Pennsylvania for a series of outrages upon law, upon property, upon private right, upon commerce, and we may say upon humanity itself, of which the history of this country furnishes no example. What must we think of the moral or intellectual structure of the man who gravely presents himself before the world with such an apology for such acts! Again:—

"The citizens of Erie and the present Executive have been condemned for alleging that there should be a break of gauge at Erie; and I must beg your indulgence on this point for a moment.

A demand for an unnecessary break of railroad gauge, and the consequent transhipment of tonnage and passengers, it will be conceded, would be an illiberal exaction, and an improper interruption of the commerce of the country. *But such is not the position of the question at Erie*. The necessity for a break of gauge between the West and the Atlantic cities results from the policy of New York and Ohio, and not from that of our own State. The railroads of Ohio are uniformly four feet ten inches wide, and those of New York, four feet eight and a-half inches, except one, which is six feet in width. A transhipment is therefore inevitable. It must occur, and the only question is as to the proper point. After all the reflection I have given the subject, I must again repeat what I said in my annual message, that I can see no reason founded in public policy, why the break should occur at Buffalo, that do not apply with equal force to Erie. The impediment to trade and travel will be alike at either point, with the advantage of greater unoccupied space at the latter. Nor have I been able

to discover why it is, that if a break of gauge is so entirely unimportant, there should be so much solicitude to have it at the City of Buffalo, or to understand how this city has escaped the execrations so freely heaped upon the City of Erie. If a transshipment at Erie be so prejudicial to the commercial interests of New York, why is not a break at Buffalo equally so? There is now a break of gauge at each, and is it not strange that, while the latter city has complained of Erie, it has failed to discover a similar obstruction to trade and travel in its own vicinity? When this shall have been removed, it will be time enough, it seems to me, to complain of Pennsylvania.

Governor Bigler mistakes the position taken by the Erie people in reference to a break at that point. Their benefit is the exact measure of the public inconvenience. He also misconceives, and consequently mistakes, the grounds for carrying the Ohio gauge into New York. The advantages to be secured by a break of gauge at Buffalo and Dunkirk, had nothing whatever to do with the subject. The facts of the case are simply these: The prospective completion of the Erie road to Lake Erie, naturally directed attention to its extension West, so as to form a connection with the railroads of Ohio. For this purpose a road, with a contemplated six feet gauge, same as the Erie was commenced, extending from Dunkirk to the Pennsylvania State line. Parties in interest in the Central line, commenced about the same time the construction of a narrow gauge road from Buffalo, West, to correspond with the Central. The folly of building two roads, when one would answer all the purposes of the two, soon became apparent to all the parties concerned, and the result was, a consolidation of the two companies into one, called the Buffalo and State Line Railroad.

The consolidated line of necessity adopted the Ohio gauge, which was the only way by which the construction of two roads could be avoided. Had the Erie and North East Co. adopted the Ohio gauge, the arrangements of the Erie and Central lines of New York would have been the very best that could have been made. But that road was then in the hands of the Erie people, and they insisted upon the six feet gauge for the purpose of securing a break at their city. Four breaks were thus made necessary instead of two; and this was the reason for our saying that a better arrangement would have been, to have carried one of the New York gauges to Erie. The State took part with the Erie people and enacted a law prohibiting the Ohio gauge East of Erie. But the Buffalo and State line road having obtained a controlling influence in the North-East Company, procured a repeal of the Gauge Law and proceeded to change the gauge of the road, which resulted as we have seen. Neither Buffalo, nor Dunkirk, ever raised the question of gauge except in its bearing upon the convenience of commerce and travel. If breaks of gauges are to be remedied as far as possible, and if it be better to have but one road instead of two, where one is all that is needed for the accommodation of business, then the extension of the Ohio gauge through Pennsylvania into New York is the best arrangement that can be made. The people of Erie object to this arrangement for reasons so often stated. Their opposition has been in violation of law, of public convenience, was winked at, if not directly encouraged, and is now publicly apologized for, by Governor Bigler.

Again,

To illustrate this idea still more forcibly, suppose it were possible to force that narrow strip of territory eastward for a few miles, and permit New York and Ohio to come together at Erie, then where would be the break of railroad gauge, and who would be at fault? When the capitalists of New York commenced the construction of a railroad from the City of Buffalo westward, differing in width from the other roads of that State, they had determined to impose upon commerce the inconvenience incident to a transshipment. Solicitous as I am to facilitate intercourse between the Great West and the Atlantic Cities and to maintain a liberal policy toward neighboring States, I have been unable to discover a reason, in public policy, why this unavoidable transshipment should not occur at Erie. Such a position is not wanting in courtesy or kindness to our neighbors. New York has selected her policy as to the width of railroads. She desires to extend them westward, and Pennsylvania is willing to admit them within her limits. Ohio, on the other hand, desires to get eastward, and Pennsylvania extends to her an equal degree of courtesy. The latter State asks no advantage—she is willing to extend her roads to Erie, and meet New York and Ohio on equal terms, on her own territory. Surely there can be no want of courtesy in this position. However much she may regret the necessity for a transshipment, she has not the power to obviate it. But, on the other hand, it is demanded that a gauge of railroad, unusual to Pennsylvania and New York both, with which neither can connect, should extend from Ohio to the City of Buffalo, on a line a mile and more south of the harbor, at Erie, and cutting off the chances of connection with the Sunbury and Erie, in the former State, and the New York and Erie Railroad, in the latter. This arrangement may answer the owners of the road better than the public. It has been assigned as a reason for this policy, that Buffalo is a greater city than Erie, and that the former should be regarded as the eastern terminus of the western business. Atlantic cities will scarcely be willing to adopt this idea.

We have stated the reasons why it is more convenient for property to break bulk at Buffalo and Dunkirk than at Erie. All the talk that Pennsylvania was willing to allow the Ohio and New York gauges to come to Erie is sufficiently answered by the fact, that Pennsylvania allowed the North East road to select just such gauge as it chose. In face of the fact what right has Gov. Bigler to assume the Bully, and to say what Pennsylvania will or will not do. He is but a citizen, as far as existing laws are concerned; and by adopting his present language he makes himself a co-worker with the Erie rioters. He has approved of a law allowing the North East Company to change the gauge and now says, Pennsylvania will not allow the Ohio gauge East of Erie! Here is rank sedition in the Governor himself: an assertion of the rights of a mob over law; a law too which bears his own signature! What a spectacle of consistency and political morality.

We now come to the Governor's reasons for compelling the roads at Erie to go to the harbor.

I, however, regard the connection of this Lake Shore Road, and the Sunbury and Erie, and the Pittsburgh and Erie Railroad with the Lake, at the harbor of Erie as vastly more important to the State and the City of Erie than the termini of the gauges. The harbor of Erie is one of the safest on the lake, and its other natural advantages are not surpassed. It can be connected with the Atlantic cities by a shorter and better railroad communication than any other, and it needs but this to place it in possession of an immense business. But it will be vain to anticipate the accumulation of the vast products of the country in that harbor, unless facilities be afforded to transportation to and from it. Nor is it any more reasonable to present the condition of business in the harbor, at this

time, as an argument against the construction of such facilities. It would be as sensible to expect to discover full grown corn in the uncultivated forest, as to find the vast products of the country in a harbor from which there is no means of transit. The natural advantages of this harbor have been thus far rudely rejected; but this policy, I am confident, cannot be longer maintained. The increasing business of the country will demand the use of this eligible spot as a necessity; as I am also confident the connection of the lakes with Philadelphia by railroad will distinguish an era of renewed growth and greater prosperity to the city of Erie and the surrounding country.

Erie harbor has been rudely rejected! Not by the people of New York nor Ohio, but by Pennsylvania!; and why? We should like to have Governor Bigler tell us. What is the grand motive that impells to, all exertion? Money. In making money, the instinct of the individual is a much greater safeguard, than the sagacity of legislators. If any money could have been made out of the use of the harbor at Erie, would not some shrewd Yankee have found it out, think you? If not, then this is the only exception to an universal rule. The latent advantages claimed for that port do not really exist. Who wants to go to Erie? Nobody. Consequently there has been nobody to build up a great city there. It has no back country, like Cleveland and Buffalo to supply a large domestic trade. It can never be the outlet for western produce. It will never see the day when produce can be forwarded, from its port, to tide water, for one-half the cost of sending the same from the same port, by way of Buffalo and the Erie canal. The canal is navigable for the same time that the Lake is. A dozen railroads from Erie to tide water would not help the case. Produce from the West would not stop there. A vessel from Chicago, say, will load to Buffalo cheaper than to any port on Lake Erie. Why? Because it is the only place at which a return freight can be had, if we except the article of coal, in which particular Buffalo will be soon as well off as Erie. The Erie bladder may as well be pricked now as to be allowed to burst of its own extreme windiness. Dunkirk was to be another great Lake city. What is it? An abortion; as is admitted in all hands. Had Erie any greater vitality, somebody would have found it out before this time of day. Yet Governor Bigler wonders why it is not a great city. He is going to make it so by legislation; by malice prepense. All merchandize passing through it must be changed from car to car. The roads must run to the harbor. Has he not sufficient sense and experience to know that the North East, and Franklin companies would have extended their roads to the harbor, had there been any prospect that the operation would have paid. There is no inducement for this. Does Governor Bigler want any better evidence of this fact, than that it has not been done. What were these roads built for? To make money. The objects were purely selfish. Selfishness would have prompted their extension to the Lake, could selfishness have been rewarded by so doing. Is not selfishness a safer guide in such matters than the mere opinion of persons living at a distance, and who know nothing about the matter. Upon this branch of the subject the reasoning of the Governor is a shallow and unsound. (we can't find any softer terms), as upon the others. We are willing that he and the Erie people should have all they advantage they

can derive from it. Neither his nor their opinions can change the direction of trade, nor force it into inconvenient channels. If Erie is nothing without legislation, it must always remain a cypher. All attempts to force commerce there will be as futile, as it would be to attempt to make the great Lakes discharge their waters through that port. Governor Bigler therefore has an impossible task before him, to say nothing of the injustice of his positions toward the commerce of the country.

We now come to the concluding paragraph of the Governor's Message:

"I have approached the discussion of this subject with much reluctance, because of the unpleasant feelings which it has excited in certain sections of the country. I have only been constrained to do so by a sense of duty to the State in her sovereign capacity. With the controversy which has been so vigorously maintained for a year or more at Erie—with the crimination and recrimination between the railroad corporations and the citizens, between conflicting interests at Cleveland, Erie and Buffalo, and the peculiar policy that each may have used to accomplish the end in view, I have not felt required to interfere, nor to correct the various misrepresentations of my official acts in reference to the late difficulties at Erie. I have felt most concerned for the State and her character. For Pennsylvania, the birth place of the Declaration of Independence—the prolific mother of brave hearts and stout arms, ever ready to defend the country against foreign aggression—the bulwark of our national strength in domestic conflicts—the Keystone of the federal arch, and the unflinching defender of the constitution, she will ask only what is right, and submit to nothing that is wrong. While she will never yield her rights to the usurpation of creatures of her own, or suffer the invasion of her sovereignty by those of another State, she will never make an unjust or unreasonable demand upon others. Claiming her rights and seeking to promote her own welfare by every proper means, she will nevertheless rejoice at the prosperity of neighboring States, and advance their interests by every just means in her power."

EXECUTIVE CHAMBER,
Harrisburg, Feb 11, 1854.

WILLIAM BIGLER.

We think this last paragraph caps the climax of the Governor's folly and nonsense. Why did he not interfere in the controversy which has been going on at Erie for more than a year? Why did he, as Chief Magistrate of the State, for weeks and months, tolerate a lawless mob in their destruction of property? Why did he not interfere to check them, and not leave it for the United States to do? It was not till he was shamed into action, by the indignant voice of the whole country, that he moved at all. We do not wonder at his sense of his own humiliation, which is most palpable, notwithstanding the gasconade and flourish about the Key-Stone State, with which he winds up. We have given the whole of the famous message immediately bearing upon the Erie troubles.

We had two motives: to give the Pennsylvania side of the case, and to show how utterly unsupported it is either by fact or argument. We desire no stronger evidence of the correctness of the ground we have taken in this affair. Of all the follies committed this message is the greatest. It leaves Gov. Bigler without apology, or sympathy for the wrongs he has permitted, or for the extraordinary doctrine he has proclaimed.

With this article we hope that we have at last got through with "affairs at Erie." We believe that they are in a fair way of settlement. That the Railroad Companies will substantially triumph we have not a doubt. They have now an uniform

gauge. They run together. Nothing can long delay their ultimate connection!

Public Works of Virginia.

The Board of Public Works, to which is committed the management of the interests of the State of Virginia in her great system of improvements, has recently issued its annual report. Although it does not exhibit so great a progress in these works as could have been hoped, it explains the difficulties which have been presented and appeals to a feeling which Virginians will not disown, for means to complete the connection, so long demanded, of those portions of the great central State separated by the Alleghanies, and of the whole with the Great West.

The report notices the progress and condition of the Blue Ridge Railroad, which is to form, when completed, a most important connection of the system of the State. The road is 17 miles long, has four tunnels, respectively 538, 830, 100, and 4,248 feet in length. All of these have proved difficult of construction. Ten miles of the Eastern end of the road are completed, and in the present month three miles on the Western end are to be opened. The short tunnels are expected to be completed within the present year, and in two, or at the most two-and-a-half years, the main tunnel will be completed also. In the mean time the Virginia Central company will operate their road over the temporary track lately planned and executed by the Engineer, Chas. Ellet, Jr., a description of which was lately published in the Journal.

The James River and Kanawha Canal is in progress from Buchanan to within thirty miles of Covington, in Alleghany county, at which latter point it has been decided it shall have its Western terminus. The stockholders of this work have conferred on the propriety of its sale to the State, or the conversion of its debt into stock upon terms subject to mutual agreement by the parties.

The report alludes in proper terms to the objects to be gained by extending the great East and West lines of the State to the four important points on the Ohio River, Wheeling, Parkersburg, Point Pleasant, and the mouth of the Big Sandy, at all of which they will be met by great lines in Ohio or Kentucky.

Other lines of road than those in which the State is a stockholder, are alluded to and represented as in a flourishing condition.

The report shows the entire length of railroads within the State, as 2,102, of which 1,049 are completed, (including 240 miles of the Baltimore and Ohio road,) and 873 miles are in progress. The authorized capital of all the roads, other than the Baltimore and Ohio, is \$27,096,100, of which the State holds on her own account \$6,102,497 17.

The Board has nearly effected negotiations in London for a large amount of State securities issued in aid of the public works.

A large and accurate map of the State, including its geological topography, is in progress under the direction of the board.

The general works of improvement are well spoken of, and confident anticipations expressed of the future position of the State, upon the completion of her leading enterprises, by which her

agricultural and mineral resources, and commercial facilities will become available.

The Commissioners of the Board of Public Works, are Archibald Graham, President; Edward J. Armstrong and Thomas J. Boyd, William R. Drinkon, Secretaries. Their office is in the State Capitol at Richmond.

State Finances.

We are now enabled to present fuller statements of the finances of Louisiana and Wisconsin, than those given in previous numbers of the Journal.

LOUISIANA.

The receipts into the Treasury during the past year, from all sources, have been \$2,148,487 75
The balance in the Treasury, Jan. 1, 1853, was 355,704 84

Total means within the year... \$2,504,172 49
The payments during the year were, 1,340,443 30

Leaving a balance in the Treasury, Jan. 1 \$1,164,568 08

The late Legislature borrowed \$100,000 to pay current expenses, the treasury being then empty. It also ordered an issue of \$750,000 of bonds to replenish the Treasury—making \$850,000. This shows where the excess over last year comes from. \$155,259 27, the State's final share of the surplus profits of the Union Bank, have also been received, besides some \$20,000 from temporary sources. Total taxes assessed in New Orleans, \$248,474 46
Taxes paid by the remainder of the State 464,227 79
The aggregate State liabilities sum up thus:
Liabilities for the property banks... \$8,421,888
For the second Municipality of New Orleans 198,244

\$8,620,132

For these amounts the State has good security.

The State debt proper is—

Trust funds due on demand \$1,221,809 41
Bonds due 1855 50,000
" 1857 250,000
" 1867 483,000
" 1869 30,000
" 1870 90,000
" 1872 125,000
" 1898 1,046,000
Bond debt 3,074,000 00

Total State Debt proper \$4,295,809 41

The reduction of \$804,000 of Union Bank bonds, during the year, was only nominal, the bank having paid the money. The withdrawal by the second and third Municipalities of \$188,160 of State bonds issued to them, and the payment of \$200,000 borrowed, to the Louisiana State Bank. Total reduction, \$1,192,160. It has been increased by the loan of \$750,000, by bonds issued for trust funds, for \$284,559 91; and by bonds to the railroad companies, \$302,000. Total addition \$1,336,559 91. Increase of the debt for the year, \$144,399 91.

WISCONSIN.

The receipts into the treasury during the year amounted to \$311,632 61. The disbursements during the same period amounted to \$262,489 20. The balance in the treasury, Jan. 1, 1854, was \$57,136 48. The estimate of the probable amount to be drawn from the treasury during the present year, for the general expenses of the State, is stated at \$147,210 70. The means applicable to meet the same are estimated at \$160,017 74. The

school fund, on the 1st of January, 1854, amounted to \$1,141,804 28, arising almost exclusively from the sale of lands granted by Congress. The whole amount expended in the erection of school-houses within the State has been \$288,346 89, of which sum \$45,071 84 were expended during the past year. The total amount expended in 1853 for the support of common schools was \$175,734 17. The State University fund, on the 1st of January, 1854, amounted to \$106,112 07. The number of banks in the State is 10; the amount of circulating notes issued by the controller, \$519,000; and the amount of securities deposited with the State treasurer, \$529,000.

MAINE.

The "State of Maine" gives the following abstract of the report of the State Treasurer, for the year ending Dec. 31, 1853.

"The amount of cash on hand on the first of January, 1853, was \$165,448 23. The receipts during the year were \$361,417 57—making a total of available means of \$526,865 80. The disbursements were \$434,361 09—leaving a balance, Dec. 31, 1853, of \$92,504 71. This is subject to reduction, however, to meet past appropriations of \$62,377 59—leaving a balance of \$30,127 12 in the treasury, to be applied to future accruing expenditures.

Among the extraordinary items of expenditure for the past year, were the following: Payment on the Massachusetts lands \$112,500; on account of repairs of Insane Hospital \$24,000; for construction, etc., of Reform School buildings \$18,000—making a total of \$154,500. The payments on the public debt have been \$10,000, and for interest on debt, \$42,474 21. Leaving for ordinary expenses of government, including payments from School Funds, etc., \$289,787 47.

The payment of \$112,500 on the Massachusetts lands was made by the Treasurer, immediately upon the approval of the deed by the Commissioners on the part of Maine; and ten bonds of \$25,000 each were given for the balance, payable, one in each of the years, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, and 1872—at 5 per cent. interest.

The treasurer estimates the receipts for 1854, (including the cash on hand,) at \$452,290 68; and the expenditures at \$318,267 02. Of the receipts \$207,000 is estimated from taxes, and \$100,000 from the Land Office. And of the expenditures—accruing, \$21,000 is on the public debt, \$30,500 for interest, and \$12,000 on account of the Reform School—leaving \$245,767 02 for ordinary expenditures.

The remaining funded debt of the State, (aside from the land debt,) is stated as follows: Due Jan. 1, 1853, and not called for, \$11,000; due March 4, 1854, \$10,000; due Feb. 1, 1855, \$1,000; due March 7, 1855, \$259,000; due March 7, 1856, \$132,500; due Feb. 1, 1860, \$48,000. Making a total of \$461,500.

Of this amount, the large sum of \$391,500 is to be provided for early in 1855, and 1856.

The annual State tax of \$400,000 being all engrossed by the ordinary expenditures of government, and the sales of public lands having been stopped for the present year, the Treasurer says the resources for the payment of the public debt falling due in 1855-6, are reduced to the following:

Assets in the Land Office due or maturing before 1856.....	\$321,000
So much of cash on hand as can be spared.....	30,000
100 shares in Augusta Bank.....	8,000
Notes due at the Treasurer's office prior to March 7, 1856.....	2,000
	\$361,000

The receipts from the Land office in 1853, were \$85,430 27.

KENTUCKY.

Besides the particulars of the State debt, and the operations in the State Treasury, given in a previous number of the Journal, we now present the following additional particulars of the wealth and growth of the State, from the recently published report of the State Auditor:

Number of acres of land taxed in 1853.....	20,667,443
Value.....	\$166,857,626
Average value per acre.....	\$8 07
Number of slaves.....	199,949
Value.....	\$79,462,188
Total value of property paying ordinary taxes.....	\$366,752,352
Total value of property paying special taxes.....	3,124,140
Taxes assessed at ordinary rates....	623,479
" " special rates.....	9,372
Increase in value of property over value in 1852.....	\$33,620,840
Whole revenue for year 1853.....	646,024

Air Vessels of Locomotive Pumps.

With a view of testing the value of air vessels, as applied to the force pumps of locomotives, Mr. G. B. Simonds, master mechanic of the New York and New Haven Railroad, applied air vessels of thick glass to some of his pumps. The idea had been entertained that the air chamber was of but little use at high speeds, as it was argued, it would soon become filled with water. The results of Mr. Simonds' trials proved this opinion to be incorrect, and showed the advantage of air vessels in a strong light, as means for relieving the strain on the feed pipes, and easing the motion of the pump valves. The air chambers tried were of glass, from $\frac{3}{8}$ to $\frac{1}{2}$ inch thick, with a ground joint and confined in the usual manner by a clamp and set screw. The unequal expansion of the glass and iron clamp broke the former after a few trials; the explosions being loud and of such force as to send the pieces of glass to the farthest end of the engine house, within which the engine was standing at each time.

The results shown by these trials were as follows: The air chambers of about 7 inches height, and of an average diameter of about $2\frac{1}{2}$ inches, applied to pumps of 20 inches stroke, were filled at slow speeds to within $1\frac{1}{2}$ or 2 inches of the top, the surface of the water pulsating slightly with each stroke of the plunger. As the engine was run at successively higher speeds, the level of the water, contrary to the previous general opinion, fell, until at a speed of 35 miles per hour, (with $5\frac{1}{2}$ feet wheel,) its general surface was about 5 inches below the top of the chamber. At every stroke of the plunger, however, a column of water, about 4 inches high rose and fell within the centre of the air vessel. This column was perhaps $1\frac{1}{2}$ inches diameter, and was of nearly the same outline as the interior surface of the air chamber.

The increase of the amount of air in the chamber, with increase of speed, is not the easiest of explanation. It may be supposed, generally to be the relief afforded by an uninterrupted current of water, in place of the intermittent jets of a slower progress. If the check valve falls fully upon its seat at every stroke, the pressure below it must exceed the pressure within the boiler in proportion to the difference between the internal and external area of the valve seat; by which a greater pressure is required to raise the valve than to keep it up afterwards. At high speeds the valve does not, probably, close upon its seat, and it may be supposed, that, with the air chamber, there is a uniform flow of water into the boiler, the impulse of each jet being absorbed in compressed air.

The relief which air chambers afford to the feed pipes, through which are carried columns of water subject to continual interruptions of motion, is quite plainly seen. Practice confirms the opinion also, inasmuch as the pipes give much more trouble in breaking off, when without these protections. The effects of air chambers on the

suction sides of the pumps are beneficial also in proportion to the disturbance caused by interruptions in the flow of water.

Before the adoption of air chambers, it was thought that a full stroke pump would not work well at high speeds, and short stroke pumps were accordingly applied. When air chambers were introduced, the full-stroke pump, (stroke of plunger equal to stroke of piston) was restored to general use. At the present time no maker in the United States employs a short stroke pump. In England, where air vessels have seldom, if ever, been used, most of the passenger engines have short stroke pumps. The rise of the pump valves, of all engines, is now made much less than formerly. When the rise of valves was once $\frac{5}{8}$ inch, it is now $\frac{1}{4}$ inch.—*American Railway Times.*

Washburn Patent Car Wheels.

Below will be found some valuable testimonials, addressed to the Agent of the Company, in favor of the "WASHBURN PATENT CAR WHEEL", manufactured and for sale by Washburn, Pond & Co., Troy, N. Y.

BOSTON & PROVIDENCE RAILROAD.

Boston, 20th May, 1853.

Dear Sir—Yours of the 18th is in hand. The Cast Iron Wheels in use on this (Boston & Providence) road are exclusively of the Washburn pattern, so called. We regard them as having great merit, both on account of pattern and stock.

The best wheel is the cheapest, which answers your last inquiry; and as we class the cast iron wheel made by Converse & Washburn, the best, they are the cheapest. Very respectfully,

W. RAYMOND LEE, Superintendent.

BOSTON & WORCESTER RAILROAD.

Boston, May 17, 1853.

Dear Sir—We have used all kinds of Cast Iron Wheels, double and single plate, spoke, etc., etc., none of which have proved so well as those manufactured by Converse & Washburn. Out of over three thousand (3000) used within three and one-half years, not one has broken by fair means.

Very respectfully, yours,
G. TWITCHELL, Superintendent.

WESTERN RAILROAD.

Springfield, Mass, May 17, 1853.

Dear Sir—Your favor of the 13th is at hand, and remarks in reference to Converse and Washburn Wheels noticed. In reply would say, that we have used upwards of two thousand (2000) of Converse & Washburn wheels, and must say that they have proved themselves a good wheel. So far as I know, they are spoken of by other Roads as being a first rate wheel. Yours, respectfully,

HENRY GRAY, Superintendent.

HARTFORD AND NEW-HAVEN RAILROAD.

Hartford, Conn., May 26, 1853.

Dear Sir—I have been requested by C. F. Pond, Esq., to whom your letter of the 17th was addressed, to reply to your inquiries respecting the use of Converse & Washburn's car wheels on this Road. It gives me much pleasure to say that we have used these wheels with much satisfaction for the last two years, and consider them superior to any others we have tried. Very respectfully, yours

M. L. SIKES, Jr. Superintendent.

OFFICE NEW LONDON, WILLIMANTIC AND PALMER RAILROAD.

New London, Conn., May 24, 1853.

Dear Sir—Yours of the 19th came to hand during my absence. We are using the Car Wheels patented by Mr. Washburn, and manufactured by Converse & Washburn, of Worcester, Mass. Our experience has shown them to be superior to others in strength and durability. They seem to be manufactured from better stock, with more care, and a better chill on the face.

Yours, very respectfully,
W. R. STORRS, Superintendent.

BOSTON AND LOWELL RAILROAD.

Boston, June 1, 1853.

Dear Sir—Your favor of the 19th inst. to Mr. Higginson has remained unanswered on account of his severe illness.

In reply to yours I can say that there is no wheel now in use of better repute than that of Converse & Washburn. We consider here that the stock is of more importance than the pattern, and the chief difficulty in relation to cast wheels arises from that cause. Your obed't Servant

WM. P. PARROT, for
WALDO HIGGINSON, Superintendent.

PROVIDENCE AND WORCESTER RAILROAD.

Providence, May 12, 1853.

Dear Sir—Yours of the 11th came safe to hand and contents noticed. We are using under our cars the wheels manufactured by Mess. Converse & Washburn, at Worcester, Mass., and they have given good satisfaction, and we consider them the best wheels we have ever used on our road. Since we have used C. & W.'s wheels we have had but very few cracked or broken wheels, and can recommend them as being the best wheel we have ever had upon our road. Yours, respectfully,

ORRAT TAFT, President.

WORCESTER AND NASHUA RAILROAD.

United States Hotel, Boston, 17th May, 1853.

Dear Sir—Your favor of the 13th, making inquiries in regard to the car wheel manufactured by Mess. C. & W., Worcester, came to hand last evening. In reply, we are and have been using these wheels for a long time, and have no hesitation in saying that it is (in my opinion) the best wheel in America. I trust that all Railroad men who have used it will fully concur with me in the opinion I have expressed.

Yours, truly, ALEX. DE WITT, President.

ANDROSCOGGIN AND KENNEBEC RAILROAD.

Waterville, June 3, 1853.

Dear Sir—Your favor of the 19th came during my absence of several weeks from home, or it would have been sooner answered. The wheel we have found to stand the best on the whole has been a wheel manufactured by Converse and Washburn, at Worcester, Mass. Our climate here, in the winter, is a severe test for car wheels, and none on the whole have stood it so well as those above named.

Truly yours, EDWIN NOYES, Superintendent.

MERRIMACK AND CONNECTICUT RIVER RAILROAD.

Concord, N. H., May 21st, 1853.

Dear Sir—I am in receipt of your favor of the 19th inst. I consider the wheel manufactured by Converse & Washburn, Worcester, Mass., much the best car wheel in use.

Yours, respectfully, J. A. GILMORE, Agent.

VERMONT AND MASSACHUSETTS RAILROAD.

Office Vermont and Massachusetts Railroad.

Fitchburg, May 31, 1853.

Dear Sir—I have just returned home after an absence of nearly two weeks, and find a line from you inquiring about car wheels.

The Vermont and Massachusetts Railroad have used most every kind of wheel for cars, trucks, and tenders, and I am satisfied that the best wheel that we have used is the one patented by Washburn, and manufactured by Converse & Washburn, Worcester, Mass.

We purchase no other wheel now, and have used this wheel two years or more without having a single one break. Respectfully, yours,

OTIS T. RUGGLES, Superintendent.

STONINGTON AND PROVIDENCE RAILROAD.

Stonington, Conn., May 21, 1853.

Dear Sir—The car wheel most approved by us, and the wheel we are using altogether, is a single plate with spokes on the inside, manufactured by Converse & Washburn, Worcester, Mass.

Very respectfully, yours,

A. S. MATTHEWS, Superintendent.

Central Ohio Railroad.

New Haven and New London Railroad.

Connecticut River Railroad,

Portland, Saco and Portsmouth Railroad.

Northern Railroad.

Portsmouth and Concord Railroad.

Norfolk County Railroad.

Cheshire Railroad.

New London, Willimantic and Palmer R. R.

Rutland and Burlington Railroad.

Boston and Maine Railroad.

Norwich and Worcester Railroad.

Connecticut and Passumpsic Rivers R. R.

Concord Railroad.

Fitchburg Railroad.

The Chilled Tire in Vermont.

We learn that the Vermont Central Road have arranged for the use of the improved tire on some of their freight engines. There has been much trouble on this line, during the severe cold weather just now over, by the bursting of wrought iron tires; a very large number of the best manufacture having failed in that manner. The prejudice which has been visited on cast iron as a material for tires, by those in charge of the operation of some of the Northern roads, is shaken by results like the above and which occur regularly every cold season. The cast tire, although in reality of a weaker material, has an advantage in the method of its application, sufficient to place it on an equal footing with a wrought *strunk* tire in point of safety. Since the first use of cast iron for tires it was predicted that it would fail in cold climates;—the New York roads admit the Baltimore roads can use it by reason of a "milder climate," and as New York roads adopt the improvement Massachusetts roads account in the same manner for its success "further south." Massachusetts roads have however adopted it without failure of any kind, at which the upper roads say the "climate is milder in the vicinity of Boston." Now it will be tested on one of the hardest roads in New England.

The wrought tire is usually *strained* so much in shrinking that it is more liable to failure than cast iron possessing its full original strength.

The Boston and Lowell road, which may be termed the "built end" of the New Hampshire and Vermont roads, is worked with chilled iron tires for freight, and on no road, has the results of their use been more satisfactory.

Vermont and Massachusetts Railroad.

The late annual report of this company shows that there has been a gain of earnings for every year since 1849. The increase of 1853 over 1852 was \$27,948 29—the total earnings of 1853 being \$248,854 97, of which \$113,174 10 was from freight, and \$84,918 17 from passengers. The balance of earnings over expenses was \$87,489 43. The construction account of the road amounts to \$3,453,488 42. Total amount of bonds issued \$950,000; notes payable, \$175,792 68; sundry small accounts, \$421 27. Total indebtedness of the road \$1,135,214 15.

The directors state that the extra expenses of the year have been \$27,773 11, for 30 new double freight cars, renewal of 145 tons of iron, 7,284 sleepers, &c.; but the excess of earnings over all expenses and all interest has been \$16,170 19. Deducting ordinary running expenses and interest, the excess of earnings of the year 1853 is \$43,943 30.

The directors refer to the difficulties with the Fitchburg Railroad. They speak of the prospects of the road as good—especially if the tunnel project is successful. The report was accepted.

Gov. Matteson on Pennsylvania Policy.

We copy the following extract from the recent Message of the Governor of Illinois, in reference to the gauge extension at Erie. The tone of it is a most refreshing contrast to the stand taken by Governor Bigler. We are glad to hear such liberal sentiments from a State that has been guilty of some intolerant legislation, akin to that of Pennsylvania.

"While I take pleasure in communicating to you the flattering condition which has grown out of her internal improvement policy, I feel called upon to mention the serious and startling difficulties which have occurred in a neighboring State, which have given rise to much solicitude on the part of the people of Illinois, and have been productive of very great pecuniary losses to many of her citizens. The whole subject being delicate and painful, I have deemed it advisable to allude to it in the utmost spirit of forbearance. Our whole free institutions are founded upon the presumption which has thus far been fully justified, that communities and individuals will govern themselves properly with a just view to their own rights, and the rights of the surrounding masses. I indulge the strong hope that the same presumption will be justified in the case of our Erie neighbors. The adoption of railways as inland thoroughfares of commerce, give rise to new and very interesting questions. Each State may justly reserve the right to point out to them their lines and manner of operation; but when they have been in operation for months and years, and the property of people of distant regions is pursuing their track on its transit to market the right of local communities to obstruct them, and pile up the property of innocent individuals to the value of hundreds of thousands of dollars, to be exposed to the elements and other means of destruction, entirely out of the reach and control of its owners, presents other and very serious questions. If such a course is justifiable by the law, it certainly is not by any rule of morals which I have been accustomed to respect. While we are not called upon to become parties to any quarrel which may arise between the people and a railroad company, which has even by sufferance or by permission laid its track and been the channel of commerce for years, we have a clear right to expect that we shall not be made the innocent victims. Yielding to the strong hope that these difficulties will speedily disappear, I submit the whole matter to the consideration of the Legislature without the recommendation of any course of conduct in relation to it. The occurrence of such difficulties affords strong lessons of admonition to us to govern the policy of our State by the broadest principles of justice and patriotism. A single glance at our geographical position will show that we hold the key to a vast portion of the great trade of Western commerce, which finds its transit over the extended railways of the country. A narrow policy might induce us to attempt to enrich ourselves by imposing upon this commerce severe exactions as it passes across our territory. But I am confident that in the adoption of such a policy we should never enjoy the consciousness of elevated motive or patriotic impulse. It is much more congenial to the wide, free spirit of the hospitable West to look with satisfaction upon the prosperity of our neighbors, and to content ourselves with those gains which are the legitimate fruits of our natural position, and the sagacity and energy of the people. No citizen of Illinois can repress the pride he must feel in looking over the continued liberal policy of the State in this direction; nor can he fail to see that our present unexampled prosperity is the natural result. Looking beyond the Mississippi to the shores of the Pacific, to the world of commerce and wealth beyond those shores, destined to seek a highway through our State, we cannot for a moment hesitate in the conclusion that sound discretion, as well as the dictates of experience, demand an uninterrupted continuance of the same liberal policy."

Railway Construction in the West.

A few weeks since, the Railroad Record published two long articles on the subject of the construction of Western Railroads, which appeared to us so extravagant as to call for some remarks, which though well intended, seem to have ruffled the usual equanimity of our cotemporary. They have brought out a long reply, but no answer to the positions taken by us.

The Record prefaced its articles by stating that the cost of a first class, double track, Western railroad, fully equipped, would not exceed \$35,000 per mile. We corrected this statement by showing that the only two single track roads running into Cincinnati, with but partial accommodations and insufficient equipments, have already cost a larger sum than the Record stated to be the cost of double track Western roads completed and fully equipped. Upon this the Record flies in quite a passion, and attempts to make good its first statement by instancing a number of single track Western roads that have cost less than \$35,000; a point which we never raised. The Record, however does not venture to re-assert its first statement, and consequently admits the incorrectness of the premise upon which its subsequent argument was built. If the foundation falls, the whole structure falls with it.

We have heard a great deal about the low cost of Western roads, and for some time after we took charge of the Journal, we really believed that a Western road could be built for \$15,000 or \$20,000 per mile. But experience has long since proved the incorrectness of all such opinions. In some parts of the West railroads can be constructed at a less cost than in the Eastern States. In others they cannot. The items of right of way, and graduation, etc., etc., of Western roads are less than similar items in Eastern roads. All, or nearly all other items entering into the construction of railroads cost more in the West than East; such as the rails, equipment, etc., etc. The total advantage is on the side of the Western roads we admit, but the difference is by no means so great as is generally supposed. The reason why Western roads appear to cost so much less than those of the East, is because the former are only half finished. It often happens that the track is laid, and that business trains commence running, before the road has received one-half the expenditure necessary to complete it.

There is not a finished railroad in the West, nor will there be for five years to come. Every one of them is in this market for money, and such as have been in operation the longest, are the largest borrowers. We do not say this, as anything for which western companies are censurable, or that they are not entitled to the money they seek to borrow. Far otherwise. The Little Miami, and the Cincinnati, Hamilton and Dayton Roads, would be much more efficient and profitable, had they double track, which, with the necessary equipment, would carry the cost up to \$50,000. The estimated cost of what are now the most expensive railroads in N. England, did not much exceed that of western railroads. They were opened at very nearly the estimates, but experience has since shown that they were very far from being completed. Precisely similar will be the history of western roads. The cost of such as are opened at \$20,000 per mile, will soon run up to \$30,000 or \$40,000 per

mile. To suppose, therefore, that there is to be any very great difference in the cost of railroads, doing an equal business, in different parts of the country, is a great mistake. In proof of this, we would refer to an article in another part of the Journal, showing the comparative cost of graduation of several, in which particular exists the principal advantage of western and southern railroads over those of the eastern and northern States. The same article also shows the progressive increase in the cost of the leading New England roads.

Our second correction of the Record, was its estimate of the earnings of New England roads. The Record reasserts its statement, that these roads earn 6 per cent. upon their cost, but without adducing the proof. In this case the *onus* is not on us. If it were, we could readily make good our assertion. It requires no argument to prove the fact to a New Englander, unfortunately. It is notorious that the railroads constructed through the agricultural districts of New England, have proved disastrous failures. So much so, that the stocks of many of the roads in Maine, New Hampshire and Vermont, are hardly worth the keeping. There are not more than ten paying lines in the three States out of some 35 roads.

The Record thinks that Ohio will sustain as many miles of Railroad in proportion to its area as England! As nearly all the Railways in Great Britain are in England, say 5,500 miles of line, out of 7,000 in the Kingdom. A similar ratio would give 4,000 miles for Ohio. Now we do not think Ohio would, at the present time give support to 4,000 miles of railroad. Should this extent of line be constructed, we think the result would be similar to that which followed their over-construction in England, to wit: the loss of nearly one half of the capital invested. But admitting that Ohio will sustain as much mileage as England in proportion to its surface, only about two thirds as many miles should be built, as the Railroads of the former country are by no means sustained. In England railroading is so notoriously overdone, that 350,000,000 of capital have been lost. Yet the Record thinks that these works may be carried to a similar excess in Ohio as in that country. A proper application of the illustration adduced, entirely disproves all such opinions instead of sustaining them.

We corrected the table of the the Record showing the market value of certain New England Road Stocks. It quoted Housatonic, and Harlem, preferred, which are very different affairs from the stocks upon the market. We gave the current quotations of the whole list. The mistakes of the Record consisted in confounding the preferred, and unpreferred, stocks.

The Record thinks that because New England is not as fertile as the West, that consequently the former can supply but very little traffic to Railroads. This is very far from being the case. In proportion to their area, the States of Massachusetts, Connecticut and Rhode Island, are capable of supplying, and do supply, at the present time, a much larger traffic to Railroads than any portion of the West. In the States named a much larger proportion of the people are travellers, for the reason they are chiefly engaged in manufacturing and commercial pursuits. If the West is capable of supplying such enormous traffic to Railroads, we wonder why the receipts of these works are

not greater. The Record estimates that were eight Railroads constructed between Scioto and the Indiana State line, running north and south, they would all pay ten per cent on their cost. Within the district named, there are two roads only, but located in such a manner as to accommodate and command nearly all the business of it. These roads, we believe, pay only ten per cent dividends. They traverse the best portions of the State, have extensive ramifications, are free from competition, and have wide belts of fertile territory on each side of their lines.

Yet with all these advantages, the country they traverse does not afford one-third as much business, in proportion to its area, as do some portions of New England, which, according to the Record, is made up of "Rocks and Whortleberries." Take the country traversed by the Fitchburg Railroad, for instance; a comparatively barren, unproductive, and not very densely inhabited, district. It does not receive the business of one-third the area of that commanded, either by the Little Miami, or Cincinnati, Hamilton and Dayton roads; yet its receipts are larger than either, with a much less mileage! Here is a nut for the Record to crack. Will it explain how it is, that so barren and circumscribed a district, can turn out so much larger traffic than the choicest portions of the West?

The Record thinks it finds an inconsistency between our comments upon its articles, and some previous articles of our own, in which we stated that in "no part of the West can the construction of railroads outstrip the wants of the people, or their ability to supply to them an abundant traffic." Very well, we think so still. The West cannot build railroads as fast as they are needed. This is the idea that we intended to convey, as any one who will take the trouble of reading the articles referred to, will see. Neither do we believe that the construction of railroads is in any danger of being over-done in the West, so long as its people will furnish one-half the cost of their construction, as we have always insisted they should do. Where those immediately interested in railroads cannot furnish one-half, or one-third their cost, the project will very probably turn out to be premature.

So much for the argumentative part of the reply of the Record to our strictures. It entirely evades the principal points made by us;—"that double track railroads cannot be built and equipped in the West for \$35,000 per mile, and that eight first class roads between the Scioto and the Indiana State line, would not pay ten per cent. upon their cost." The Record has a plenty of words for issues that we did not raise, but no arguments, no proof, for those that we did.

In conclusion the Record steps entirely out of the record, and abuses us roundly for the grounds we have taken in reference to the affairs at Erie; and zealously espouses the Pennsylvania side of the question. This is certainly a singular position for an inhabitant of Cincinnati to take, and a still more singular one for the editor of a paper devoted to the interests of railroads and commerce. A break of gauge at Erie had no other object than to saddle the commerce of Ohio with a tax, to support Erie. To such outrages does the editor of the Record lend himself and his paper. We must be permitted to express our belief, that by doing so, he adds nothing to its reputation or patronage.

As a matter of curiosity we annex the paragraphs from the Record in reference to the Erie matters.

"The Railroad Journal has issued a fulmination against the State of Pennsylvania—which, it considers, the whole world is about to abandon to all sorts of disgrace. A year or two since it issued another fulmination against Illinois, in relation to the Terre Haute and St. Louis railway, which was to be made forthwith, whether Illinois chose or not. Illinois did as she pleased, and so will Pennsylvania. It is positive folly to abuse a State—especially when that State has the whole work in her own hands.

It seems to be thought that Ohio will do something terrible on the occasion. She will do *nothing at all*. She can do nothing without injuring herself materially. Are there not the *Ohio & Pennsylvania*, the *Central*, the *Bellefontaine & Indiana*, the *Cincinnati & Marietta*, and all the railways south of the Lake Shore, directly interested in the Pennsylvania Central? Will all the great wheat counties of Ohio consent to set aside their interests to meddle in the Erie war? Not at all. The Erie business will be settled by the Courts and Legislature of Pennsylvania, who have the sole control over the matter. Pennsylvania will in all probability make an equitable arrangement, whenever one is sought; and, at any rate, cannot be forced from her position by abuse. Ohio will go into no flare-ups for the purpose of spiting Pennsylvania."

American Railroad Journal.

Saturday, February 25, 1854.

Stock and Money Market.

There has been considerable improvement in the stock market for the past week. The whole list shows an advance, and a number of stocks have gone rapidly upward. A better state of feeling appears to be steadily gaining ground. Money is becoming more abundant, which has caused an increased demand for railroad securities. The European news, which has ruled this market for five or six months past, appears to be losing its influence, so that the certainty of war would hardly exert a depressing effect upon our market. A steady advance in railroad securities from their recent depressed figure, may, we think, be anticipated.

Toledo and Indianapolis Railroad

The organization of a company to build a railroad between the above cities has been completed and the following directors elected:—M. Johnson, A. J. Field, H. H. Dodd, C. B. Phillips, of Toledo; J. Purdy, of Mansfield; C. M. Godfrey, of Kalida; H. J. Boehmer, of Fort Jennings.

At a meeting of the Directors, H. H. Dodd was chosen President; C. M. Godfrey, Vice President; Charles B. Phillips, Secretary and Treasurer.—The first annual meeting was fixed as early as June next.

The President was directed to appoint a Chief Engineer, and cause a survey of the route via Mercer, Delphos, Ft. Jennings, Kalida, Medary and Gilead, at the earliest practicable moment.

Fitchburg Railroad of Massachusetts.

A new board of Directors has been elected to manage the affairs of this Company. The number is five instead of seven as before: viz: Alvah Crocker; E. H. Derby; John J. Swift; Thomas Whittemore and James Ellison. All of these members are well known for their exertions in behalf of the Hoosic Tunnel project.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipment.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do	Price of Shares
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	83
Androscoggin and Kennebec... "	55	809,378	1,016,500	2,064,458	140,561	80,053	none	30
Kennebec and Portland... "	72	952,621	297,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth... "	51	1,355,500	123,884	1,459,384	208,669	...	6	96
York and Cumberland... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	33
Concord... "	35	1,485,000	none.	1,485,000	305,805	141,836	8	111
Cheshire... "	54	2,078,625	720,900	3,002,094	287,768	55,266	5	38
Northern... "	82	3,016,634	...	...	328,782	163,075	5	59
Manchester and Lawrence... "	24	717,543	...	...	...	...	6	90
Nashua and Lowell... "	15	600,000	none.	651,214	132,545	51,513	8	106
Portsmouth and Concord... "	47	...	...	1,400,000	...	...	none	...
Sullivan... "	26	...	...	673,600	...	...	none	21
Connecticut and Passumpsic... Vt.	61	1,097,600	550,000	1,745,516	...	...	...	29
Rutland... "	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	11
Vermont Central... "	117	8,500,000	3,500,000	12,000,000	...	...	...	13
Vermont and Canada... "	47	1,500,000	...	1,500,000	...	...	Leased to the Vt. Cent.	97
Western Vermont... "	51	392,000	700,000	...	Recently opened.	...	none	...
Vermont Valley... "	24	...	...	...	...	...	none	...
Boston and Lowell... Mass.	28	1,830,000	...	1,995,249	388,108	130,881	7	91
Boston and Maine... "	83	4,076,974	150,000	4,092,927	659,001	338,215	7	103
Boston and Providence... "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	84
Boston and Worcester... "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	100
Cape Cod branch... "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River... "	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern... "	75	2,850,000	500,000	3,120,391	488,793	241,017	7	89
Fall River... "	42	1,050,000	none.	1,050,000	229,445	99,589	8	99
Fitchburg... "	66	3,540,000	112,305	3,623,073	674,574	232,787	6	91
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County... "	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony... "	45	1,964,070	282,300	2,293,534	374,897	122,816	none	87
Taunton Branch... "	12	250,000	none.	307,136	137,406	24,399	8	...
Vermont and Massachusetts... "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	23
Worcester and Nashua... "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	59
Western... "	155	5,150,000	5,319,520	9,953,759	1,525,224	746,736	7	97
Stonington... R. I.	50	...	467,700	...	240,572	110,892	...	65
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Cahal... Conn.	45	922,500	500,000	1,400,000	...	...	4	65
Hartford and New Haven... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	128
Housatonic... "	110	...	...	2,500,000	329,041	168,902	none	...
Hartford, Prov. and Fishkill... "	50	...	...	In progress	69,629	...	none	...
New London, Wil. and Palmer... "	66	558,861	800,000	1,511,111	114,410	...	...	39
New York and New Haven... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	101
Naugatuck... "	62	926,000	440,000	...	...	...	8	...
New London and New Haven... "	55	750,500	650,000	1,380,610	Recently opened.	...	none	40
Norwich and Worcester... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	57
Buffalo and New York City... N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	...	none	...
Buffalo, Corning and N. York... "	132	...	...	In progress	...	...	none	65
Buffalo and State Line... "	69	879,636	872,000	1,921,270	Recently opened.	...	...	130
Canandaigua and Niagara F... "	50	...	...	In progress	...	...	...	...
Canandaigua and Elmira... "	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna... "	35	687,000	400,000	1,070,786	74,241	23,496	none	...
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	78
Hudson River... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	70
Harlem... "	130	4,725,250	977,463	6,102,935	681,445	324,494	4	56
Long Island... "	95	1,875,148	516,246	2,446,391	205,068	44,070	...	34
New York Central... "	504	23,085,600	10,773,823	33,859,423	...	...	none	112
Ogdensburgh (Northern)... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	...	29
Oswego and Syracuse... "	35	350,000	201,500	607,803	90,616	43,609	...	70
Plattsburg and Montreal... "	23	174,042	131,000	349,775	Recently opened.	...	none	...
Rensselaer and Saratoga... "	25	610,000	25,000	774,495	213,078	96,737	...	...
Rutland and Washington... "	60	850,000	400,000	1,250,000	Recently opened.	...	...	...
Saratoga and Washington... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland... "	32	237,690	100,000	329,577	Recently opened.	...	...	33
Troy and Boston... "	39	430,936	700,000	1,043,357	Recently opened.	...	none	...
Watertown and Rome... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy... N. J.	65	1,500,000	...	4,327,498	1,388,885	478,413	10	148
Morris and Essex... "	45	1,022,420	128,000	1,220,825	149,941	79,252	7	...
New Jersey... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	...
Cumberland Valley... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	...
Erie and North East... "	20	600,000	...	750,000	Recently opened.	...	...	125
Harrisburgh and Lancaster... "	36	830,100	713,227	1,702,523	265,827	106,320	8	...
Philadelphia and Reading... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	80
Philad., Wilmington and Balt... "	98	5,000,000	2,399,166	8,067,235	868,038	541,769	5	80

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97 1/2
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102 1/2
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna.. "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,598	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.... "	140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	115
Georgia..... "	211	4,000,000	1,214	.....	934,424	466,468	7 1/2	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,642	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga.. "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	91
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	100
Cleveland and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	121
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	104 1/2
Cincinnati and Marietta.... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently	opened.	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	In prog.	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	109 1/2
Mansfield and Sandusky.... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77 1/2
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	87
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently	opened.	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley... "	44	750,000	300,000	.....	Recently	opened.	.....	.....
Xenia and Columbus..... "	54	1,291,000	300,000	1,257,714	317,000	158,500	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77 1/2
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	115
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently	opened.	.....	87
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,932	Recently	opened.	.....	72
Lafayette and Indianapolis... "	62	.....	.....	.....	opened.	.....	.....	.....
Madison, Indianapolis & Peru "	138	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Peru and Indianapolis..... "	40	.....	.....	In prog.	.....	.....	.....	65
Terre Haute and Indianapolis "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	1,932,361	500,000	In prog.	473,548	286,152	.....	118
Michigan Southern and Ind. N. Mich.	315	2,800,000	3,741,664	7,276,616	1,200,922	586,929	17	119 1/2
Michigan Central..... "	282	4,856,700	3,977,663	8,618,505	1,145,598	582,816	8	103 1/2
Pacific..... Mo.	33	1,000,000	none.	In progress	Recently	opened.	.....	.....

Edwin F. Johnson upon the Pacific Railroad.

We have published, and have for sale, E. F. Johnson's recent work upon the Pacific Railroad. Mr. Johnson is admitted to be one of the first Engineers in this country, and his reputation is a good guaranty that the subject under discussion has been thoroughly considered and discussed. The work is illustrated by a large map, showing all the proposed routes, a profile of the Northern Route, a map of the mountain chain traversed by it, and seven lithographic views of various points upon its line. The whole work is elegantly got up, and makes a volume of 176 Pages, Octavo.

Persons wishing to procure copies of the above work, by forwarding one dollar to our address, can have a copy of the same with the maps, forwarded by mail post paid.

Duties on Railroads Iron.

There is a strong feeling, on the part of railroad companies particularly, in favor of the removal of the duty on Railroad Iron. Could this feeling be thoroughly organized, we believe there would be little difficulty in effecting the desired result. It is organization, not an increased interest in the subject, that is needed. In view of effecting such organization, we would suggest that a meeting, or convention, be held by the different railroad companies interested. Shall we not have some response to this proposition?

Since the above was written, we have received the following communication, to which we invite attention. We join in the recommendation for the proposed meeting.

EDITOR OF THE RAILROAD JOURNAL:—

I have been surprised that the railroad companies of the United States, struggling, as most of them are, to complete their lines in these embarrassing times, have not effected an organization for the purpose of bringing the subject of the present high duties on Rails, (amounting to nearly \$1,500 per mile,) before Congress, with a view to obtain their remission.

It is time such a movement was made, and as there are at all times, a large number of railroad officers in this city from all parts of the country, I respectfully suggest a meeting at the Astor House, on Saturday evening at 7 o'clock, for the purpose of taking action upon this subject.

Ohio.

Machine Works in Alabama.

The extensive works, known as the Winter Iron Works, at Montgomery, Alabama, were lately sold for \$175,000. Col. Lewis Troost has become one of the purchasers, under whose influence the works will doubtless gain increased reputation. The beautiful steam engine, built at these works, and in operation at the Crystal Palace shows the capabilities of Alabama enterprise and skill.

Comparative Tonnage of Railroad and Canal Commerce.

The the total amount of freight moved on the Michigan Southern and Northern Indiana Railroad in 1853, was 116,635 tons. The amount received at Toledo by Canal for the same time was 225,330 tons. The freight arriving at Cincinnati by the Miami and Erie Canal 153,789 tons, and at other points 135,308 tons. Total movement on the Canal, 514,427 tons.

Adaptation of Locomotives.

BY ZERAH COLBURN.

It will not be disputed that in a selection of engines, of the best construction, a regard should be had for *adaptation and uniformity*. There are often obstacles in the way of attaining these ends, such as inability to procure the right kind of engines at the right time, but the propriety of the *principle* still remains. It is a fact that these ends are often overlooked in the selection of engines for first class roads, as there are abundant instances in point to prove it. Some of these may be referred to hereafter. The grounds for adaptation require to be appreciated before the true end can be gained. It is far from true that what is fit for one road is fit for another, as position, traffic, physical features, fuel, attendance, and other circumstances may be essentially different in different cases.

The power of the engines is first to be considered. Engines may be designed for great power and high speeds, or only for great loads at slow speeds. The first is the engine for a heavy express traffic on a great through route. Its perfection may determine the result of competition, and may give a road a positive advantage in point of time and accommodation. An engine of less power, and for a slower speed, is in place on roads doing only a moderate business and beyond the influence of competition. A 25 ton passenger engine would be a monstrosity on a local road, having no important connections with the great current of through travel.

The engine designed for great loads at low speeds is that for a heavy freight business, or for a road having frequent and severe grades. More moderate power will accommodate an ordinary freight, an emigrant or a mixed business. A still less powerful engine is serviceable for yard work and ballasting. These applications are all obvious in their nature.

The heavy engines require the most care for their perfection and adaptation. They must exert the greatest power with the greatest economy of space, weight and fuel. These are important requisites, especially as the demands of modern transportation are calling for the ultimate economical power of the engine; although the common *gauge* of our roads affords room for more power than can be economically exerted, or than is likely to be required.

The outside connection economises space, laterally, vertically and horizontally. It reduces the weight, and especially the *disturbing* weight, and consequently the weight for counterbalance; besides bringing the disturbing weight into a better position for balancing. It involves less friction, and what is still better, it gives room for the most effective proportions of cylinder and wheel.

The link motion is another requisite in all good engines, affording the means for an economical adaptation of the expenditure of steam to the resistance of the train; simplifying the construction of the engine; and being the most reliable of any kind of reversing gear. Of the two arrangements of the link motion, the stationary and the shifting links,—the former gives equally as good results in the distribution of the steam, and has the advantages of occupying less room, being easier to reverse and requiring none of the weight, strain, and danger of the heavy counterbalance. It allows also of a better suspension, whereby the joints

will not wear as fast. The varying lead, claimed for the shifting link, is had, *in effect*, by the stationary link, as the varying *travel* of the valve, (the same with either link) is the principal agent in effecting pre-admissions of steam upon the piston.

The edge frame is best, for being stiffer, affording more room for furnace, and admitting of better lateral bracing and better cylinder fastenings.

For the reduction of weight, the outside connection, hollow axles, wrought iron driving wheels, pistons, rockers, draw irons, dome caps, etc., afford greater strength with much less weight.

So also the use of moderately thin boiler iron, well stayed and double riveted at the weak points, reduces weight.

Boilers, for rapid evaporation, should have their furnaces wide compared with the length; should have free thimble-opening and large tubes. The smoke boxes should be small and not made to extend above tubes, a low level crown forming the base of the chimney.

We may then assume that generally, for all purposes, the outside connection, with level or nearly level cylinders; the link motion; flanged wheels (throughout, except for very short curves); the least dead weight, lowest center of gravity; the edge frame; boilers designed according to the proportions and adjustments most influential in promoting rapid combustion and rapid evaporation, and having also provision for heating the feed water by the waste heat of the tubes; will give the best results.

To these are to be added the use of the very best material, and the greatest accuracy and security of fitting in all the working parts.

The adaptation of engines then commences.—The fast passenger engine requires greater evaporative power, compared with its capacity of cylinder, than the freight engine; its hourly evaporation being generally double that of the latter. Its boiler should be capable of maintaining a higher pressure, and provision can be made for working at a somewhat higher ratio of expansion. It must always be borne in mind that the passenger engine exerts great power and experiences more severe wear than the freight engine, and that in all cases it demands the perfection of design and workmanship. Besides being more exposed to the risks of failure, the consequences of failure are far more disastrous with the passenger than with the freight engine. Every means of *economy* should be secured in the passenger engine. The grate area should not be disproportionately large; as large furnaces, although having greater evaporative power, do not burn their fuel so economically.—The object is to get the *most* heat with the *least* necessary area of grate. The general apparatus for draught should have such adjustment as will give the largest possible area of blast orifice. The damper should close perfectly tight and should be very sensitive to any admission of air. Provision should be made for heating the feed water by the waste heat from the tubes. The cylinders should be especially well protected to guard against condensation on the higher grades of expansion. Perfect balance of the disturbing weights is especially necessary, as the irregularities due to insufficient balance increase as the *squares* of the speeds.

Beyond the evaporative power of the boiler, the relation between stroke of piston and diameter of wheel, the adjustment of valves, and the capacity

of steam pipes and steam openings, are the governing points in the adaptation for speed. But speed can be had only at the sacrifice of power, and on some roads the grades are such that engines designed for speed are inefficient in moving trains of any considerable weight. Other roads, having every advantage for the maintenance of high speeds have engines incapable of quick running. Those extremes are the results of neglect in the adaptation of the engines. The New York and New Haven Railroad was originally stocked with a number of engines with 18 by 20 inch cylinders, and 6 feet wheels. This road has many and severe grades, upon which such engines are not efficient. The Boston and Lowell Road, on the other hand, having no grades exceeding ten feet per mile, a firm track, easy curves, and a large and important traffic, has but two engines having wheels as large as 5½ feet. The time made by the trains of this road is not generally over 20 to 25 miles per hour for accommodation, and from 25 to 30 miles per hour for express trains.

Freight engines require to be distinctive in character. They should be made to work at the speed which gives the maximum of useful effect, a speed of about 10 miles per hour. Freight engines require more adhesive weight than passenger engines and the weight may be also distributed on more points. Hence, the ten wheel engine is that best suited for freight. The adaptation of coal for fuel will probably become generally introduced in freight engines, and the "feed heater" will, in consequence, become more efficient, there being generally more waste heat with coal than wood. From running more slowly there are not the *extremes* of resistance which are encountered by the passenger engine, and therefore the highest pressures of steam and the highest grades of expansion are not of so much economy in the former as in the latter. The steam pressure being somewhat lower, the extraction of heat by the tubes, and especially with coal, can be made to a greater extent, and the tubes can therefore be longer, in proportion to the area of grate, than with the passenger engine. Tubes of from 2 inches to 2½ inches, and of 14 feet length are found to afford good draught, and furnish ample steam of from 90 to 110 lbs pressure. From running at slow speeds and from having but moderate concentration of weight, the freight engine presents a good application for the slip chilled tire. While the four-driver passenger engine has four tons on a wheel, and runs at forty to sixty miles per hour, the six-driver freight engine need have but three tons on a wheel, and be run at from ten to fifteen miles per hour; or only three-fourths of the *bearing* weight at one fourth of the speed. The economy of the tire, in first cost and maintenance, is a great inducement to its use upon roads doing a large freight business. The finish and ornamental character of the freight engine may be much plainer than on the passenger engine. The former is generally under steam for the greatest length of time, except in cases where passenger engines only can "double the road."

An engine for the coal trade is only an expansion of the plan of the freight engine. There is no business where *cheap* transportation is so important as in the coal trade, for the bulk of coal is greater in proportion to its value than with al-

most any other kind of freight. And in proportion to the distance through which coal seeks a market, should its transportation be economised. Economy in transportation is promoted by carrying the largest loads over the narrowest gauge, thus concentrating motive power and reducing resistance. The coal-train engine should have extreme power, with a proper distribution of weight. The fuel should be of the same kind as the material hauled. The furnaces and tubes should be of the best iron; the finish of the engine should be of the plainest kind. The cast iron tire can be here used with the best adaptation and the greatest economy.

The grade engine should be one combining the greatest power with the plainest finish. The coal engine is a good engine for grades. Provision must be made in the grade engine for a sufficiently high water level, as from the length of the boiler and the inclination to which it is subject, there is danger of uncovering the tubes or furnace. The tubes must come as nearly to the crown sheet of the furnace as may be, and the gauge cocks must be placed well up in the boiler. With a boiler of the length of twenty feet, the disturbance of the water level, on a grade of 116 feet per mile, is over five inches. The pumps should be of large capacity, as such engines are standing much of the time, and are run but slowly when in motion. The necessity of the use of three or four pairs of coupled drivers makes uniformity of diameter of much importance. The chilled tire secures this requisite, besides being far more durable in such places, and is also renewed without the aid of any machinery, a matter of much importance in the working of engines at a distance from the repair shops.

Ballast and yard engines are also a distinctive class. Being under steam through working hours, running only for short distances, and subject to be run backwards much of the time, they require modifications for especial adaptation. I have often seen engines, built for this business, provided with copper tubes, inside cylinders, short stroke pumps, separate cut-off valves, wrought iron tires, a truck frame, and other refinements out of all place. Such engines should be of the simplest and plainest construction. They should always be outside connected for lightness, simplicity, economy and efficiency. They should have iron tubes for economy, and because the tubes of such engines are not generally in the care of the best enginemen. A short stroke pump is an absurdity on such an engine, working at slow speeds, as a full stroke pump, unless out of order, is sure to fill. The full stroke pump should have a large capacity, and a large air vessel, on both the suction and forcing sides. Arrangements for expansive working are not generally of much utility, in such engines, as they run but slowly, and for short distances, and with greater regularity of resistance. On Western roads, gravel engines have often to be run for great distances and the necessity in such cases of taking large loads may make a cut-off of some use. On such roads, however, economy of fuel is not of so much account as reliability of engines. A truck frame is generally uncalled for, as such engines are continually starting and stopping, often on bad rails, and need all of their weight for adhesion. Running often upon temporary tracks, and on short curves, the wheel base

should be short. Unprotected by a truck frame, and running backwards much of the time, the tires should be of chilled cast iron, as the flanges are otherwise soon cut away, making them liable to leave the rails, and involving great expense for their maintenance. As a yard or ballast engine is standing much of the time, the gauge cocks should be well up, so that too much water shall not be boiled away, and the tubes become exposed in consequence. For economy in fuel, such engines should have especially tight dampers, to control the fire when standing.

As the business of a road should influence the selection of engines, so also should its characteristics determine the proportion and construction of some of the details of the engine. Undulating roads require adaptation in the size of the drivers, length of stroke, etc. A reduction of the size of drivers to the amount of six inches for every rise of twenty feet per mile, is not out of the way in an engine having 7 feet drivers for a level line. If the road be much curved the center bearing truck cases the turning of the engine; plain or flat tires may be applied to the central pairs of drivers, and with extremely short curves, much play has to be made in the journals of the axles, also between the boxes and pedestals and between the flanges and rails. On extremely short curves the draw bar of the engine may extend under the furnaces and be attached nearly beneath the center of the engine. In all engines for curved roads the wheel base must be proportionally short.

The height of bridges, tunnels, and station doors, will govern the height of chimneys, and with low chimneys they should extend downwards in the smoke box to a level crown sheet just above the tubes. With some forms of patented spark arresters, much room is required above the deflector for clearance. Such pipes reduce the effective height of the chimney, and are not so well adapted to run under low bridges as some other forms of pipes which require less waste room.

The character of the fuel burnt influences the proportions of the boilers. Good wood, well seasoned, can be burnt more economically on a small than on a large grate. The size of the furnace controls the amount and intensity of heat generated, and should furnish such amount as can be economically absorbed by the tubes. If less, the pressure of steam will fall,—if more, the fuel is wasted, as much of the heat goes up the chimney. With such fuel as possesses superior heating qualities a smaller bulk furnishes the desired amount of heat. Green wood, or wood of any kind, having inferior heating qualities, cannot be economically burnt except furnished for about the ordinary cost of cutting and hauling for short distances. To be burnt at all and be efficient in producing steam, the furnace should be large and the tubes short. The furnace should be deep especially. In some situations, economy of fuel is not of so much consequence as reliability and efficiency of engines; not but that economy is consistent with both of these requisites, but that on those roads where fuel is cheapest there are often the fewest engines, and these from storms or other unusual causes must often be overworked.

Coal burns closely, and therefore requires a large grate and thin fire to pass sufficient air and to prevent overheating. Its intense heat would act less upon copper than iron sheets, were it not

that the sharp particles projected by a strong blast are found to have a destructive mechanical effect on copper. Thin iron of the best quality, ample air opening, a large and shallow furnace, with the side sheets protected from the heat by closing up the grate for a few inches around its margin, and movable grate bars, will give the best results in burning hard coal. With softer coal, and with coke, copper furnaces are in general use.

Cost of Railroads.

Every new railroad project in its first conception is sure to be flanked by estimates of cost, "sufficient", as is invariably announced, "to place the road in complete running order". In justice to the engineers and financial agents of these works it is fair to say that in some cases the road is put in operation at a cost not exceeding the estimates. But to argue that the cost of a road, in the condition in which it is opened, represents the cost of a complete and permanent work, is a fallacy. No fact is better established than that the construction accounts of most of our roads, after the line is opened for business, increase in a more rapid proportion than the receipts.

The Journal has often stated the latter fact by comparisons of the original and ultimate construction accounts of old roads. This account has been often doubled in periods wherein the receipts have increased but fifty per cent. In our number of September 24th, 1853, we gave the construction accounts, receipts, dividends and stock value of several of the older roads in New England, for each year, for a period of eleven years. The general result was as follows for 1843 and 1852.

The first line of figures for each road is for 1843.

Road.	Cost.	Value.	Gross Earnings.	Net Earnings.	Div.
Worcester 1852.....	\$2,764,400	\$107	\$333,367	\$176,726	6 1/2
Providence 1852.....	4,845,966	101	755,819	331,397	6 1/2
Maine 1852.....	1,892,800	86	233,388	108,014	6 1/2
1852.....	3,646,203	86	429,484	212,626	6 1/2
Lowell 1852.....	1,260,300	83	178,745	86,990	6 1/2
1852.....	4,092,926	405	661,521	338,215	8 1/2
Eastern 1844.....	1,978,300	595	277,315	107,948	7 1/2
1852.....	1,996,249	480	383,103	156,881	7 1/2
Western 1852.....	2,388,600	104 1/2	337,238	227,919	8 1/2
1852.....	3,120,391	93	488,973	211,018	8 1/2
Western 1852.....	7,087,200	45	573,882	269,909	0 8
1852.....	9,963,700	98 1/2	1,339,873	698,194	0 8

* Par value \$500

Increase of construction accounts has been necessary, in the long run, in the case of almost every road in New England or elsewhere. The business developed by the roads (what is called the prospective business of new roads, and claimed by them as clear gain) has invariably involved heavy outlays for increase of establishment, corrections of location, &c. While the ordinary accession of this business has increased the operating expenses in proportion.

Every road running into Boston has largely increased its construction account for new freight, passenger, engine, wood and water stations. The Providence road, especially has incurred extraordinary outlays for its connection with the Stonington road and new depot in Providence, as well as new stations in Boston.

The Lowell road, since 1852, has completed a large and expensive passenger station in Lowell, a capacious and first class machine shop, with the best description of stationary machinery, at East Cambridge; and is now engaged in extending its line into the business centre of Boston at a cost for pile bridging, land, tracks, buildings and fixtures of perhaps \$300,000.

A large part of the equipment of the Boston and Lowell Railroad also, for which little or no depreciation has been allowed in yearly expenses, is in such condition as to require to be soon replaced if the road expects to do a first class business.

The Fitchburgh road, not included in the above list, has incurred large outlays in establishing its new stations in Boston, Charlestown and Fitchburgh; improvements made since the opening of the road for business, and made, indeed to replace structures of a quite permanent character.

So with all the others. Every accession of business has required accommodation. Freight has required warehouses, docks, yards, siding, turntables, motive power, &c., &c. Passengers have required larger, more elegant and expensive stations, motive power and other equipments, and the establishment of stations at new points. The local business, which is the most reliable resource of all roads, requires vastly more outlay for its accommodation, in proportion to its amount, than foreign business.

Now these results will be precisely the same on all Western roads. They have an original advantage in the cheapness of their graduation and of right of way. In many other respects, in the cost of rails, ballasting stations and equipments, they will cost more than for the same portion of Eastern works.

Very few Western roads have yet come up to the necessities of double tracks; while their buildings and many of their fixtures are of a cheap and temporary description. They appear, in their gloss of newness, "elegant" and "capacious" enough, but time, increase of business and fire will yet involve as great expenses as Eastern roads have incurred for similar purposes.

To show the advantages which Western roads possess in cheapness of graduation, masonry and bridging, we may compare the estimated cost of these items for some of their new roads with the actual cost of the same for Eastern roads.

Cost of Graduation, Masonry and Bridging.

		Per mile.
Boston & Lowell..	28 miles, double track,	\$15,186
Boston & Maine..	83 " $\frac{1}{2}$ do.	15,000
B. & Worcester...	69 " $\frac{2}{3}$ do.	14,517
Western.....	156 " $\frac{2}{3}$ do.	29,434
Fitchburgh.....	66 " $\frac{3}{4}$ do.	13,658
Cheshire.....	54 " single.	28,225
Vermont & Mass...	77 " single.	21,565

We have given the Cheshire and Vermont and Massachusetts roads in this list, not that they are among the principal Eastern roads, but that they have been among the most difficult to build, and their physical features are even now more severe than

on the average of other roads in the same States.

Estimated Cost of Graduation, Masonry and Bridging for single-track Western roads.

	Per mile.
Indiana and Illinois Central...	150 miles, \$3,326
Indiana and Bellefontaine....	83 " 2,000
Indiana and Terre Haute.....	74 " 4,965
Pittsburgh and Cincinnati.....	" 8,000
Mississippi and Wabash.....	251 $\frac{1}{2}$ " 6,091
Lake Erie, Wabash and St. Louis.....	170 " 5,260
Mobile and Ohio (Southern)...	594 " 8,588

In Operation.

Little Miami, about.....5,000
Giving Western roads, generally, the advantage of \$10,000 per mile in first cost, we may assume that a mile of railroad in the West, equal in condition to one costing \$60,000 per mile in New England, will cost \$50,000.

In such proportion can competition in the West exceed, with equal profit, that in New England.

That Western roads are not yet completed is well known to all who are acquainted with them. On the Cleveland, Columbus and Cincinnati line, a single track road, only a few permanent structures are put up. The station buildings at Cleveland and Columbus are of wood. Engine houses and repair shops, characteristic of a great line, are wanting. At Cincinnati, the freight station is of but limited capacity, while the engine houses and shops at Fulton are not such as the prospective business of the road will demand. These facts, and many others, of the incompleteness of this road are best known to those directly engaged in its management and operation. So of the Hamilton and Dayton. It has a second track to lay, an engine house at Cincinnati to build, as well as a passenger or freight house, according to the ultimate destination of the present building; buildings to erect at Hamilton and Dayton, and many other heavy expenditures to make. As fast as Western roads develop their business their construction account must rise to meet it.

New York Central Railroad.

The following is given as the general statement of Receipts and Disbursements (though in part estimated) of the Central Road for the nine months ending on Feb. 1, 1854:

Gross receipts for the nine months:—	
From passengers.....	\$2,410,435 26
For freight.....	1,512,427 85
Total receipts.....	\$3,922,863 11
Disbursements, including special expenditures.....	2,042,328 26
	\$1,880,534 85

Deduct nine months interest, at 6 per ct., on debt certificates (\$8,885,210) and on debts of the old companies assumed under the consolidation agreement (\$1,861,823), in all say \$10,747,033.....\$488,616 49

Proportion of sinking fund for nine months to pay debt certificates, at the rate of $1\frac{1}{4}$ per cent., per annum.....	83,298 84
	566,915 33

Total receipts for nine months, after payments as above.....\$1,313,619 52

Vermont.

The stockholders of the Connecticut and Passumpsic Rivers Railroad met at White River Junction on the 26th ult., and voted to extend their road to the Canada line. The stock of the road has been gradually but steadily depreciating in market and it is thought that by extending it and forming a connection with Montreal, the stock must improve. The people along the line of the proposed extension are very sanguine that the stock will be good, and at any rate that the gain in the value of real estate and the increased facilities of transportation will much more than balance any loss that may be sustained in stock.

Rutland and Washington Railroad.

At the annual meeting of the Rutland and Washington Railroad Company held at Poultney, on the 1st February, the following persons were elected directors for the ensuing year:—Merritt Clark, Poultney; George W. Strong, Rutland; J. Bradley, Burlington; J. W. Bishop, Granville; J. P. Eastman, Boston; James W. Baldwin, Boston; A. Latham, White River Junction.

At a meeting of the Directors, George W. Strong was elected President; John Bradley, Vice President; James W. Baldwin, Treasurer; Thomas H. Canfield, Superintendent; Z. H. Canfield, Clerk.

Railroads of the State of New York--Report of the State Engineer.

We give below the annual Report of the State Engineer on the railroads of this State, which will be found a very interesting and instructive document. The accompanying tables will be published at another time.

To the Honorable the Legislature:

The annexed table A furnishes a list of all the railroad corporations of this State, including those associations that have filed their articles in the office of the Secretary of State, and also shows the date of the filing of their annual reports in this office.

The annexed tables A to I inclusive, furnish all of the information which is contained in the reports.

These tables will be given hereafter.

The length of all the railroads in operation in the State is.....	2,432 miles.
The length of railroads laid is about.....	2,497 "
The length of double track in addition to the above is.....	664 "
The number of locomotives in use is.....	586
The number of passenger cars in use is.....	834
The number of baggage and freight cars in use is.....	6,895
	====
The number of miles run by the passenger trains is about.....	6,594,963
The number of miles run by the freight trains is about.....	4,227,807

Total number of miles run...	10,822,770
	=====
The whole number of miles travelled by the passengers is about..	581,572,298
The whole number of miles each ton of freight was moved, or the number of tons moved one mile, is about.....	246,554,492
The capital stock of which is about.....	\$112,038,131 45
The capital stock paid in is about..	61,238,829 22
The amount of funded and floating debt is about.....	59,669,478 38
The amount paid for construction and equipment is.....	117,707,620 58
The average distance which each passenger travelled, would appear from the footing of the reports to be 44 $\frac{1}{2}$ miles, and the average distance	

which each ton of freight was moved, would appear to be 65½ miles. But these average distances should be slightly increased in consequence of a portion of the passengers and freight being carried over two or more roads, and the number of passengers and tons of freight being in those cases repeated on each road.

Twenty-three railroad corporations have made full reports, from which the following statements were made:

The length of railroads is.....	2,103 miles.
The capital stock, as per charter.....	\$54,748,800 00
" " subscribed.....	50,137,263 03
" " paid in.....	47,430,865 04
" " floating debt is..	43,346,781 27
" " ".....	7,111,590 64
The amount of funded debt is.....	35,457,962 75
Amount expended in grading and bridging.....	7,681,097 75
Amount expended in superstructure.....	3,214,424 73
Amount expended in station buildings.....	1,209,205 76
Amount expended in engine houses and machine shops.....	7,781,299 73
Amount expended for land damages and fencing.....	3,254,501 64
Amount expended for engineering and agencies.....	9,686,520 77
Amount expended for locomotives and cars.....	95,466,243 59
Total amount expended in construction and equipment, including grading and superstructure.....	19,130,411 44
Amount expended on do. during the year.....	2,093
Whole length of the road laid is miles.....	554
Whole length of second track laid on the above is miles.....	490
Number of locomotives.....	595
Number of passenger and emigrant cars.....	5,388
Number of baggage and freight cars.....	5,254,963
Number of miles run by the passenger trains for the year.....	2,841,147
Number of passengers carried on the cars as reported*.....	397,272,298
Number of miles travelled by all the passengers.....	3,564,807
Number of miles run by freight trains.....	219,454,492
Number of miles of movement of the freight.....	\$1,447,876 65
The cost of maintenance of way (17 roads — miles only reporting this item).....	
Charged to passenger business.....	\$874,895 50
Charged to freight.....	606,893 08
The cost of repairs of machinery on 18 roads reporting is.....	1,403,154 81
Charged to passenger business.....	\$817,570 51
Charged to freight.....	564,771 35
The cost of operating on 19 roads reporting is.....	4,159,310 51
Charged to passenger business.....	\$2,155,597 92
Charged to freight.....	1,945,990 64
The receipts on 19 roads reporting are,	
From passengers.....	\$6,799,953 82
From freight.....	5,890,638 10
From other sources.....	602,298 46
	\$13,292,890 38

The payments other than for construction, on 19 roads, were—

For transportation.....	\$6,418,187 71
For interest on debts.....	2,644,252 63
For dividends.....	2,217,536 04

The average cost of construction and equipment per mile of road of those railroads which have reported these items, has been as follows:

*The actual number of passengers carried is considerably less than the number above stated.

For graduation, masonry and bridges for 2,066 miles of road.....	\$17,162 61
For superstructure, including iron, for 2,066 miles of road.....	11,915 61
For station buildings for 2,066 miles of road.....	1,555 87
For engine houses and machine shops for 2,066 miles of road.....	585 29
For land and fencing for 2,066 miles of road.....	3,751 30
Total expense of construction and equipment for 2,105 miles of road.....	\$45,091 84
The number of locomotives on 2,076 miles, is one to 4½ miles of road.	
The number of passenger cars on 2,076 miles, is one to 4½ miles of road.	
The number of freight cars on 2,076 miles, is one to 38-100 miles of road.	
The average mileage on the passengers for each mile run by the trains, 76.	
The average distance travelled by each passenger is nearly 48½ miles.	
The average speed of the express trains when in motion, is 40 miles per hour.	
The average number of tons of freight for each mile run by the trains is 62 tons.	
The average distance each ton of train was moved, 72¼ miles.	
The average speed of the freight trains when in motion, is 16 miles per hour.	
The average weight of the freight trains, exclusive of the freight carried, is 160 tons.	
The roads reporting the amount of freight carried show an aggregate of 2,831,336 tons passing over the roads, but as the same freight is frequently carried over two or more of connecting roads, on each of which it is reported, the footing of these several amounts does not show the true aggregate of the tonnage carried. As near as can be ascertained, about one and a half millions of tons of freight were carried on all of the Railroads of the State.	
The reports furnish the number of tons of each classification of freight carried, but as the aggregate return must necessarily contain the errors above mentioned, these aggregates are only useful to show the proportions of each description of freight shipped, which are nearly as follows:—	
The tonnage of the product of the forest is 12 per cent. of the whole tonnage.	
The tonnage of animals, is 20 per cent of the whole tonnage.	
The tonnage of vegetable food is 22 per cent of the whole tonnage.	
The tonnage of other agricultural products is 4 per cent of the whole tonnage.	
The tonnage of manufactures is 12 per cent of the whole tonnage.	
The tonnage of merchandise is 11 per cent of the whole tonnage.	
The tonnage of unclassified articles is 17 per cent of the whole tonnage.	
The average cost of maintenance of way per mile of road, is as follows:—	
Charged to the business of	
Passenger.	Freight.
For repairs of road bed.....	\$374 31
" " buildings.....	22 87
" " fences.....	11 88
" " taxes.....	46 87
	38 75
All expenses of maintenance of way.....	\$455 43
For all expenses both passengers and freight, \$699 12	
The average cost of repairs of machinery per mile run by the trains, is as follows:—	
Charged to the business of	
Passenger.	Freight.
For repairs of engines.....	8.78
" " cars.....	6.07
" " tools.....	0.64
" " oil and waste.....	0.97
	1.10
For all repairs of machinery.....	16.45
For all repairs both of passenger and freight.	16.80
The average cost of repairs of machinery per	

passenger and per ton of freight carried one mile, is as follows:—

	Mills.	Mills.
For repairs of engines.....	1.10	1.20
" " cars.....	0.80	1.20
" " tools.....	0.10	0.10
" " oil and waste.....	0.11	0.10

For all repairs of machinery..... 2.11 2.60

For all repairs both of passenger freight.

The average cost of operating the road per mile, run by the trains is:—

	Charged to the business of	
	Passenger.	Freight.
	Cents.	Cents.
For office expenses, stationery.....	0.90	1.10
" agents and clerks.....	4.30	5.56
" labor, loading and unloading.....	—	9.33
" porters, watchmen and switchmen.....	2.60	2.31
" wood and water station attendance.....	0.93	0.79
" conductors, baggage & brakemen.....	5.00	6.10
" enginemen and firemen.....	5.00	6.10
" fuel, cost and labor of preparing.....	13.60	15.50
" oil and waste for engines.....	1.83	2.24
" oil and waste for cars.....	0.69	1.30
" loss and damage to goods and baggage.....	0.57	1.30
" damages for injuries to persons.....	1.20	0.32
" damages to property and cattle.....	0.48	0.44
" general superintendence.....	1.20	0.38
" contingencies.....	4.50	3.90

For all expenses of operating..... 42.80 57.67

The same per passenger and per ton, carried one mile:—

	Mills.	Mills.
For office expenses and stationery.....	0.10	0.20
" agents and clerks.....	0.54	0.90
" labor, loading and unloading.....	—	1.50
" porter, switchmen and watchmen.....	0.34	0.30
" wood and water station attendance.....	0.10	0.10
" conductors, baggage and brakemen.....	0.64	1.00
" enginemen and firemen.....	0.64	1.00
" fuel—cost and labor of preparing.....	1.70	2.50
" oil and waste for engines.....	0.23	0.30
" oil and waste for cars.....	0.10	0.20
" loss and damage to goods and baggage.....	0.10	0.20
" damages for injuries to persons.....	0.32	0.05
" damages to property and cattle.....	0.06	0.10
" general superintendence.....	0.17	0.20
" contingencies.....	0.52	0.65

For all expenses of operating..... 5.56 9.20

The average receipts per mile of road are as follows:

From passengers.....	\$3,270 78
" freight.....	2,833 40
" other sources.....	289 70

Total..... \$6,393 88

The receipts per mile run by the trains are as follows:

From passengers.....	\$1 34
" freight.....	1 73
" passengers, freight and other sources.....	1 56

The receipts per passenger per mile carried was 1¾ cents.

The receipts per ton of freight carried one mile was 28-10 cents.

By comparing the foregoing average expenses with those furnished in the last report, it will be observed—

That the cost of repairs of the track per mile of road exceeds that of the preceding year nearly fifty per cent., but that the repairs of machinery per mile run by the train is about the same. The better condition of the track has prevented the expense for repairs of machinery from increasing with the increased rates of speed which are now adopted.

The expense of operating the roads has increased about twenty per cent. over those of the preceding year, owing to the increased speed of the trains, and to the higher price of labor.

The tables which have been prepared show the comparative cost of construction and repairs, and of operating each road, and the average results afford very useful and reliable information on these interesting subjects.

It is to be regretted that all of the railroad companies do not prepare their reports with the same care and accuracy that is generally observed.

The manner which has been adopted for preparing these tables furnishes the means of detecting many of the errors, and it is believed that the publication of the errors will be found one of the most effectual means of inducing more care in the preparation of the reports.

In my last report, I pointed out some striking discrepancies and suggested that additional authority should be conferred on the State Engineer, to enable him to enquire into the accuracy of the returns made to his office. I respectfully renew this recommendation.

The following statements, which are exhibited by the tables, will show how widely the cost and expenses of the various roads differ from each other.

	Highest.	Lowest.
Cost of graduation and masonry per mile....	\$35,099 38	\$5,540 57
Cost of superstructure per mile.....	25,218 02	5,040 14
Cost of land and fences per mile.....	6,448 93	1,080 28
Cost of construction and equipment per mile....	81,812 16	16,848 98
Cost of graduation and masonry per mile of single track.....	21,507 70	5,200 52
Cost of superstructure per mile for single track.....	12,150 50	4,896 32
Cost of land and fences per mile for single track.....	5,573 77	1,140 23
Cost of construction and equipment per mile for single track.....	50,131 63	16,040 41
Cost of maintenance of way per mile run by passenger trains,—cts..	31 39	10 98
do. do. freight trains....	56 39	8 05
Cost of repairs of machinery per mile, passenger trains.....	25 57	4 31
do. do. freight trains....	27 53	7 93
Cost of operating, per mile, passenger trains..	72 79	22 48
do. do. freight trains...	228 79	30 12
Cost of repairs of machinery, per mile run by passenger trains,—cents:		
Cost of repairs of engines.	14 44	3 27
do. cars....	9 29	0 70
do. tools.....	1 59	0 03
By freight trains, repairs of engines.....	17 68	1 69
do. do. cars.....	18 02	2 54
do. do. tools.....	0 85	0 16
Cost of operating per mile		

run by trains—

Passenger agents,—cents.	10 85	1 17
Fuel.....	29 15	3 89
Conductors, &c.	10 49	0 86
Enginemen....	8 33	2 96
Freight agents.....	67 86	1 84
Fuel.....	52 75	5 58
Conductors, &c....	48 12	3 05
Enginemen.....	40 12	2 75

To obtain an accurate average, it has been necessary to reject some of the lowest results, and such of the reports as appeared to be evidently erroneous.

The tables, in some cases, show pretty plainly that these errors are caused either by carelessness or design, probably for the purpose of reducing the expense of some particular item.

The whole number of persons carried in the cars on 20 railroads.....	8,174,363
Number of miles travelled.....	397,272,298
Whole number of passengers injured Of whom were killed.....	19 11
Whole number of employees injured Of whom were killed.....	97 56
Whole number of others injured Of whom were killed.....	93 70
Making the total number injured. Of whom were killed.....	209 137

One passenger was killed for every 36,115,663 miles travelled, and one passenger was injured for every 49,659,037 miles travelled.

The classification of these accidents is as follows:—

	Killed.	Injured.
Jumping on or off trains in motion.....	14	5
Fell or thrown from train.....	19	8
Collisions of trains.....	9	13
Trains thrown off the track.....	5	5
Run over while walking, standing or lying on the track.....	57	17
Collisions with vehicles at road crossings.....	10	2
At work or standing by trains....	5	16
Standing on platforms.....	3	
Defective machinery.....	7	4
Other accidents.....	7	3
	136	73

The Albany and West Stockbridge, Buffalo, Corning and New York, Buffalo and New York City, Sacketts Harbor and Ellisburgh, and Schenectady and Troy companies have not included in their reports any statements in relation to accidents, and it is not known to the department whether or not any have occurred upon these roads.

It will be observed how few accidents have occurred to passengers from causes beyond their own control.

One passenger was killed from such causes for every 198,636,149 miles travelled, and one passenger injured for every 66,212,050 miles travelled.

Twenty-one per cent. only, of the accidents causing death, and thirty-three per cent. of the accidents not causing death to the employees, were from causes beyond their control.

By a comparison of the ratio of accidents, and miles travelled in 1852, with that of 1853, it will be observed that during the last year the passengers travelled nearly three times the distance travelled in the former years before meeting with an accident causing death, and one quarter further before meeting with an accident not resulting in death.

These evidences of the increased safety of railroad travelling, both to the passengers and the workmen, will be as gratifying to the passengers of railroads as they are to the public, especially when it is remembered that the speed of trains has been greatly increased during the past year.

This is partly due to the better condition in which the track and machinery are now maintained, and partly to the observance of greater care on the part of the travellers, and to the exercise of greater skill on the part of the managers and workmen. Respectfully submitted.

WM. J. McALPINE.

Albany, Feb'y, 1854.

Freight Tariff from New York to Chicago.

The New York Central, Great Western and Michigan Central companies have issued their tariff of freights between New York and Chicago.

1st class: Agricultural implements, furniture, stoves, hardware, etc. per ton....	\$1 87	pr ton	pr mile	3 9 c.
2d class: Books, fresh meat, hides and groceries.....	1 40	"	"	2 9 c.
3d class: Dry goods and miscellaneous....	1 15	"	"	2 4 c.
4th class: Anchors, castings, iron, heavy goods in baskets, etc.	72	"	"	1 5 c.

The rates from Boston to Detroit and Chicago on the several classes of freight are as follows:

	Boston to Detroit.	To Chicago.
First class per 100 lbs.....	\$1 52	\$2 00
Second " ".....	1 16	1 50
Third " ".....	0 97	1 25
Fourth " ".....	0 77	1 00

From Chicago and Detroit the rates going east are the same.

Live stock are carried at special rates, by the car load, as follows:

From Chicago to Detroit.....	\$35 00
From Detroit to Suspension Bridge.....	40 00
From Suspension Bridge to Albany.....	60 00

From Albany to Boston..... \$185 00

From Chicago to Boston..... \$170 00

The animals to be fed and taken care of by the owner, and at his risk.

Receipts of Railroad Iron at Cleveland.

A. N. Gray, Esq. of Cleveland, has received for forwarding, during the past year, above 40,000 tons of railroad iron. The following comparative statement of his business in this line for the last five years, shows something of the progress of railroads at the West, besides being an indication of the business of Cleveland.

	Cargoes.	Rails.	Tons.
Am't of iron receiv'd for 1849..	22	20,365	3,393
" " " 1850..	89	82,888	13,813
" " " 1851..	203	170,086	28,342
" " " 1852..	269	231,463	42,852
" " " 1853..	306	230,297	43,665

889 735,099 131,566

The Cleveland Herald, from which we make the above statement, adds:

"In addition to the receiving, cutting, and re-shipping of the iron, there is another duty of quite equal importance, that of assorting. Different patterns often compose the same cargo, varying often not the sixteenth of an inch, and not observed by shippers, engineers, or even track-layers. They make, however, the roughest of roads when laid down miscellaneously. The Michigan Southern Road had to take up five miles of its track to rectify the assorting. Mr. G.'s experience is such that he and his hands recognize the different patterns at sight, and save all mistakes on that score.

No less than 20,000 tons have been ordered during the past year which have not been received here, having been held back on account of the tightness in the money market. Of the 43,665 tons received, about three hundred tons was the compound rail, from Newcastle, Pennsylvania; all the rest was imported from England. The average cost of railroad iron during the past year has been \$70 a ton. The Ocean freight to New York and Quebec during the past year has been from 28s. to 33s., a very considerable increase on last year's prices. Freights will be still higher next year—

contracts having been already made at from 40s. to 45s."

Providence and Worcester Railroad.

The following gentlemen have been chosen Directors of the above road for the current year, viz:

H. N. Slater, Moses B. Lockwood, Daniel W. Vaughan, Welcome B. Sayles, Providence; Wm. Dickinson, Wm. M. Bickford, Alexander Dewitt, Worcester; J. Newton Perkins, Erastus Williams, Norwich; Paul Whitin, Whitinsville; Edward S. Hall, Welcome Farnum, Blackstone; Aaron Rathbone, Woonsocket; Isaac Livermore, Oliver Deane, Edward Crane, H. M. Holbrook, Philo Sanford, Boston. Mr. Welcome Farnum was elected President of the Company. This election throws the Providence and Worcester Road into the hands of the Norfolk County Road interest.

Notice to Contractors.

SEALED PROPOSALS will be received at the Office of the undersigned in Indianapolis until the 15th day of March next, for the Grading, Masonry and Bridging of that portion of the Indiana and Illinois Central Railway, between the West line of Edgar County and Decatur Illinois, being for a distance of about 53 miles.

The Map and Profiles together with the Plans and Specifications, will be ready for inspection at the Office of the Company in Decatur on and after the 1st day of March.

Any further information may be obtained at the Office of the undersigned in Indianapolis.

M. C. STORY & CO.

Indianapolis, February 7th, 1854.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of

Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

New York and Erie R. R.

PASSENGER TRAINS

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the B. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAY EXPRESS, at 12½ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAY PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.

These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

CHAS. MEYER, Sup't.

Railroad Iron.

2000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and "Crawshaw" manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by
P. CHOUTEAU, Jr., SANFORD & CO.,
December 4, 1852. No. 51 New street.

To Contractors.



CONSTRUCTION OF THE NORTH SHORE RAILWAY.

THE Directors of THE NORTH SHORE RAILWAY, from Quebec to Montreal will receive tenders for the construction of said Railway or sections thereof from this to the fifteenth day of March next.—For information, &c., apply personally or in writing to the undersigned.

HECTOR L. LANGWIN

Sect'y. & Treasr. N. S. R. C.

Quebec Feb. 14, 1854. Buade St., Quebec.

OFFICE CINCINNATI, HAMILTON & DAYTON R. I. CO.
CINCINNATI, Feb. 14, 1854.

THE Directors have this day declared a dividend of Five per Cent. on the capital stock of this Company, payable at the office of the Company in Cincinnati on and after the 25th inst., till which time the Transfer Books will be closed, and at the Ohio Life Insurance and Trust Company's Office in New York, on and after the 15th proximo. By order of the Board.

FRANK S. BOND,

Sect'y.

To Railroad and Canal Co.'s, Contractors, &c.

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics, &c. of any description, and also to inform them that they forward such men to whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.

No. 85 Greenwich street, New York.

Rail Road Letting.



PROPOSALS will be received at the Office of the Company in the City of Evansville, Indiana, until 6 o'clock, P. M., of Wednesday, 15th day of February, 1854, for the Grubbing, Grading and Bridging of that part of the 1st Division of the EVANSVILLE, INDIANAPOLIS, AND CLEVELAND STRAIGHT-LINE RAIL ROAD,

Extending from Evansville to the Crossing of the Ohio and Mississippi Rail Road, in Daviess County, a distance of fifty-four miles.

The work will be divided into sections of about one mile each, and proposals will be received for one or more sections, or for the whole line.

Maps, Profiles and Specifications will be ready for the examination of bidders on and after the 1st of February, and all necessary information given on application to W. C. Moore, Chief Engineer.

O. H. SMITH, PRESIDENT,

W. CARPENTER, VICE PRES.

Evansville, Jan. 2, 1854.

Railroad Letting.



PROPOSALS will be received by the undersigned at the Engineer's Office, Dover, Delaware, until March 14th, inclusive, for the Graduation, Masonry and Superstructure of the DELAWARE RAILROAD, extending from the New Castle and Frenchtown Railroad to Seaford, a distance of 70 miles, through a healthy region, and convenient to procure hands and supplies.

The work will be divided into sections of about 4 miles each.

Maps, profiles, and specifications will be ready for the examination of contractors, after the 1st of March.

Bidders personally unknown to the undersigned, will be expected to produce satisfactory evidence of their responsibility.

D. H. KENNEDY,

Resident Engineer.

feb.18-tm14

Valuable

Engineering and Mechanical Works,

IMPORTED and FOR SALE by

JOHN WILEY, 167 Broadway.

DEMPSEY'S PRACTICAL RAILWAY ENGINEER. 1 vol. 4to, with 50 Engravings, bound in half Morocco. \$11.00
SCOTT'S ENGINEERS' AND MACHINISTS' ASSISTANT, 2 vols. Quarto. 20.00
TREDGOLD on the LOCOMOTIVE ENGINE, half calf. 15.00
" on the MARINE ENGINE, half calf. 24.00
" on the STATIONARY ENGINE, &c., half calf. 24.00
TREATISE on the STEAM ENGINE by the Artizan Club. 6.00
WEALE'S THEORY, PRACTICE and ARCHITECTURE of BRIDGES, 3 large vols., half bound. 25.00
" **SUPPLEMENTARY VOL.** (just published), half bound. 14.00
TRAUTWINE on RAILROAD CURVES, turk. 1.00
" on EMBANKMENTS AND EXCAVATIONS. 1.00
WILMES' HANDBOOK of PLAIN and ORNAMENTAL MAPPING, and Engineering Drawing, for Civil and Mechanical Engineers. 7.50
WOOD'S PRACTICAL TREATISE on RAILROADS, 8vo. 5.00
RYDE'S TEXT BOOK for the USE of ARCHITECTS, ENGINEERS, SURVEYERS, &c. 1 vol Royal 8vo. 8.50
GREGORY'S MATHEMATICS for PRACTICAL MEN. 8vo. 6.00
BARLOW on the STRENGTH of MATERIALS and on CONSTRUCTION. 4.50
LARDNER on the STEAM ENGINE. New Edition. 2.00
SCRIBNER'S ENGINEER'S, SURVEYOR'S, and CONTRACTOR'S POCKET TABLE BOOK. 1.50
SCRIBNER'S ENGINEER'S and MECHANIC'S COMPANION. 1.50
BUCK ON OBLIQUE BRIDGES. Illustrated with Plans, &c. 4.00
EXAMPLES of RAILWAY MAKING. With PRACTICAL ILLUSTRATIONS. 3.50
SIMM'S on LEVELLING and SETTING OUT RAILWAY CURVES. 8vo. 2.25
SIMM'S on MATHEMATICAL INSTRUMENTS, 8vo. 2.25
HAUPT on BRIDGE CONSTRUCTION. 8vo. 3.00
QUESTED'S TREATISE on RAILWAY SURVEYING and LEVELLING. 8vo. 1.75
Together with an extensive assortment of Books in every department of science.

LAWRENCE SCIENTIFIC SCHOOL, Harvard University.

THE next Term of this Institution will open on the second day of March, 1854, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical Exercises, according to the nature of the Study, will be given in:

Astronomy	by Messrs. Bond.
Botany	" Prof. Gray.
Chemistry, analytical and practical	" " Horsford.
Comparative Anatomy and Physiology	" " Wyman.
Engineering	" " Eastis.
Mathematics	" " Pierce.
Mineralogy	" " Cooke.
Physics	" " Lovering.
Zoology and Geology	" " Agassiz.

For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

Cambridge, Mass., January 1854.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by
BOORMAN, JOHNSTON & CO.,
 90 Broadway, New York.
 June 9, 1853.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to
THOS. CHAMBERS, President,
 63 Beaver st, N. Y.,
 September, 1850.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.
VOSE, PERKINS & CO.,
 9 South William St.
 New York, June 1, 1851.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.
F. HUNGERFORD & CO.
 Mayesville, Ky., Sept. 29, 1853.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
157 Broadway, New York.CHARLES B. STUART,
DANIEL MARSH,EDWARD W. SERRELL,
SAMUEL McELROY.**Railroad Iron.**

3000 TONS superior quality, delivery from April forward, with 5 to 600 tons per month, for sale by
NAYLOR & CO.,
 121½ 99 & 101 John street

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 50 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by
JOHN H. HICKS,
 21 Feb'y. 90 Beaver street.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars. Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers. Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West.
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
 feb. 18. 1m.

To Railroad Engineers and Contractors.

WANTED, a corps of efficient Engineers and Contractors, for the construction of a Railroad in one of the Southern States. Apply to
DUFF GREEN.
 New York, Feb. 14th, 1854.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior. At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloohah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
 Superintendent.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
 No. 61 Camp Street,
 New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.
T. & E. GEORGE.

Philadelphia, November 14, 1850.

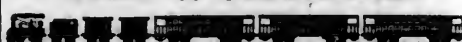
Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.
COOPER & HEWITT,
 17 Burling Slip, New York.

February 15, 1850.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
 Norfolk, Va., Jan. 8, 1854.

SEALED PROPOSALS will be received by the undersigned at this Office, from the 1st until the 20th day of March next, at sundown, for the "clearing" and "Graduation" on the line of the "Norfolk and Petersburg Railroad," between that portion of said road now under contract, and its terminus at Petersburg—covering a distance of about eighteen miles; also, for the "Culvert" and "Bridge" Masonry of the last section of said work.

At the same time, sealed proposals are invited for the "Abutment" Masonry of "Bridges" over the Eastern and Southern branches of Elizabeth River.

The work will be divided into sections of about three miles, and bids may be made for one or more of said sections.

The line, plan, profiles and quantities of work will be ready for examination on and after the 1st of March.

Specifications with forms of contract and proposal may be had of the undersigned after date.

Payments will be made in current funds during the progress of the work, in proportion of four-fifths of the amount due.

Of bidders personally unknown to the undersigned, evidence of their responsibility will be necessary; and of those to whom work shall be allotted, will be required bond and approved security in an amount not exceeding one-fifth of the amount of their contract, for the timely and faithful execution of the same.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

The line is easy of access, the country through which it passes abundant in supplies and of a climate highly favorable for the prosecution of work at all seasons.

The work here offered for contract is of a character well worthy the consideration of the most responsible contractors.

W. MAHONE,
 Chief Engineer.

January 19.

Norfolk, Feb'y 10th, 1854.

Sealed proposals will be received between the dates mentioned in the above notice, for the construction of two Iron Bridges with stone abutments and piers, one over the Eastern Branch of the Elizabeth River, 630 feet long, and containing about 3,300 cubic yards of masonry, and the other over the Southern Branch of the same stream, about 400 feet long, and containing some 1,700 cubic yards of masonry. Plans of bridges, with quantities of material and working drawings, will be ready for inspection after the 1st March.

From this date proposals will be entertained for the Clearing and graduation of several sections not included in the 18 miles mentioned in the above notice, and also for the bridges and culvert masonry upon said sections,—of the former about 3,560 cubic yards, and the latter 670.

W. MAHONE,
 Chief Engineer N. & V. R. R.

Spikes, Spikes, Spikes.

ANY person wishing a simple and effective Spike Machine, or a number of them, may be supplied by addressing **J. W. FLACK, Troy, N. Y.** or, **MOORE HARDAWAY, Richmond, Va.**
 March 6. 1850.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

BOORMAN, JOHNSTON & CO.,
 Sept. 7. 90 Broadway, New York.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 9.]

SATURDAY, MARCH 4, 1854.

[WHOLE No. 933, VOL. XXVII.]

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Construction Account of Railroads.....	129
Progress of Liberal Ideas in Legislation.....	130
English Railroads.....	130
New York Locomotive Works.....	131
Railroads of Ohio.....	131
Traversing Screw Jack.....	122
Analysis of Water for Locomotives.....	132
Railroads of Virginia.....	133
Journal of Railroad Law.....	134
Jeffersonville Railroad.....	135
Stock and Money Market.....	136
E. F. Johnson's Report.....	137
East Tennessee and Virginia Railroad.....	138
Ogdensburg, Clayton and Rome Railroad.....	138
Railroads in Missouri.....	139
Railroads of Chicago.....	139
Public Works of Pennsylvania.....	139
Cincinnati, Hamilton and Dayton R.R.....	141-140
General Railroad Law of Ohio.....	140
Toledo and Indianapolis Railroad.....	141
Marietta and Cincinnati Railroad.....	142

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, March 4, 1854.

Construction Account of Railroads.

The "Construction Account" has always been the great bugbear in railways; the moth that eats up their income; the barrier that often rises at the unlucky moment to cut off the unfortunate stockholder from his dividends. It is the rapid and uniform increase of this account, that has rendered *English Railways* so unproductive. There is no department in railway economy that has called forth more discussion on the part of the English press. But the disease is not checked, nor its cause apparently understood. It still remains the great blight in the railway system of that country.

It is natural that Europeans should suspect similar causes to be at work in the railway system of this country, that have produced such disastrous consequences in their own, especially when they witness a similar increase in the construction account of its railroads. If the *uniformity* in the

two cases be due to *different* causes, they may not be able to detect their dissimilarity, and may properly call for an explanation. If on the other hand, a similar result proceeds from one and the same source, then it is high time that the attention of our own people was directed to a subject which may suddenly discover to them, that a property at present so highly valued, is comparatively worthless.

Without attempting any explanation of the cause of the increase of the construction account of *foreign* railroads, we are free to admit, that in this country, a rapid increase is not only inevitable, but necessary and proper. There is, in all cases, a necessary relation between the *business* of a road and its *cost*. Were it otherwise, the ordinary principles which lie at the foundation of every kind of business, would be subverted. The profits of railroads are regulated precisely as are the profits of all other kinds of business. Money invested in them, can, in the long run, earn no more than an equal amount invested in trade, commerce, or in manufacturing. Every profitable enterprise is pushed till the profits are brought down to the ordinary level of other investments. A manufacturer cannot execute double the usual amount of orders without increasing his works. If he sells two hundred thousand dollars worth of goods *this* year, where he sold *one*, last, he cannot do so without doubling the make, which will require him to double his investment; so that no matter how much he may increase his business, the *rate* of his profits may not be increased in the slightest degree. He is simply doing a larger business, upon a larger investment.

The operation of our railroads presents a precisely parallel case. A business yielding \$500,000 *annually*, may fully tax the present capacity of a road. An increase of receipts to \$600,000 necessarily involves an increased investment for its accommodation. This increased cost will, in the end, as we have seen, bear a very exact ratio to the increase of business. When the receipts of such road shall have gone up to a million, we may very safely calculate that upon the settlement of all bills, the construction account will have doubled, or nearly so. That such *should* be the result, is reasonable. That such *is* the result, experience fully proves.

The increase in the construction account of a railroad is, *ipso facto*, therefore, by no means improper, nor is it any cause for suspicion or distrust of its management, *provided* the receipts increase in like ratio. The two must go together. It is the fact whether they *do* agree, and whether any proposed outlay will probably be justified by the result, that should excite and command attention.

The increase of the *construction* accounts may, therefore, be no more objectionable than the original construction of a railroad, nor in fact so much so. The objection does not go against the principle, but the *expediency* of the thing, and it is to the question of expediency that purchasers of securities must look as well in one case as the other.

In looking into this matter it will be found, that while, as we have seen, the business and cost of a road, provided the latter be productive, may properly increase in equal ratio, the business of our roads increases much faster than their cost. The increase of business is probably equal to 25 per cent. per annum upon the average of our roads; certainly 20. The cost of our lines in operation does *not* increase in equal ratio. There is a good reason why it should not, in the fact, that business of most of our roads does not come up to the capacity of either their tracks, nor equipment. A *larger* business can be transacted without material increase in outlay. For this reason a proposed increase in the construction amount of a railroad, should be made the occasion of the utmost consideration and reflection, but no more so than the reasons for the original construction of the road. Both may result in the conclusions that a proposed expenditure is unwarranted, either by an existing or prospective business.

We are glad to see the construction and management of the railroads of this country subjected to the most rigid scrutiny, but this scrutiny should be exercised under broad and enlightened ideas as to the objects and functions of these works. Measured by such a test, the *doubling* of the first cost of a road may be shown to be both proper and expedient. While this is true, we hope to see every important step taken by railroad companies, and every large expenditure of money, made a subject of careful inquiry and investigation, on the part of those parties owning it. Such in-

vestigation may secure a more economical expenditure to effect a given object, or may result in showing it to be altogether unadvised.

Progress of Liberal Ideas.

While Pennsylvania has rendered herself notorious for her attempts to obstruct the commerce of the country to promote the supposed advantage of her people, it is gratifying to see that two other States, Virginia and Illinois, have very recently repudiated a similar policy, of which both have long been champions. The legislature of Illinois have just legalized the construction of the *Mississippi and Atlantic Railroad*, and by doing so has probably broken down all barriers to the free construction of these works in every portion of that State. The legislature of Virginia has also granted the right of way across the *Pan Handle*, to the Pittsburgh and Steubenville Railroad; a right which has been pertinaciously denied up to the present time.

We cannot help attributing the above results, in a great measure to the recent course of Pennsylvania in reference to the affairs at Erie. Her conduct was a mirror in which the States named saw the odiousness of their former policy. In this way only could they be made to see, their own lineaments. Some good, therefore, has come out of the Erie difficulties already, in showing States the folly and injustice of all attempts to subject commerce to any other burdens than the mere cost of movement.

It is gratifying to witness the progress of correct ideas in railway legislation. There is no doubt that the best legislation upon these matters, is none at all, except such as is necessary to restrain companies within the sphere of their proper functions. Railroads are commercial enterprises, as much as are ships, or manufacturing establishments. It would be regarded as the height of absurdity, were the Legislature of New York to presume to dictate the number of ships to be built annually at this port, or the character and destination of their cargo. It would be said, and very properly, that these are matters entirely beyond the scope or capacity of a legislative body, and could be safely entrusted only to the guidance of individual interest. Legislatures are equally incapable of directing the location, mode of construction and management, of railroads. This fact is fast coming to be acknowledged. A number of the States have consequently thrown wide open the door for railroad construction, by authorizing voluntary associations to organize themselves into companies, and vested such by general laws with the power to construct railroads where they chose, and as they chose; leaving such companies the judges of the propriety of their acts. The advantages of such legislation are obvious. When a body of men understand that they are to receive no incidental aid, or support, but that their projects must stand or fall upon their own merits, they will be very careful to engage in no enterprise that will not pay, nor incur any expenditure not justified by the result. Under such legislation, the first roads will be built upon the best lines, which will leave no mistakes to be corrected by subsequent schemes; consequently we shall escape one of the great causes of rival roads. Such roads are generally built, because their predecessors, under the idea that their charters secured to them certain immunities, failed to locate their

lines in a manner to accommodate the public. Remove all such idea of legislative protection, and railroad companies will have nothing for a rival, or subsequent work; to remedy.

English Railways.

From the annual statement in *Herapath's*, (London), Railway Journal, it appears that the total mileage of railways in the United Kingdom, on the first day of January A. D. 1851 was 7,774 miles. The total receipts from the same for the year was, £17,920,540. Receipts per mile, £2,303. Total cost of construction, £263,636,320; being at the rate of £33,912 per mile.

The following remarks of the Railway Journal, in reference to the management, cost, income, etc., of English Railroads, will be of interest to our readers.

It will be seen by the above table that the additional mileage opened in 1847 was 839 miles; in 1848, 975 miles; in 1849, 835 miles; in 1850, 1,078 miles (of which 487 miles were open in 1849,) but the traffic returns were not published till 1850. In 1851 the additional mileage was 299 miles; in 1852, 374 miles; and in 1853, 278 miles. Nothing can be more satisfactory than the traffic returns on railways; they have progressed at a rate far beyond the most sanguine expectations of the promoters of railways, but from some unknown cause the capital expenditure has more than kept pace with the advance of the traffic. This state of things has produced considerable disappointment in the minds of those who have invested their money in railway undertakings, in the hopes that the natural development of the traffic would survive all additions to capital expenditure.

It would appear that there must be some very great inducement on the part of railway Directors to expend large sums on capital account; and so long as that inducement exists there is no hope of dividends improving to any great extent. Almost every increase of traffic, or chance of increase in the dividend, is immediately forestalled by some secret measure on the part of the Directors, either in the shape of leasing other lines, or making some new branch, of guaranteeing some line a dividend, or by creating preference shares for new branches or extensions. It seems as if it were the destiny of some railway boards in Great Britain to forestall, to overreach, or intercept any increase of dividend to the shareholders. There are very few instances of the converse of this in railway management; there is however one solitary instance in the Lancaster and Carlisle, a railway upon which, with the Lancaster and Preston, together 90 miles in length, about £2,000,000 have been expended. This united Company have neither branches nor guarantees, and fortunately for the proprietors, when the line was projected, it was thought by all the great railway men in that day, that it was scarcely possible for it to pay any dividend on account of the country being so poor through which it passed. The consequence was, the capital expenditure was kept down to the lowest limit, and the Company have ever since reaped the benefit of the "oversight," and the line has paid dividends of 6, 7, 8, and will, probably, 9 and 10 per cent., if let alone, while the average receipts of railways in the United Kingdom scarcely amount to 3½ per cent., notwithstanding the extraordinary development of traffic on railways which the above table exhibits.

Owing to the very effective mode of carrying out the joint stock system in the United Kingdom, projectors and Directors of railway and other companies, are rewarded for their services by indirect means. They are thrown upon their own resources to devise means to make what they can, either in buying up land, in making contracts, in getting shares out at a premium, in creating preference stock, in leasing worthless lines at high rents, and doing all sorts of things for the alleged benefit of the companies they manage, but in reality for

their own benefit and that of their friends. All this involves great extravagance, and a wasteful expenditure of capital, which will certainly be perpetuated so long as the present system continues. The only remedy for this state of things, is to adopt the French system, which very properly provides for the promoters of good and useful schemes, by giving them an interest in the profits of the railway, &c., when they exceed 5 per cent. per annum on the capital expended. In most cases, they have one-tenth of the amount of profits beyond 5 per cent., and this accounts for the great success of French railways and the disastrous state of railway property in England. It is, therefore, not the interest of the French Directors to spend the capital of the company wastefully, or to give it away to excess to contractors, in order that the contractor may return a percentage, but to construct the works as well and as cheaply as possible. The fault lies with shareholders in a great measure, who are generally very selfish, and not over anxious to reward services, even when they have been rendered faithfully. Unless Parliament determine on making all the existing railways monopolies, in the strict sense of the word, and authorize them to make any railway they please, restricting other parties from having anything to do with future railways, there will be no security for railway property as at present constituted and managed. Any new company adopting the French system in England, will reap their reward, and the old railway companies will suffer in a corresponding degree. The new stock will be receiving good dividends, while the old companies, going on with an open capital account, will be scarcely able to improve their dividends, and that, too, notwithstanding the continued development of the traffic. It is a good feature in the South Eastern and South Western Railways that some of the Directors think they have expended enough on branch lines; and it is hoped the same view may be taken by Directors of other companies who do not receive remunerative dividends.—Were it possible to put an end to continual litigation and parliamentary warfare, even for a limited period, say 5 or ten years, and to close the capital accounts of railways now yielding small dividends, the result would be of a most beneficial character,—the only increase allowed being for working stock and additional accommodation for traffic. This should be done with great care, and the effect would be productive of profitable results.

The annual increase of traffic on railways has been very considerable, partly arising from the further development of traffic on the trunk lines, and partly from the additional receipts derived from the opening of new lines and branches.—The increase in the year 1843 over that of the preceding year, amounted to £500,874; in the year 1844, to £768,337; in 1845, to £1,058,342; in 1846, to £1,020,650; in 1847, to £1,285,797; in 1848, to £1,109,335; in 1849, to £980,808; in 1850, to £1,744,161; in 1851, to £1,809,923; in 1852 to £520,402; and in 1853, to £2,010,220. The great increase of traffic in the year 1850 is due in a great measure to the encouragement given by railway companies to excursion traffic, the increase in 1851 chiefly arose from that cause in connection with the Great Exhibition and the general improvement in trade. It would appear that the efforts made to increase the traffic in 1850 and 1851, had re-acted on the natural increase of traffic in 1852, and reduced its amount by £682,400 as compared with the average of ten preceding years.—The great increase of trade to Australia and America, consequent on the gold discoveries, has had the effect of raising the traffic in 1853 to a point which had never been reached before, showing an increase of £2,010,220 over the preceding year. The average increase of traffic from 1843 to 1848, over preceding years was at the rate of £1,048,470 per annum, while that from 1848 to 1853 inclusive was at the rate of £1,424,419 per annum. The total increase at the end of ten years was £12,337,530, and, should the traffic increase only at the same rate during the next ten years, it will amount in 1863 to about

\$30,000,000; but it is hoped the amount of capital will not likewise increase in proportion, as in that case there will be no better dividends than at present. It is evident that railway shareholders have only one thing to do in order to insure future success; that is, keep a strict watch over the increase of capital and not trouble themselves at all about the increase of traffic, as that will come of itself in defiance of the artful representations of interested parties to the contrary. To close the capital accounts as soon as possible, and as far as practicable, should be the business of railway shareholders who wish to preserve their dividends from "growing small by degrees and beautifully less." It is the opinion of some eminent railway authorities, that if the railways in the United Kingdom had been constructed prudently and judiciously, as commercial undertakings, that about £90,000,000 might have been saved on the present outlay of £263,000,000.

The average traffic receipts per mile per annum were as follows: For 1842, £3,118; for 1843, £3,085; for 1844, £3,278; for 1845, £3,469; for 1846, £3,805; for 1847, £2,870; for 1848, £2,556; for 1849, £2,302; for 1850, £2,227; for 1851, £2,283; for 1852, £2,238; and for 1853, £2,471.

The amount of capital expended on the railways referred to up to July, 1842, was £52,380,100; in 1843, £57,635,100; in 1844, £63,482,100; in 1845, £71,646,100; in 1846, £83,165,100; in 1847, £109,528,000; in 1848, £148,200,000; in 1849, £181,000,000; in 1850, £219,762,730; in 1851, £229,175,235; in 1852, £239,467,453; and in 1853, £252,802,320.

The average cost of the railways in operation per mile would appear to be in 1842, £34,690; in 1843, £36,360; in 1844, £35,670; in 1845, £35,070; in 1846, £21,860; in 1847, £31,709; in 1848, £34,234; in 1849, £35,214; in 1850, £35,229; in 1851, £35,058; in 1852, £34,630; in 1853, £35,101. The most satisfactory feature in railway statistics is that of the average cost per mile remaining at about the same figure as in 1842, notwithstanding that many comparatively cheap lines have been added to the system since that date. In 1842 the average cost per mile was 34,690*l.*, and the receipt for traffic during that year was 3,113*l.* per mile, while in 1853 the average cost was 35,101*l.* per mile, and the receipts from traffic 2,471*l.* per mile. This reduction in the receipts per mile occurred notwithstanding that the annual traffic receipts increased from 4,341,781*l.* in 1842, to 17,180,000*l.* in 1853, being an increase of traffic to the amount of 12,845,320*l.* Great expectations have been for some time held out respecting the presumed advantages likely to arise from the establishment of a standing committee of the House of Commons, for the regulation and protection of railway property; but railway shareholders had better not rely too much on Parliament for the security of their property until it is very differently constituted; and so long as a great portion of the Legislature is composed of railway Directors, it is not likely that anything will be done either to limit the power of railway Directors, or to increase that of the shareholders.

Proprietors of railway property are too apt to delude themselves with the hope that things will right themselves in time and that the present system of managing railways will last their time, and so it may; but those who live long enough, and those who come after those who do not, will feel the effects of their past and present negligence. Cheap railways will and can be made, and are being made; and unless all further extensions or branches of existing railways are made very cheap, indeed, and worked economically, the consequences will be very serious to the widows and orphans whose property is invested in railway companies. The system adopted during the past 10 years has reduced the dividends on the great trunk railways of this country, above 50 per cent., and the value of the railway stock to one-half, and in some cases to one-eighth or one-tenth; and if there be no check, there is nothing to prevent the same devastating effects on railway property du-

ring the next 10 years that have operated with such fearful effect during the past 10 years. It is true, the revenue has increased from 4,843,000*l.* in 1843, to 17,180,000*l.* in 1853, nearly 12½ millions during the past 10 years on certain railways; but the capital has increased from 58,000,000*l.* to 253,000,000*l.* during the same time, or 195,000,000*l.*, and there is nothing to prevent the increase of expenditure during the next ten years from 253,000,000*l.* to 450,000,000*l.*; as not much more than one-half the railways already sanctioned by Parliament have been constructed, and as there remain about 6,000 miles more to be sanctioned, and made to accommodate the traffic in various districts of the United Kingdom, railway projectors have still a wide field before them.

It appears from the company's report that 7,834,661*l.* had been received on 6,900 miles of railway in the United Kingdom during the half year ending June 30 last, and that 3,806,126*l.*, or 48.57 per cent., had been expended in working expenses, rates, and taxes, leaving 4,027,738*l.* to pay interest and dividend on the outlay, amounting to 247,706,314*l.*, or 1.62 per cent. for the half year, or at the rate of 3.24 per cent. per annum.

The receipts on the railways in England and Wales for the above period amounted to 6,659,581*l.* and the expenses to 3,263,767*l.*, or 49 per cent., leaving a balance of 3,395,814*l.* to pay interest and dividend on 206,397,601*l.*, being at the rate of 1.65 per cent. for the half year, or 3.30 per cent. per annum.

The receipts on the railways in Scotland amounted to 802,380*l.*, and the expenses, including rates and taxes, and Government duty, to 383,649*l.*, or 47.8 per cent., leaving 418,731*l.* to pay interest and dividend on a capital of 28,282,548*l.* or 1.48 per cent. for the half year, or at the rate of 2.96 per cent. per annum.

The receipts on the Irish lines amounted to 372,708*l.*, and the expenses, including rates and taxes, to 158,711*l.*, or 42.6 per cent., leaving 213,997*l.* to pay interest and dividend on a capital of 13,086,165*l.*, or 1.635 per cent. for the half year, being at the rate of 3.27 per cent. per annum.

The length of the line over which the traffic was carried during the above half year in England was 5,176 miles; in Scotland, 943 miles; and in Ireland, 781 miles. The receipts per mile were respectively 1,286*l.*, 851*l.*, and 477*l.*; and the cost of construction 39,872*l.*, 30,000*l.*, and 16,755*l.* per mile.

New York Locomotive Works.

We have had the pleasure of examining a fine locomotive engine, just finished by Breese, Kneeland & Co., of 38 Exchange Place, New York, and whose works are conveniently situated in Jersey City. This locomotive was constructed for the Hudson River Railroad, for running the heavy express trains. It combines very favorable features to this end, having 16 inch cylinders with 22 inches stroke, and drivers of 6 feet 6 inches diameter. It is constructed with such arrangements and proportions as are admitted to be improvements, and was from the first intended to be a first class work. The driving wheels are of an elegant pattern, forged from wrought iron; an application of much importance in the increase of strength and reduction of weight. In other important particulars this engine presents especially favorable points. The mechanical execution of its parts is also of the best description.

Breese, Kneeland & Co., have erected a large and complete establishment for the construction of locomotive work, and have secured the best machinery, and what is of equal importance, the best talent for the successful prosecution of the business. Their Superintendent and Engineer, Mr. E. P. Gould, formerly occupied a responsible situation in the locomotive department of the

Hudson River Railroad, a work which has become a graduating school for the best engineering talent in the country.

The New York Locomotive Works are situated most favorably for a cheap command of materials and an economical delivery of work. Engines can be delivered directly on ship-board or on the New York and Erie and New Jersey Railroads; and by a short ferriage upon the Hudson River and all Northern and Western roads.

Railroads of Ohio.

Capitalists and others, who, in stringent times, hear much and think more of the over construction of railroads in Ohio need occasionally to be reminded of the position and resources of that State. Her extent and wealth are well enough known.

Ohio has great water routes on both her northern and southern borders. If the one is not as safe for navigation as the bays on the Atlantic coast, and the other as uniform in volume as the Hudson, both have nevertheless served the purposes of a great trade, and still confer advantages which few other States can enjoy. Three important commercial depots have been established on the northern water border, Cleveland, Sandusky, and Toledo. All of these have the command of a wide and fertile back country; two have the advantages of artificial water routes, extending through that country to the water line on the South; while all are in the line of the great trade between the cities of the East and Chicago, the great city of the North West.

On the South, Cincinnati, placed by a "great bend" of the Ohio river far within the State, has attracted a population and trade which place it among the great commercial cities of the continent. It commands also superior natural resources and means of communication. It is the commercial depot of a great agricultural and mineral country. It has an uninterrupted water line to the principal Eastern market. For 750 miles of the Ohio River it is the nearest point to the Lake ports, being nearly equi-distant from Lakes Michigan and Erie. By going 500 miles up the Ohio to Pittsburgh, no more than 100 miles are gained in proximity to the lake, and but little more than 100 miles to the common point, Cleveland. Most of the intervening points in this distance are much further from the Lake than Cincinnati, while the Ohio river forms their natural outlet of trade, of which Cincinnati is the direct recipient.

On the West lies the united fertility and wealth of the best part of the great valley, the products of which, so long as the Eastern continue to be the consuming States, will be carried principally to them. To the above is to be added the natural wealth which Ohio contains within herself, her fields, forests and minerals. Great in extent, she loses nothing in inaccessible or unavailable territory.

With such position and resources, Ohio has established, and given character to, a great trade, while in doing this, she has employed but a small share of the elements at her command. It is this trade in which each of the great commercial cities of the Atlantic is seeking to participate, each perhaps hoping to secure.

New York has commanded the whole northern water front of the State by her great work, the Erie Canal. The New York Central and Hudson River water route has overcome its disadvantage

of greater lineal distance, by its capacity, facility of operation, and the commercial advantages of its terminus. Although it imposes on the through trade and travel from Cincinnati 300 miles of distance more than lies between the latter and Baltimore, it has become the established route from the greater portion of Ohio. How far the preference it has received has been determined by the enterprise displayed in its construction and operation will be exhibited upon the completion of shorter routes to other Atlantic cities. But New York will forever have the advantage of the great natural route, upon which a canal has taken the character of a river, the former working under but little more disadvantage in this comparison than the interest on its cost. It has become a rival Mississippi in the extent of its trade, if not in the volume of its current.

A water route that will support itself will support a railroad, and neither will be injured by the other. This is a principle sustained by all precedent. In this fact lies the construction and success of the entire railroad line from New York to Cincinnati, 880 miles, and from New York to Chicago, 955 miles.

With the construction of railroads commenced the contest between Eastern cities for the trade of Ohio and of the country beyond. The great railroad line from New York followed the water line to Cleveland; until the opening of the Erie road, which has since shared in this trade.

Philadelphia extended her great line to Pittsburgh. From thence the same interest has established its interior line to Chicago. At Pittsburgh, the Stenbenville road, connecting at Newark with the Central Ohio, aims at Cincinnati. 31 miles East of Pittsburgh, the Hempfield road connects the direct line from Philadelphia to Cincinnati. 645 miles in length. From Wheeling, *via* Marietta, the distance is only 25 or 30 miles more.

Baltimore has extended its road to Wheeling by which it reaches Cincinnati, over the Central Ohio Road, in 620 miles. Its direct connection through Parkersburgh will reduce this distance to 580 miles.

So far, the longest routes have had the advantage of priority of construction, and the shortest Eastern outlet of Cincinnati will doubtless be completed last.

It is this inevitable competition between Eastern cities that has given to the railroad system of Ohio its present complicated character. It has created nine east and west lines, cutting the sixth degree of longitude, or about the meridian of Portsmouth, Columbus, Gallon and Sandusky. It has intersected the State, between the 39th and 41st parallels of latitude, with twice the number of eastern trunk lines which lie between the 39th and 43d parallels.

Of those lines which are strictly vertical lines on the map, aiming to connect the northern and southern water lines of the State without reference to eastern connection, there is but one completed in Ohio:—The Sandusky and Cincinnati line. To this will be added eventually the line from Sandusky to Portsmouth and the Dayton and Michigan road.

At the present time more than one third of the entire State of Ohio, lying to the South and East of Wellsville, Zanesville, Columbus and Cincinnati, is without means of railroad communication.—

And this part, not likely to remain without such facilities for any great length of time, contains, besides agricultural, a great portion of the nominal wealth of the State. With the river, the Ohio Canal and the Scioto and Hocking Valley and Iron Railroads, this trade has already attained an important development.

One limit of railroad competition in Ohio must be that of the Eastern cities. Those lines on the route to the successful eastern competitor will pay, for they will attract trade in proportion as their eastern terminus receives it.

To all of the eastern cities Ohio is an empire, and the highway to an empire beyond. But while the independent systems of these cities ramify the State with their lines, most of these will find their support in their local trade. Their cost and their operating expenses will be nearly in proportion to their business. This is a rule which has proved generally correct in the east, and it will be still more likely to be true in the west. A railroad in Ohio can be built nearly as cheaply in one direction as another. Not so in New England and in the greater portion of the middle States. In the east a river route often commands the greater business while it is at the same time usually the cheapest of construction. On the contrary those roads which cross the streams contend against continual diversion of their business, and incur far greater expenses for construction.

If then, the construction of through lines in Ohio is regulated by the local wants of the State there can be no danger of over construction. It is the extent of these wants that forms the real question. They require that every available element of wealth shall be accessible, and its products have an outlet. But to command a choice of every market cannot be afforded by every farmer, manufacturer or merchant. If the construction of all tributary lines be left to those who stand in need of their facilities there will be little danger of over-construction.

It is then the local wants of Ohio that must be the guide in extending financial aid to her new roads.

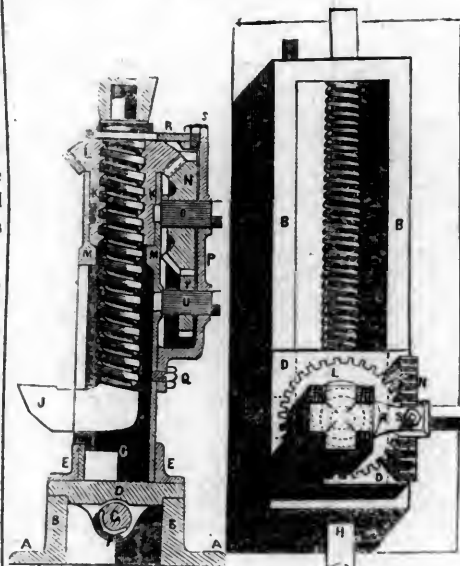
The surest indication of their wants must be the support given to such works by those who are likely to be most benefited by their construction. With this check, and the gradual development of the wants of the people, and the capacity of the roads already constructed, there will be at least no necessity for more through routes.

The present system commands, on the most direct routes, all of the Atlantic cities above Washington; besides Indianapolis, the lake ports, St. Louis and the most important points of distribution on the Mississippi. When these shall command the natural drainage of their respective districts the Railroads of Ohio will be completed.

Canada.—London and Port Stanley Railway.

The County Councils of Elgin and Middlesex have taken stock in this road to the amount of £45,000, the former £20,000 and the latter £25,000. We believe this includes the whole of the stock not previously subscribed for. The road is expected to be in full operation before the close of the present year. This important branch will prove a valuable feeder to the Great Western, as boats will run in connection with the road from Port Stanley to Cleveland.—*Hamilton Spectator*.

Traversing Screw Jack.



We copy from the *Mechanics' Journal* a cut of the improved traversing Screw Jack, as now manufactured by Geo. England & Co., of Hatcham Iron Works, London. The drawing represents a cast iron base with planed ways, upon which the standing part of the Jack may be moved by a horizontal screw. The standing part may be operated on two ranges of elevation, both ends of the screw being adapted for lifting.

By working the pinion *r*, which is of but one-half the diameter of the wheel *n*, the lift may be doubled in weight with the same expenditure of power.

The traversing Jack is of great value in replacing cars which are off the track, and for many purposes of timber and masonry framing.

The Western Railroad.

The Springfield Republican states that W. H. Swift, Esq., voluntarily retires from the Presidency of the Western Railroad, though he retains his place in the direction. Chester W. Chapin, Esq. of Springfield, who succeeds him, has recently become the largest private stockholder in the road. His assumption of the reins of the Western will probably produce some change in the management of the Connecticut River Railroad, of which he has been for the past two or three years the successful President. Mr. Chapin, it is said, is in favor of having the treasury and executive departments of the corporation located at Springfield.

Analyses of Water.

It is important to every railroad company to know the chemical constituents of the water along its line, in order to guide the choice of water stations. The effects of different waters are well known to those having charge of the operation and maintenance of locomotives. At points, perhaps not half a mile apart, water of entirely different qualities in its effects on boilers and on the production of steam, is often found. An analysis will disclose these qualities and determine which will occasion the least incrustation, oxidation and ebullition.

The following are the analyses of different waters use for locomotives on the Erie Road, and extend over a distance of 300 miles. They were made by James R. Chilton Esq., Chemist, of New York.

In 1 Gallon.	Piermont Reservoir.	Tank in Piermont Shop.	Tank (New) in Middletown.	Goshen Tank.	Chester Tank.	Turner's Tank.	Tank Piermont Shop 2d Trial.	Iron sec. 2.	Wilke's.	Monroe Works.	Clarkstown.	Spring above Mon- sey; proposed to use.	Do. at Spring Valley do.	Old Tank at Middletown.	Piermont Reservoir same as 1.	Monsey.	Otisville.	
Carbonate of Lime and Magnesia....	2.52	1.20	6.28	12.56	6.24	0.92	1.27	1.24	0.81	0.45	4.42	2.38	1.16	1.24	1.60	2.10	2.82	1.01
Do. of Soda .....	..	..	..	..	..	0.04	..	..	..	..	..	..	..	..	..	..	..	..
Sulphate of Soda....	..	..	..	..	..	2.76	..	..	..	..	0.95	..	..	..	..	..	..	..
Do. of Lime	1.04	0.44	3.32	3.76	0.84	0.08	0.14	0.18	0.09	0.10	0.57	0.14	0.44	0.40	0.32	0.14	0.13	0.02
Do. of Magnesia....	0.56	0.48	1.28	3.44	0.64	..	0.35	0.51	0.44	0.55	..	0.30	0.36	0.56	1.04	0.41	..	0.21
Chloride of Magnes., Calcium, Sodium.	0.80	1.60	5.04	6.16	4.56	1.72	1.83	1.71	1.04	0.52	6.51	2.33	0.84	0.76	0.64	2.54	3.00	1.16
Oxide of Iron	a trace	..	0.01	..	a trace	..	..	..	..	..	0.01	0.09	..	..	..	..	0.11	..
Organic Matter....	0.08	0.08	0.09	0.12	0.13	0.08	0.09	0.08	0.02	0.02	0.12	0.10	0.04	0.04	0.03	0.09	0.08	a trace.
Total Grains.	5.00	3.80	16.02	26.04	12.41	5.60	3.68	3.72	2.40	1.64	12.58	5.24	2.84	3.00	3.63	5.28	6.56	2.40
				Shin Hollow.	Elmira.	Great Bend.	Binghamton.	Union.	Owego.	Smithboro.	Waverly.	Elmira.	Big Halls.	Corning.	Cameron.	Kirkwood.	Addison.	
Carb. of Lime.....				1.31	7.74	..	8.48	..	4.26	..	2.80	4.26	1.25	1.55	1.98	..	1.21	
" " Magnesia.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
" " Soda.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sulph. of Soda.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
" " Lime.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
" " Magnesia.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
" " Soda.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chloride Magnesium.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
" " Calcium.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
" " Sodium.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
Oxide of Iron.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
Organic Mat. ....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
Silica &c.....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
Peculiar Gelatinous Substances .....				..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total.....				3.03	14.04	2.58	16.80	2.80	8.92	1.75	5.67	12.00	4.84	3.28	3.64	3.86	2.40	

Corrugated Boiler Iron.]

We observe that arrangements are in progress for the manufacture of corrugated iron for boilers.—The ribbed or channeled surface, it is expected, will possess a positive advantage in strength over the plain sheets now in use. As the patentees claim, "the principle of the arch is borrowed from architecture," and "the result is equivalent to the discovery of a new metal of increased strength."

It would appear at first sight that the strength of the material is of the greatest consequence in the construction of steam boilers; but yet, owing to the mode of connection of the plates, by the usual resort to riveting, nearly one half the strength of continuous sheets is lost. There are no locomotive builders in our country who take the pains to form the connection of their boiler plates by double riveting, in which plan it is ascertained that but about thirty per cent. of the strength of the iron is removed in punching. The only method of connection of plates by which their ultimate strength is preserved is by welding. Timothy Hackworth of Darlington, England, built several locomotives in which the boiler plates were welded in the circumference of the shell; the connection of the sections longitudinally being made by riveting. Here nearly the ultimate strength of the material is preserved, and any inherent advantages of form, as in corrugations, would assist in increasing the total strength of the boiler.

As corrugated plates involve loss of space for the insertion of flues; as they increase the cooling surface of the boiler; as they present a difficulty in cleaning the boiler; as they are more expensive, more difficult for working, probably more liable to imperfections in rolling, there is no motive to their use, provided the manner of their connection is not such as to preserve the ultimate strength of the material. Any mode of connecting corrugated plates must be expensive and perhaps insecure, unless effected by means different from those generally at command in boiler shops.

The increase of weight of these plates, due to the greater extent of developed surface in a nominal unit of area, is one objection to their use; unless their increased strength is dependent and proportionate to their increased surface, in which case the same strength would be much better obtained by increased thickness of plane-surface plate.—With corrugations equal to one half of a circle on each side of the central plane of the sheet, the increase in surface, and consequently of weight, would be 57 per cent.

In the construction of locomotive boilers, the use of corrugated iron could scarcely be regarded as an improvement, in view of the practical difficulties in the way of its manufacture, shaping connection and disposition. The weight, expense loss of room, increased cooling surface and liability to retain deposits, attended with greater difficulty of their removal, are all objections operating in the same direction.—*American Railway Times.*

The Railroads of Virginia.

At the beginning of every year a statement of the length of railway in each and all of the States goes the round of the newspapers. It is always more or less defective, being generally below the truth. Virginia especially has been credited for much less than her actual share of railway enterprise. To do her justice in this respect, before her own citizens as well as those of other States, we decided to compile the subjoined list of the lines now underway within her limits or in the hands of her people. Among them are three lines the greater part of which lies within Virginia, the Seaboard and Roanoke, Petersburg, and Hicksford and Gaston; and one which is principally, we believe, in North Carolina, but prosecuted mainly by Virginia capital. This is the Clarksville and Ridgeway, a link in the route from Norfolk to the upper Roanoke. The 251 miles of the Baltimore and Ohio road lying in this State are excluded from the sum, because on the principle we follow in the case of the above named roads they are assigned to Maryland.

ed from the sum, because on the principle we follow in the case of the above named roads they are assigned to Maryland.

Name of Road.	Miles opened.	Miles building.	Total miles.
Virginia Central	107	70	188
R. E. and Potomac.....	76	..	76
Covington and Ohio (State)....	..	115	228
Va. and Tennessee and branch..	73	189	212
Rich. and Pot. and branches....	40	..	40
Petersburg and Roanoke.....	60	..	60
Hicksford and Gaston.....	21	..	21
Norfolk and Petersburg.....	..	62	79
Seaboard and Roanoke.....	78	..	78
South-Side	71	49	120
Danville and branches	95	51	146
Orange and Alex. and branches..	82	15	155
Manassas Gap and branch.....	42	19	146
Winchester and Potomac.....	32	..	32
Tuckahoe (coal)	5	..	5
Winifrede (do.)	5	..	5
N. W. Va. ....	..	104	104
Blue Ridge (State).....	8	8	16
Appomattox.....	10	..	10
Fred. and Gordonsville.....	..	..	46
A., L. and Hamp. and branch....	..	..	166
Clarksville and Ridgeway.....	25	..	25
	808	654	1,958

This list will, we think, be found very nearly correct. It will be seen that Virginia has, in round numbers, 800 miles of railway in operation; 700 building; and 500 more in the hands of organized companies, every mile of which will doubtless be made in a few years. About 250 miles will probably be added to the finished track during 1854. Besides those we have named, there are others projected, to the extent of perhaps one thousand miles or more.—*Winchester Virginian.*

Journal of Railroad Law.

PACKED PARCELS.

By this term the English denote a collection of small packages, enclosed in a common envelope by carriers, for the purpose of being forwarded to the different parties for whom they are intended. The Court of Exchequer has been lately examining a case, in which was involved the right of carriers to have such parcels conveyed by railway upon the same terms as those enjoyed by the public generally. The case in question was that of *Crouch vs. the Great Western Railroad Company*, which was brought to recover damages by reason of defendants' refusing to carry plaintiff's packed parcels without an extra compensation of 50 per cent. above that ordinarily paid, and the plaintiff also claimed to recover over-charges to which he had been previously subjected, upon the packages of like description.

The question, upon which this case turned, had been already substantially decided against Railway Companies, in the case of *Parker vs. the Great Western Railway Company*, 11 *Common Bench Reports*, and in the case of *Crouch*, above mentioned. The Court adhered to their previous decision, and held that the companies were not at all likely to make any distinction between carriers or forwarders and the public at large. No ingenuity of counsel seems to have been spared in order to evade the application of the rule already explicitly laid down in opposition to their claim which they advanced. But the Court wholly discountenanced the practice of discriminating between different classes of customers having occasion to transport by railway. Indeed, common carriers undertake generally, and for all persons indifferently, to convey goods and to deliver them at some appointed station for rates of compensation, which must not be modified by capricious injustice, to the detriment of the public.

In the direction of Sheffield, the Great Western Railway terminates at Rugby, and in that of Glasgow, at Preston. The defendants had endeavored to baffle the plaintiff by refusing to transport his packed parcels beyond Rugby upon the one route, or beyond Preston on the other. But the Court held, that having held themselves out to the world as common carriers to Sheffield and to Glasgow, respectively, they could not evade their obligations to transport the plaintiff's parcels at those points, although one of them was situated out of the kingdom of England. In other words, common carriers are to be considered as such for the whole route over which they undertake to convey, be it within the limits of their country or beyond it, be it wholly within the limits of their own road, or partly within them and partly beyond. The New York Supreme Court interpret the duties of common carriers in like manner, and have declared a railroad company, who contract to carry passengers and their baggage beyond the limits of their own road, are liable for losses which occur on any part of the route, in respect to which the contract is made.

It may be added, that our State Railroad Law contains a general provision, authorizing the construction of parts of lines in other States than their own. This can, however, only be done by a vote of two-thirds of all the Directors of the company proposing such extension, and then the sections of the said railroad, within this State, are to

be deemed a connected line according to the articles of association.

In the case of the Great Western Railway, above mentioned, the defendants further insisted that inasmuch as the plaintiff had refused upon request to disclose to them the contents of his packages, he thereby lost his right to have them transported. But it was held that it is only essential to disclose the contents of packages when they are hazardous or when they exceed a certain value, in cases regulated by the Act of Parliament providing for the extra compensation of carriers.

But while common carriers are obliged to perform all the duties which fairly belong to their vocation, no Court will compel them to do what they are not considered as having substantially engaged with the public to do. They need not receive such goods as would be a nuisance to those availing themselves of their trains, nor are they bound to receive passengers who will not comply with their reasonable regulations, or who are guilty of grossly offensive behavior, or who are disorderly, or who use their vehicles for purposes manifestly hostile or injurious. See *Story on Bailments*, 375.

Jeffersonville Railroad.

In a statement of the business prospects of the Company, published in New York, in April last, it was estimated that the earnings of the Road for the year, would not be less than \$128,000. It will be seen by reference to the following statement furnished by the Secretary and Treasurer, that the earnings for the year ending 31st of December, have exceeded that estimate nearly \$20,000, viz :

Transportation of Passengers.....	\$61,813 05
" " Freight.....	81,643 86
" " Mail Service.....	3,885 42
	<hr/>
	\$147,342 33

When it is recollected that the track of the road was only laid to Rockford, 52 miles, in August, 1852, and extended to Edinburgh on the 23d of December; that the track was broken, and the roadway greatly injured, by the unprecedented flood of the 24th of the same month, by which the business on more than one third of the whole line was almost entirely suspended, until March, 1853, that the Road was unfinished, the track rough and unballasted, and for a considerable part of the year had to be operated almost without turnouts or side tracks, it must be admitted that the earnings of the past year, (notwithstanding the drawbacks above mentioned,) present favorable indications of fair future business and income.

Within the past year the condition of the Road has been greatly improved, by ballasting the track, constructing turnouts, and substituting stone piers and abutments in most of the important bridges, which had, when first built, been placed on wooden structures, for want of stone accessible to the road, there being no quarries on the line affording suitable material, except those within a few miles of the Ohio river. The stone for the bridge across Flat Rock river, was carried on the Road from the Company's quarry at Silver Creek, a distance of more than sixty miles. And the gravel for ballast had also to be hauled a long distance, there being no gravel between Jeffersonville and White river, fifty-two miles, except in small quantities, which had to be carted to the road, from beds of small creeks, at heavy cost.

During the low water of the past autumn, the bridge piers and abutments have been generally well protected by placing around them large quantities of broken stone, and they are now considered in safe condition.

The extraordinary flood of last winter, which injured several Roads in Indiana, proved that, the

grade-line adopted by the Engineer when constructing our road, was not, at some points, sufficiently elevated to free the track at all times from inundation, and we have, during the past summer, raised the grade from one to two feet in height, and increased the width and strength of the embankments at such points as the freshet of the previous winter had shown to be defective. It was deemed of great importance to the interests of the Company to substitute stone piers and abutments in place of wooden structures, at the principal bridges, and to place the track above the highest known freshets, and prepare the Road for active business at all seasons. The whole road, except a few miles not yet ballasted, was put in good position through the summer and fall, and our passenger trains are running over it at an average speed of 30 miles per hour.

To make these improvements, and at the same time operate the Road, and keep up its regular business, required great care and attention to prevent accidents or injuries to the trains, and those employed upon the work, and with the high price of labor last year, required a heavy expenditure not included in any previous estimate.

Lumber has been purchased, and is now seasoning, preparatory to covering the principal bridges, to prevent them from decay. They are expensive structures, and it is important that this protection should not long be neglected, as exposure of the timber will in a short time render them unsafe, and their renewal would be a heavy tax, compared with the expenditure required to cover them.

The business of the Road in transportation of hogs the past season, has fallen short of our anticipations, and far below the estimate of dealers in pork, before the commencement of the slaughtering season. The whole number of hogs carried on the Road, may be estimated at 43,000. A large increase of this trade, over that of the previous year had been anticipated, and ample provision was made for it, both in motive power and rolling stock, so that with corresponding promptness on connecting lines, we could have readily carried double the number of hogs presented for transportation. The most prominent cause contributing to reduce the anticipated business from this source was the low price offered by those engaged in that traffic. Much of the crop of last season, part in barrelled pork, and the residue in bacon, after it shall have been cured, has yet to find its way to market and the carrying of this product will be distributed through several months, instead of being confined to the slaughtering season.

We have purchased the last year, six first class locomotives, four of which were placed on the road preparatory to the business of the fall and winter; the other two are finished, awaiting the settlement of the Erie difficulty, when they will be sent forward. Upon the receipt of these, we shall have on the Road and branch, nineteen locomotives; and no further expenditure will probably be required for the purchase of motive power for the road now constructed, for two or three years.

To accommodate the increase of freight and travel upon the line, it will be necessary to add largely to our stock of freight cars, the approaching spring and summer, and to the stock of passenger cars, at least a sufficient number to fit out an extra train, whenever it may be thought necessary to do so; and this contingency will probably often occur after the connection is completed of the Ohio and Mississippi Road, from Cincinnati to our line. The ballasting of the unfinished portion of the road, will be completed early in the summer. The track should be re-spiked and surfaced, and the entire line from Jeffersonville to Edinburgh, will then be in such condition, that a high rate of speed (sixty miles per hour), may, if necessary, be attained, with as little hazard to the safety of the trains, as upon any road in the country.

In the expenditure of the past year, charged to construction account, is embraced the outlay for the engine shop and car shop, erected at Jeffersonville. These are substantial two-story brick buildings, and with small additional outlay for

tools, will add greatly to our facilities for the economical repair of engines, and the construction and repair of cars. Nearly all the freight and platform cars in use on the road, all the baggage and express cars, and part of the passenger cars, have been built at our own shops, at greatly reduced cost, from the prices charged for the same quality of stock procured from other shops.

Cost of Road from Jeffersonville to Edinburgh, seventy-eight miles, inclusive of engines and rolling stock, to 31st December, 1853..	\$1,186,118 49
Average cost per mile, \$15,207 00	
Locomotives and rolling stock on same.....	233,499 92
	\$1,419,681 41
Cost of Shelbyville Road, 16 miles, with expenditure for new track, engines and rolling stock.....	275,578 37
For locomotive and cars on Rushville Road paid by this Company	8,101 69

Total expenditure for 94 miles and equipment.....	\$1,703,298 47
Average per mile, including equipments, \$18,120 00	
The capital stock of the Company issued to the 1st of January, 1854, is 961,222 91.	
Earnings of the Road to same date, including excess of receipts for four months of 1852.....	\$179,683 28
Running expenses, stationery, interest, (including interest on Road bonds, and bonds of the cities of Louisville and Jeffersonville paid by this Company,) exchange, repairs of machinery, salaries, taxes, &c.,.....	120,023 62
Balance nett earnings.....	\$59,659 66

On the 28th of January, a dividend of six per cent. was ordered to be paid in stock from the nett earnings of the Road, to 1st of January, 1854, which on the capital stock above stated, will amount to \$57,673 37, and will leave a balance of net earnings, of \$1,965 29.

The expenses above stated compared with the gross earnings of the past year, may appear large and disproportioned. The deduction from gross earnings includes not only the interest upon all the road bonds and city bonds sold by the Company, printing, stationery, salaries of officers, depot clerks, station agents, train hands, repairs of machinery, and all other running expenses, in transportation of freight and passengers, but includes also, the expenses on account of hauling ballast, rock and other material for the roadway and in filling up depot grounds at Jeffersonville, and also includes the expenditure for a large quantity of wood paid for, which will be used the present year, while at the commencement of the year, there was very little wood on hand. The expenses properly chargeable to operating the Road, will hereafter be greatly reduced, in proportion to gross and nett earnings heretofore shown.

The present liquidated unfunded debt amounts to \$87,354 39. This sum will be somewhat increased by the contracts which are being executed for machinery etc., and by the settlement of unadjusted accounts. When all the contracts of the Company shall have matured, the floating debt may be increased to a sum not exceeding \$160,000. A large portion of the floating debt is created in the purchase of cross-ties, spikes, chairs, and heavy T rail for the Shelbyville branch and in relaying the track, which was originally constructed with a plate rail. With it, are connected at Shelbyville, the Knightstown Road, 27 miles in length, and the Rushville, 20 miles. The two latter Roads are under lease to the Shelbyville Branch and their business during the unexpired term of the lease, is to be done over the Shelbyville Road. Its thorough repair having become necessary, the directors decided that the better mode of repair was to relay the track with a heavy rail, about two-thirds of which is completed. While this improve-

ment has increased the cost of the Road, it has at the same time added to the security of the last issue of Bonds, for the amount of iron and other expenditures incurred.

We now own 94 miles of road in operation, and control by lease 47 miles of connecting Roads.—The business and earnings of the Shelbyville Road have heretofore been kept separate and distinct from those of the Jeffersonville. It is intended hereafter to place the whole under one control and management. This will at least save the expense of one set of officers, and will doubtless in other respects be to the interest of the stockholders in the main line. The expenditure on the Road between Jeffersonville and Edinburgh to the 31st of December last, for construction of way, real estate, salaries, interest, discount on bonds, exchange, motive power, rolling stock, depot buildings, shops, &c., is \$1,419,681 41, and including the Shelbyville Road, together with the expense of relaying the track with T. rail, and also the locomotives and rolling stock purchased from branch roads, is \$1,703,298 47.

The extension of the Indiana Roads to the Lakes the past year was consummated too late to add materially to the earnings of this road. The connections now afforded by roads from Indianapolis to Lake Erie and the Eastern Cities, by lines through Central and Northern Ohio, with which arrangements for through business have been made, will add greatly to the general business of the Jeffersonville Road. The outlet recently opened to Lake Michigan and Chicago is already inducing considerable travel and trade over our line in that direction, and this must be vastly increased upon the completion of the Louisville and Nashville Road which will constitute the Jeffersonville Road a connecting link between the North and South.

Notwithstanding the drawbacks before referred to, the business of the past year exceeded the estimate of the Company as before shown. These earnings were produced mainly from local business, as our connections with other lines and arrangements for through travel and freights were not perfected in time to add much to our general business for the year just closed. Upon all Roads the operations for the first year are always embarrassed by contingencies which no foresight can guard against, and which experience only can discover and overcome. It also requires time for business to adapt itself to new channels opened for outlets of surplus products to market, and the same may be said in reference to new routes for travel; time is required for the route to become known before it can command attention and patronage, and its business for a few months only, cannot be taken as the measure of its future usefulness and profit.

We shall commence the business of the second year freed from many disadvantages under which the business of the past year was prosecuted, and may justly calculate upon a large increase of local traffic as well as through business, in connection with roads now in operation.

One of the most important sources of new business will be the Ohio and Mississippi Road which will shortly be opened from Cincinnati to the Jeffersonville Road, 50 miles from our southern terminus. As soon as this connection is completed, the two roads will form the great route of travel between Louisville and Cincinnati. It is estimated that there are at least 500 passengers daily between these cities. The charge by the boats is \$2 50 per passenger, and the time is from 10 to 17 hours, subject to frequent vexatious delays, and at times to total interruption from ice and low stages of water in the Ohio. The time by railroad will be reduced to six hours between those cities, and the fare about the same as charged by the boats. There is also a vast amount of commerce between those two cities, much of which will be performed by railroads. When this connection is completed these roads will form an important part of a line of one of the great routes of travel and commerce between the South and the North, and the Jeffersonville

Road must form the best extension to Indianapolis and to Lake Michigan and Chicago. Within two years from the present time the Jeffersonville Road will form an important part of one of the greatest Northern and Southern lines of railroad in the United States.

The operations of the road for the first year not only show a satisfactory result in itself, but equally so when compared with similar works in the West. The earnings of the Cincinnati, Hamilton and Dayton Road, with a line of 60½ miles, the first year, were \$241,426 00, or \$3,990 00 per mile. This was on a capital invested, of \$2,659,653 00. Were the earnings of the Jeffersonville Road only \$129,000 00, it would be equivalent to this, if we compare the two investments. The earnings of the Eaton, Hamilton, Richmond and Miami line, 69 miles, for the first year were \$121,114 00 or \$1,755 00 per mile. The Indianapolis and Bellefontaine road, 84 miles, cost \$1,600,000 00. Its gross earnings the first year were \$150,500 00, or 1,793 00 per mile. The earnings of the Terre Haute Road the first year, with a mileage of 72 miles, were \$105,943 00, or \$1,472 00 per mile. The earnings of the Jeffersonville Road, upon a mileage of 78 miles, were \$147,342 00, or 1,900 00 per mile. The total cost of the two latter roads, including equipments, are very nearly the same, the difference being say \$5,000.00. The Terre Haute is well known to be one of the highest priced Western stocks. A comparison with the first year's operations of other roads, it is believed, would show results equally favorable to this road.

No accurate estimate can be made of the business of the road for the present year; that it will greatly exceed that of the past, cannot be doubted. The annual increase of business on new roads is very great. The gross receipts of the Terre Haute, the second year, to 31st December last, were \$177,976 00, and increase of more than 70 per cent. A similar rate of increase in the earnings of the Jeffersonville Road will make its receipts for the present year more than \$250,000 00. The earnings in January 1853, were only \$1,735 44; returns of the business in January 1854, have not been received from all the stations, nor from roads with which we have arrangements for through business, but enough is now known at the principal office to induce the belief that the earnings for the month have been about \$18,000 which would be an increase of more than \$13,000 over the earnings of the corresponding month of the previous year, and furnishes an indication that the business of the road the present year will not be less than \$250,000. It is confidently believed that if the floating debts of the Company were now funded, the earnings of the road after paying running expenses, and interest upon the funded debt, will be such as to enable the Company to pay fair cash dividends to the stockholders, and create a fund to retire the mortgage bonds issued by the Company as they become due.

The funded debt for the issue of bonds, to mature in 1861, is.....	\$289,000
For those to mature in 1873.....	300,000

Total Road bonds sold.....\$589,000

Since the last annual report, a temporary arrangement has been made with the Madison and Indianapolis Company, for the joint use of its track, from Edinburgh to Indianapolis, a distance of thirty miles. Negotiations are pending for the purpose of making a permanent arrangement. As the route for this distance is common to both lines, and as one road may be made to afford all the necessary accommodations to both Companies, by laying down hereafter a double track on the same right of way and same grade, it is the dictate of prudence and common sense to enter into some mutual arrangement which shall save a large expense to both Companies. To accomplish such a result, the Jeffersonville Company are disposed to propose liberal terms to the other Company. Should however all efforts to effect a fair and satisfactory arrangement fail, the Jeffersonville

Company will at the expiration of the present temporary contract, proceed at once to continue their line to Indianapolis. The country traversed by the line of extension is deeply interested in having ready access to the City of Louisville. That interest was clearly manifested during the prosecution of the surveys, by the tender of additional subscriptions to our stock, for the purpose of constructing the graduation. The same motive power and rolling stock necessary for the present road would do the business on the entire line with comparatively little or no additional expenditure for equipment. That the business of the Jeffersonville Road will, with the important lines soon to be connected with it from the South, require the extension to Indianapolis of an independent line, or such arrangement as will place us in a position equally favorable there can be no doubt.

WM. G. ARMSTRONG, President.

February 3d, 1854.

American Railroad Journal.

Saturday, March 4, 1854.

Stock and Money Market.

The improvement noticed last week is fully sustained. The stock market shows a good deal of firmness, with an upward tendency. There has also been a better demand for securities, particularly on foreign account, which is exciting a favorable effect upon our money market. First class Bonds are gradually working off. The sale is still limited, but the rapid curtailment of expenditures upon railroads, has lessened the demand for money, but not in equal ratio. On the whole, there has been a decided improvement since the new year, and as many believe, a still better prospect for the future.

The following is a detailed statement of the deposits and coinage of the Mint for the month of February:

Gold Bullion deposited—

From California	\$2,461,000
From other sources	53,000

Total deposits in Feb	\$2,514,000
Total deposits in Jan	4,215,579
Silver Bullion deposited	1,166,000

GOLD COINAGE.

	Pieces.	Value.
Double Eagles	154,297	\$3,085,940

SILVER.

Half Dollars	274,000	\$137,000
Quarter Dollars	1,240,000	310,000
Dimes	130,000	13,000

Total	1,644,000	\$460,000
-------	-----------	-----------

COPPER.

Cents	1,222	17
Total coinage of Gold	\$3,085,940	00
Total coinage of Silver	400,000	00
Total coinage of Copper	1,222	17

Total	\$3,547,162	17
-------	-------------	----

The deposits of the year, thus far, compare with those of last year as follows:

	1853.	1854.
January	\$4,962,962	\$4,215,579
February	3,584,523	2,514,000

Total in 2 months	\$8,547,485	\$6,729,570
-------------------	-------------	-------------

The falling off from last year, owing to the severity of the rainy season in California, is quite large, but it will probably be made up in future supplies.

The exports of specie since January 1st, have not exceeded \$3,000,000, while the receipts of gold dust have been nearly \$7,000,000; showing a balance in favor of the country of \$4,000,000.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	809,878	1,016,500	2,064,458	140,561	80,053	none	30
Kennebec and Portland..... "	72	952,621	291,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	98½
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	32
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	110
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	38
Northern	82	3,016,634	.....	.....	328,782	163,075	5	59
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	91
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	109
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	.....	21
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,510	.....	.....	none	27
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9½
Vermont Central	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	13
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to	the Vt. C.	cent.	97
Western Vermont..... "	51	392,000	700,000	.....	Recently	opened.	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7	91
Boston and Maine..... "	83	4,076,974	150,000	4,092,927	659,001	338,215	7	103
Boston and Providence..... "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	84
Boston and Worcester..... "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	100½
Cape Cod branch..... "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River..... "	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern..... "	75	2,850,000	500,000	3,120,391	488,793	241,017	7	87½
Fall River..... "	42	1,050,000	none.	1,050,000	229,445	99,589	8	99
Fitchburg..... "	66	3,540,000	112,305	3,623,073	574,574	232,787	6	91½
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County..... "	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony..... "	45	1,964,070	282,300	2,293,534	374,897	122,816	none	87
Taunton Branch..... "	12	250,000	none.	307,136	137,406	24,399	8	.....
Vermont and Massachusetts.. "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	21½
Worcester and Nashua..... "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	59
Western..... "	155	5,150,000	5,319,520	9,953,759	1,525,224	746,736	7	97
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	65½
Providence and Worcester.. "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	97
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	129
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	102½
Naugatuck..... "	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.. "	55	750,500	650,000	1,380,610	Recently	opened.	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	57½
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently	opened.	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently	opened.	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna..... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,008,865	33,070,863	4,318,962	1,800,181	7	81½
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	70½
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	57
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	34
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	111½
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	29½
Oswego and Syracuse..... "	35	350,000	201,500	607,803	90,616	43,609	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,777	Recently	opened.	none	.....
Rensselaer and Saratoga..... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington..... "	60	850,000	400,000	1,250,000	Recently	opened.	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently	opened.	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently	opened.	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently	opened.	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,827	106,820	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	80
Philad., Wilmington and Balt. "	98	5,000,000	2,392,166	8,067,235	868,038	541,769	5	80

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina..... S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	115
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River..... Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..... "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..... Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	91
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	161
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,464	12	121
Columbus, Piqua and Indiana..... "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton..... "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	104½
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	.....	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	109½
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	.....	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	.....	.....	.....	.....
Xenia and Columbus..... "	54	1,291,000	300,000	1,257,714	317,000	158,500	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	115
Indianapolis and Bellefontaine..... "	83	.....	.....	.....	.....	.....	.....	87
Indianapolis and Cincinnati..... "	90	1,128,486	1,289,000	1,869,932	.....	.....	.....	72
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru..... "	138	2,647,700	1,241,300	2,400,000	516,414	263,075	10	70
Peru and Indianapolis..... "	40	.....	.....	In prog.	.....	.....	.....	65
Terre Haute and Indianapolis..... "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	1,932,361	500,000	In prog.	473,548	286,152	.....	118
Michigan Southern and Ind. N. Mich. "	315	2,800,000	3,741,564	7,276,616	1,200,922	586,929	17	119½
Michigan Central..... "	232	4,856,700	3,977,563	8,618,505	1,145,598	582,816	8	106
Pacific..... Mo.	33	1,000,000	none	In prog.	.....	.....	.....	.....

Edwin F. Johnson upon the Pacific Railroad.

We have published, and have for sale, E. F. Johnson's recent work upon the Pacific Railroad. Mr. Johnson is admitted to be one of the first Engineers in this country, and his reputation is a good guaranty that the subject under discussion has been thoroughly considered and discussed. The work is illustrated by a large map, showing all the proposed routes, a profile of the Northern Route, a map of the mountain chain traversed by it, and seven lithographic views of various points upon its line. The whole work is elegantly got up, and makes a volume of 176 Pages, Octavo.

Persons wishing to procure copies of the above work, by forwarding one dollar to our address, can have a copy of the same with the maps, forwarded by mail post paid.

Duty on Railroad Iron.

The meeting, to take into consideration the subject of the removal of the duty on railroad iron, notified in our last week's paper, was held on Saturday evening, at the Astor House, in this city. About 30 companies, numbering some of the largest and most influential in the United States, were represented. A committee of five, consisting of Hon. Samuel F. Vinton, Noah L. Wilson, John Striker, George Ashmun, and Henry V. Poor, was appointed to take the matter in charge, who were, by resolution, "requested and empowered to take such measures for the removal of the duty on railroad iron, as they may deem expedient and proper; and especially that by memorial, or otherwise, they cause this subject to be brought before the Congress of the United States at as early a day as practicable."

We learn that the committee have already taken steps to secure the co-operation of the railroad companies throughout the country, without which, there is little prospect that the proposed repeal of the duty can be effected. This done, they will immediately bring this subject to the attention of Congress.

Michigan Central Railroad Co.'s Boats.

The Central Company are building two boats to form their lake connection on the opening of navigation. For size, accommodation and luxurious finish these will surpass anything on Western waters, and the chief points anything now running on the Hudson River or Long Island sound. The length of each of these boats is 348 feet; depth of hold 15 feet; breadth of deck across guards 72½ feet. Engines, 81 inch cylinder, 12 feet stroke and 1500 horse power. Wheel 39 feet face; buckets 11 feet width. There are 127 slate rooms, of which 64 contain double beds.

The engines are building at the Allaire Works of this city. The boats completely finished, are expected to cost \$250,000 each. Their names are *Plymouth Rock* and *Western World*.

Erie Railroad--Change of Officers.

The Superintendent of this road, Charles Minot Esq., has resigned, and will leave his post about the first of May. His place is to be filled, we understand, by D. C. McCallum Esq., of Owego, formerly a Division Superintendent.

We also understand that Mr. McAlpine has virtually left the road, though he may still be nominally in the employ of the company.

East Tennessee and Virginia Railroad.

We have received the fourth annual report of the Directors of this road, and gather from it the following particulars of its progress and condition.

A new organization of the Engineer force has been made, under which M. Lynch is Chief, and Robert L. Owen and Robert C. Morris Principal Assistant Engineers.

Much of the line has been placed on a new location, for the reduction of grades, etc. The work of construction is steadily progressing. The Eastern division from the Virginia line to Bull's Gap, 74 $\frac{3}{8}$ miles, it is estimated can be finished during the present year. The Western division, from Bull's Gap to Knoxville, is about one third graded and the masonry nearly one half completed. The whole road is 130 $\frac{3}{8}$ miles long, and is estimated to cost as follows:

Graduation	\$537,808
Masonry	168,053
Bridge Superstructure.....	72,129
Ties, track laying and contingencies....	120,908

Total for Road-bed, exclusive of iron..\$898,898

The bonds of the State to be issued at \$8,000 a mile, with the successive opening of each 30 miles of the road, are relied on to provide iron and equipments.

The payments made on account of construction, including 20 per cent. retained on work in progress, up to Nov. 24th, 1853, were about \$318,000, leaving \$580,898 to be expended, to prepare the roadway for the iron. The Balance due and means in hand are \$573,658 50; which as \$193,976 of work in hand is made payable in stock, leaves a balance of assets over estimates of \$186,736 50; believed to be sufficient to meet loss upon stock, land damages, and discount upon County Bonds.

The grade of the road is as follows:

Level,	13 miles,	3,249 feet.
0 to 20 feet,	14 "	260 "
20 " 40 "	18 "	3,010 "
40 " 60 "	23 "	1,912 "
60 " 68 "	60 "	5,079 "
Total,	130 "	2,950 "

Two lines have been examined with reference to connections with Norfolk, Va., and Charleston S. C.

One, leaving the E. T. & V. R. R. 6 $\frac{1}{2}$ miles east of Jonesboro' passes to the summit of the Blue Ridge in North Carolina, 60 miles, and thence to Morgantown, Raleigh and to Norfolk; making a line of about the same length as that via the Virginia and Tennessee and Norfolk and Petersburg roads. A saving of 30 miles can be made in the North Carolina route, by a connection of the Central road at Hillsboro with the Gaston road at Henderson N. C.

The other line, looking towards a connection with Charleston, leaves the E. T. & V. R. R. $\frac{1}{2}$ mile west of Greenville, and extends 60 miles to Ashville, N. C. From Ashville to Norfolk, with the Central and Gaston connection before named, the distance is 381 miles, or 20 miles nearer than by the Virginia route. From Ashville, via Spartansburg and Columbia, to Charleston is 324 miles.

Resignation.

John Brough, Esq., has resigned the Presidency of the Madison, Indianapolis and Peru Railroad, and has been succeeded by Dr. E. W. H. Ellis, of Indianapolis.

"Railway Machinery."

We have Parts 21 and 22 of this work, received at the hands of George Falconer, Esq., Agent for Blackie & Sons, 117 Fulton street. We have before expressed our opinion of this work and need say but little more than to reaffirm it. The work presents a consecutive exhibit of the entire structure and principles of the locomotive. It does not deal in *opinions*, nor in vague masses of undigested matter, but in strict principles, and their practical application. It is *authority* for the builder, engineer, master mechanic, operative, and student; and what work can be more? In perfection of execution and profusion of illustrations it ranks above any similar work. With two or three numbers more it is expected to be completed, when there may be greater difficulty than at present in filling complete sets. We invariably advise our engineering friends to procure and study "Clark." The 8th number of the Engineers' and Machinists' Drawing Book is also received by the same agency, in style corresponding with "Railway Machinery."

New Locomotive—"Superior."

With our present issue we give a fine representation of the locomotive engine "Superior," just completed by the New York Locomotive Works, for the Hudson River Railroad, and noticed in another column of the *Journal*. Those who are acquainted with such work, will perceive an excellent combination of favorable features, such as will establish a good reputation for the builders, besides adding materially to the working facilities of the road for which it has been designed and constructed. Very few engines have been built in this country having a better combination of durability, lightness, beauty, and power for high and long continued speed.

Affairs at Erie.

There appears to be good reason to believe that the recent difficulties at this place are in a fair way of being satisfactorily disposed of. The Erie and North East Company have changed their gauge as authorized by law. Governor Bigler has recommended that a competent charter be given to the Franklin Canal Company's road, which has a similar gauge. These two roads run to each other, but are not yet allowed to connect, so that cars can run from one to the other. The issue, however, is narrowed down to a single point, and common sense must decide the matter. The absurdity of compelling freight to break bulk, when the two gauges are the same, is too palpable to be tolerated, so soon as reason can have time to exercise her sway. We are happy to announce so favorable a conclusion to this unpleasant controversy.

Pacific Railroad of Missouri.

The balance of this road from the city of Jefferson to the West line of the State, is advertised for letting, as will be seen by reference to another column of the *Journal*.

Grand Trunk Railroad of Canada.

Messrs. D. A. Macdonald, Ronald Macdonald, and A. F. Macdonald have taken the contract for building that portion of the Grand Trunk Railroad from Point St. Charles, at Montreal, to Charlesville—the Eastern boundary of the Township of Osnaburck—extending over a distance of one hundred and ten miles.

Ogdensburg, Clayton and Rome Railroad.

We understand that the two sections in Jefferson County of about thirteen miles in length, which were not put under contract at the first letting, were let on the 16th instant and the whole line of the road is now under contract for grading, masonry, bridging, &c., the whole to be completed by the first of Sept. next and at a cost of less than one million of dollars, being about one hundred and twenty miles in length.

The Contractors are pushing forward this work vigorously having at least one thousand men employed in grading, &c., through the whole of the line.

The subscription to the capital stock is over one million of dollars, the right of way has been to a very large extent secured and depot grounds at the various points have been purchased.

There is no longer believed to be any doubt of the completion of this important enterprise not only important to those residing on the line of the road but vastly important to the citizens and business men of New York City, it being the most direct outlet for freight and travel for Northern New York and a large portion of Canada.

Air Lines.

In the "old countries," crowded with population, railroads are made to conform to the existing state of things. With us it is different. Air line roads are now becoming the great desiderata in America, and the nearest approach to a straight line between any two great points is considered the nearest approach to perfection in railroading, other things being equal. We give below a table of distances on some of the important railroads in the States of New England and New York.

Name of Road.	Length in Miles.	Air Line between Places.	Difference in Miles.	Loss in proportionate Distances.
Eastern Railroad				
Portland to Boston. 105	99	6	1 in 16 $\frac{1}{2}$	
New York & Boston, (air line) Boston to New Haven. 135	120	15	1 in 8	
Boston & New York Central, Boston to New Haven. 158 $\frac{1}{2}$	128	38 $\frac{1}{2}$	1 in 3 1-9	
N. H., Hartford, Springfield & Worcester, Boston and New Haven. 160	120	40	1 in 3	
Western Railroad, Boston to Albany. 200	138	62	1 in 2 2-9	
Central Railroad, Albany to Buffalo. 320	274	46	1 in 6	
New York & Erie Railroad, N. Y. to Dunkirk. 460	304	156	1 in 1 18-19	
That new "air line," the "Boston & New York Central" is thus made up.				
Midland.....			11 miles.	
Norfolk County.....			25 "	
Southbridge & Blackstone.....			22 $\frac{1}{2}$ "	
Thompson.....				
Norwich & Worcester.....			37 "	
New London, Williamantic & Palmer....			13 "	
New Haven & New London.....			50 "	

158 $\frac{1}{2}$ mls.

The distances above given have been taken from the published statement of the companies, and the air lines between these places very carefully calculated by their latitude and longitude on

the arc of the circle of the earth. It will be seen that some of our railroads are very serpentine, and snake-like in their shape, and it is a little curious that the combination of roads, recently christened the "Boston & New York Central Railroad," and which we see designated as an "air line," is actually one of the most circuitous, losing in its course one mile in every 3 1-9 miles of distance, in its efforts to make a straight line between Boston and New Haven.

The straightest railroad in New England, for its length, so far as we are acquainted, is our "Eastern Road." It will be seen that it is only six miles less than an air line, following the cost almost the entire distance, and but for the deviation from its original line, might have been constructed nearly on a straight line.

The road which next comes nearest to an actual air line is the "New York & Boston," and it was upon this that the name of "Air Line" was first bestowed, and it only loses one mile in eight; the "Central," from Albany to Buffalo, being next in perfection of distance as it loses one mile in every six.

People are never content till they can reduce the time, and the cost, of travel, to its lowest unit. —State of Maine.

Railroads in Missouri.

"If we are not deceived, our Railroads look now in a better condition than at any period since their commencement. We have stated elsewhere, that the Pacific Railroad Company has determined to put under contract the whole of the line of that road from Jefferson City to Jackson county. Contracts have already been made for the line to Jefferson City, and men are actively engaged upon it. By the time the spring fairly opens, the company can have the whole of the balance under contract.

But we are glad to see that the Directors have gone an important step further. They have resolved to commence the construction of the entire South Western Branch, from Franklin to the boundary of the State in that direction; and for that purpose have directed its offices to contract with a New York Company for the building of the whole road. We are given to understand, that this Company have great experience in the business, that their financial arrangements will justify them in the undertaking, and that, on the other hand, it is a fair and equitable bargain for the Railroad Company. The public are aware that the Company own 1,200,000 acres of land on the route of this road, which must be greatly enhanced in value as the road progresses, and will of itself furnish a very large portion of the funds necessary for the ultimate payment of the cost of the work.

The North Missouri Road and the Iron Mountain Road, we have the best reasons for believing, will soon be under contract for their entire length, and then we shall be able to see the true workings of the system of Railroads which have been devised in this State. We shall have nearly one thousand miles of Railway under contract—running into, and developing the best parts of the agricultural and mineral resources of the State.—They will bring a large amount of capital from abroad, to be employed in the construction of the works: they will afford, employment for thousands of laborers, and a market for the surplus products of the farmer, on each line of road: they will justify, and require the introduction of locomotive and car factories in our city, and in hundreds of ways contribute to our growth and population.

While these works are going on in Missouri, there are several others in which we have a direct interest, which are progressing very fairly, and promise to be pushed with even greater rapidity. We allude to those terminating opposite to our city, at Illinoistown. The Ohio and Mississippi road is now open for more than twenty miles, and trains are running regularly for that distance; while nearly the whole of the route to Vincennes is graded and ready for the rails. They are being laid as rapidly as possible, with the certainty of being able to complete the whole distance—

160 miles—before the close of the present year.—The road from Illinoistown to Alton, it is calculated, will be built in the same time; and there are others in prospect—depending on the action of the Illinois Legislature—which will, with those we have already enumerated, open up to us avenues of communication in every important direction of this great Republic. We rely upon the interest, the perseverance and the go-ahead spirit of the Directors of the several Companies to carry out these projects. Now is the time to show what stuff they are made of. We hope, and believe, that they will be equal to the crisis.—St. Louis Republican.

Illinois Railroads.

The Chicago Democratic Press of the 31st of January, gives the annexed table of railroads that are now, or will be in operation, on the 1st of July 1855, in the State of Illinois:

RAILROADS OF ILLINOIS.

	Miles.
Chicago and Milwaukee.....	90
Illinois and Wisconsin to Janesville.....	88½
Madison Branch.....	35
Galena and Chicago Union, Chicago to Freeport.....	121
Fox River Valley Railroad.....	30
Beloit Branch of the Galena.....	20
Beloit and Madison.....	47½
Chicago and Galena Air Line.....	135
Lyons Iowa Central to Iowa city.....	73
Chicago, St. Charles and Mississippi Air Line to Oregon.....	95
Chicago and Aurora.....	89
Central Military Tract.....	84
Peoria and Oquawka, Galesburg to Burlington.....	40
Northern Cross, Galesburg to Quincy.....	120
Hannibal and St. Joseph Railroad.....	205
Chicago and Rock Island Railroad.....	181
Mississippi and Missouri, first division to Iowa city.....	57
Mississippi and Missouri, second division to Muscatine.....	30
Mississippi and Missouri, third division Muscatine to Cedar Rapids.....	50
Peoria and Bureau Valley.....	47
Chicago and Mississippi Railroad.....	265
Great Western, Naples to Springfield.....	65
Illinois Central.....	704
Fort Wayne and Chicago.....	145
Michigan Southern and Northern Indiana, to Toledo.....	242
Cincinnati, Peru and Chicago Railroad.....	70
Michigan Central Railroad.....	282
New Albany and Salem Railroad.....	284

Total, 12 trunk, 16 branch extens'n lines.. 3,745

The following table exhibits the number of railroads that are now in operation leading into this city, with the number of miles that are now completed:

	Miles.
Illinois and Wisconsin, to Deer Grove.....	32
Galena and Chicago Union, to Freeport.....	121
Beloit Branch of the Galena.....	20
Galena Air Lane, to Line, Ogle county.....	75
Chicago, St. Charles and Mississippi Air Line.....	10
Chicago and Aurora.....	89
Chicago and Rock Island to Geneseo.....	153
Chicago and Mississippi, Alton to Bloomington.....	132
Great Western, Naples to Springfield.....	65
Illinois Central.....	245
Michigan Southern and Northern Indiana, to Toledo.....	242
Michigan Central.....	282
New Albany and Salem.....	155

Total, 10 trunks, 8 branch and extens'n lines, 1,626

On these roads will be daily leaving and entering the city, on the first of May next, forty-six trains, making in all ninety-two trains per day over the roads to accommodate travel and commerce. Less than two years ago we had only one

railroad entering the city—the Galena and Chicago Union—and that was finished only a few miles. Now we have 1,621 miles, counting only two States from our own, and by the first of December we shall have 2,075½ miles.

Public Works of Pennsylvania.

The following is a recapitulation of a statement prepared by the Auditor General and State Treasurer of the total cost, revenue and expenditures of the public works to the close of the last fiscal year, Nov. 30th, 1853. As the question of the sale of these works is now before the people, the facts will have a peculiar interest:

Lines.	RECAPITULATION. Cost.	Revenues.	Expend's.
Columbia and Phil. R. R.....	\$5,277,278	\$9,020,273	\$5,860,291
Eastern Divis. Canal.....	1,737,285	2,932,571	862,936
Janiata Divis. Canal.....	3,575,966	1,496,429	1,950,657
Allegheny Port. R. R.....	2,708,672	3,520,407	4,014,788
Western Div. Canal.....	\$,173,432	2,812,312	1,340,535
	\$16,472,684	\$19,781,999	\$14,029,241
Main Line. Delaware Divis. Can. Susquehanna Canal.....	1,454,936	2,746,650	1,223,301
North Branch Canal.....	897,160	475,254	605,990
West Branch Canal.....	1,598,379	1,374,258	799,775
	1,832,583	573,336	815,218
	\$22,255,694	\$24,951,501	\$17,473,626
Lines in Operation. French Creek Division of Canal.....	817,779	5,819	143,911
Beaver do do.....	519,364	38,312	210,330
	\$23,592,838	\$24,995,633	\$17,827,853
Finished Lines. Unfinish'd improvements Board of Can. Commis'rs.....	8,093,044		
Board of Appraisers.....	78,962		78,962
Collectors, Weigh Masters & Lock-keepers.....	17,584		
			1,540,793
	\$32,542,267	\$24,995,633	\$19,447,653
Amount received at the State Treasury from sales of public property belonging to the publ. improv'm's State printing chargeable to the publ. improv'm's.....		346,387	
Amount paid for use of pat't rights.....			6,400
Miscellaneous.....			12,000
Total.....	\$32,542,267	\$25,342,020	\$19,499,857

If it be desired to connect with those expenditures the amount paid for interest on the loans pertaining, directly or indirectly, to the public improvements, the aggregate amount of the said

interest, to the close of the fiscal year 1853, may be stated at \$35,137,796 13.

GUARANTEED INTEREST.

Danville and Pottsville Railroad Co.	\$221,076 53
Bald Eagle and Spring Creek Navigation Company.....	157,532 47
Tioga Navigation Company, (now Railroad Company).....	61,647 16
Codorus Navigation Company, (guaranteed loan).....	6,000 00

\$446,256 15

The length of the Columbia and Philadelphia railway, when built, was 82 miles; the Eastern Division of the Canal, 45 miles; the Juniata Division, 128 miles; the Allegheny Portage Railway, 36 miles; the Western Division, 103 miles; the Delaware Division, 60 miles; the Susquehanna Division, 41 miles; the North Branch Division, 73 miles; the West Branch Division, 76 miles; the French Creek Division, 49 miles; and the Beaver Division, 30 miles.

The unfinished improvements cost as follows:

North Branch extension of Canal.	\$4,037,442 45
West Branch do. do.	353,574 78
*Erie do. do.	3,196,148 70
†Wisconsin feeder.....	393,440 71
Allegheny feeder.....	31,591 56
Gettysburg extension of railroad....	682,846 45

\$8,695,044 65

Cincinnati, Hamilton and Dayton Railroad.

From the Cincinnati Enquirer, Feb. 22d.

But a few days ago we published a statement of the amount of receipts for the past six months, and compared them with the receipts for the previous six months, showing an increase that keeps up with progressive spirit of the age. Those receipts, according to the figures, go to show that the Cincinnati, Hamilton and Dayton railway, during the past year, has done a large business, and from all the data we can procure, we should say that the prospects for the coming year were very flattering.

Five years ago, when the project was started of building a road up the Great Miami valley, its friends were thought over sanguine in saying that within two years after its completion, three hundred passengers a day would be transported over the road. Two years have elapsed since the road was finished, and the average per day of passengers is eleven hundred, and the freight earnings are equaling those of the passengers. Judging from the past, it will not be extravagant to say that within two years from this time, the average number of passengers per day will reach two thousand, and perhaps exceed that.

This large travel, we all know, is three-fourths local to the valley. The timidity of the farmers along the line, naturally felt on the first opening of the road, is fast, we find, wearing off, and now the young and the old do up their visiting and courting by steam. So successful has been the management of the running trains, that not a single passenger has been killed. Since the opening of the road, the curious, on examination, will see that the machinery appertaining thereto is of the best and safest kind, and will compare favorably with any other road in the United States. The character of the road itself we are all familiar with. It has cost more than most Western roads, but every dollar appears to have been well expended, and we have a road built for permanency. Its commanding position, as a trunk road, through the richest and most populous valley of the West, required that it should be well built, on grades and lines approaching straight and level. This, we are satisfied, has been done, and the road is referred to as a model for the West.

Its position, as relates to injurious competition, is *impregnable*. Besides the great local travel immediately on the line, such permanent, perpetual and exclusive business connections have been

made with other roads, as to render it certain that its double track, when completed, will be fully and profitably occupied. We have taken some pains to post ourselves up, and will mention a portion of its leading railroad connections.

1st. With the Indianapolis, Terre Haute, Lafayette, etc., these junction roads of the same gauge, running from Hamilton through the oldest settled portion of Indiana.

2d. With Chicago, through the Hamilton and Eaton, Richmond and Miami, Richmond and Newcastle, and Logansport and Chicago roads, all of an uniform gauge with the Cincinnati and Hamilton road.

3d. With Fort Wayne, through the Twin Creek, Greenville and Miami, and Cincinnati, Union and Fort Wayne Railroads, also of uniform gauge.

4th. With Toledo, through the Dayton and Michigan road, terminating at Dayton with unbroken gauge.

5th. The Sandusky and Cleveland, through the Mad River and Lake Erie, and Cleveland and Toledo roads.

To form these connections, the C. H. & D. railroad has been called on for liberal subscriptions, and we believe they have been judiciously made.

In addition to the business which the road now has, a large accession may be expected from Pittsburg and Philadelphia, via the Ohio and Pennsylvania, and Ohio and Indiana roads, which connect with the Mad River and Lake Erie road at Patterson, or Forest, a point some 70 miles south of Sandusky.

So soon as the Lake opens, those noble steamers, the *Mississippi* and *St. Lawrence*, will be in line, presenting to the traveller, east from Cincinnati, via the C. H. & D., and M. R. & L. E. roads, a route, which, for comfort and speed, is not surpassed. During this winter, we are informed alterations have been made in the shafts of these steamers, which must greatly increase their speed.

The opening of the Great Western road, from Detroit to Niagara Falls, through Canada, will doubtless this year, from its novelty, attract much pleasure travel, via Sandusky. Leaving Cincinnati in the morning at 6 o'clock, the traveller will reach Detroit at 6 P. M., and after a pleasant night's rest, and a few hours spent in seeing Detroit next morning, depart for the Falls, which he will reach in ten hours.

These are facts which cannot be subverted, as they must be familiar with all who have watched the progress of events in railroad matters; and we do therefore feel, as one of the press, that we are doing no more than justice to the road, and to the public, to keep them before the people.

We have some other matters in relation to the local interests of the aforesaid road, which we shall give as soon as the spring opens, and a special privilege is granted us of taking a ride over the same.

Comparative Statement of the Earnings of the Cincinnati, Hamilton and Dayton Road, for 12 months, ending January 31, 1854.

	1852-3.	1853-4.	Increase.
February.....	14,270.50	27,399.76	13,119.26
March.....	19,067.29	35,364.68	16,297.39
April.....	20,481.28	36,051.83	15,570.55
May.....	22,701.15	35,061.10	12,359.95
June.....	24,096.15	32,302.93	8,206.78
July.....	26,301.15	34,283.47	7,982.32
August.....	25,001.27	40,085.89	15,084.62
September (State Fair).....	29,138.15	50,385.23	21,247.08
October.....	30,001.60	38,085.82	8,084.22
November.....	27,615.82	36,812.98	9,197.16
December.....	54,833.09	41,268.51	17,435.42
January.....	29,545.36	41,519.91	11,974.55

292,062.81 448,532.11 156,464.30

Increase \$156,469.30—nearly 54 per cent.

Number of Passengers carried 1852-3.... 223,574

" " 1853-4.... 328,986

105,411

Commutation and discount passengers not embraced in this above.

General Railroad Law of Ohio.

As Railroad Companies are about being organized under the General Railroad Law of Ohio, it is of interest to know the constitutional provisions applicable to such. We copy, therefore, the 13th article of the New Constitution of the State, relating to *Corporations*, upon which is based the general Railroad law of the State.

ARTICLE XIII.

SEC. 1. The General Assembly shall pass no special act conferring corporate powers.

SEC. 2. Corporations may be formed under general laws; but all such laws may, from time to time, be altered, or repealed.

SEC. 3. Dues from corporation shall be secured, by such individual liability of the stockholders, as may be prescribed by law; but in all cases, each stockholder shall be liable, over and above the stock by him or her owned, and any amount unpaid thereon, to a further sum, at least equal in amount to such stock.

SEC. 4. The property of corporations, now existing, or hereafter created, shall forever be subject to taxation, the same as the property of individuals.

SEC. 5. No right of way shall be appropriated to the use of any corporation, until full compensation therefor be first made in money, or first secured by a deposit of money, to the owner, irrespective of any benefit from any improvement proposed by such corporation: which compensation shall be ascertained by a jury of twelve men, in a court of record, as shall be prescribed by law.

The above provisions, as far as they relate to the *personal liability* of the stockholders, apply to no company chartered prior to Sept. 1, 1851.

Schuylkill Coal Trade.

The following is a summary of a table contained in the columns of the Pottsville Miners' Journal, embracing all the collieries in the Schuylkill Coal Region, up to June, 1853, except two collieries on the Lorberry Creek Railroad, Messrs. Wheeler & Miller's and Greenawalt & George's. Messrs. Wheeler & Miller shipped last year 12,447 tons, and Greenawalt & George 692 tons. There is about two miles of underground railroad in the Lorberry Creek region, not in the table. From this chart we sum up the following information:—

Total number of Collieries.....	113
Red Ash do.	58
White Ash do.	55
Number of operators.....	82
Under ground Railroads, miles.....	124 1/2
Of which through solid rock, do.....	6 1/4
Steam engines employed in mining.....	201
Aggregate horse power.....	7,071
Equal to man power.....	42,426
Power for hoisting and pumping, horses....	3,805
For pumping only, do	1,375
For breaking and screening coal, do	1,891
Miners and laborers employed at collieries..	9,792
Horses.....	468
Mules.....	569
Miners' houses out of towns.....	2,756
Whole capital invested in these collieries...\$3,-	462,000
By individual operators, about.....	\$2,600,000
Deepest slope, yards.....	353
Shortest do.....	33
Thickest vein, worked at Hecksherville, feet...8	
Smallest do.....	2

We have also gleaned the following from this table:—All the coal lands now worked in the county are owned by six corporations and sixty individuals. About twenty-five of the owners reside in Schuylkill county, and the balance abroad. The proportion belonging to residents is small compared to that owned by persons residing abroad. In looking over the names of the owners in the table, it may appear doubtful whether

* Transferred to Erie Canal Company.

† Transferred to Wisconsin Canal Company.

these landowners possess the ability to make the necessary improvements for working their coal lands, without acts of incorporation.

Not one solitary ton of coal was mined by any corporation in Schuylkill county during the year 1853—the whole product of two millions five hundred and fifty-one thousand six hundred and three tons was mined by individuals.

The coal rent will average about 30 cents a ton. The product of 1852, in Schuylkill county, was 2,551,603 tons. This would give an income of \$765,480 to the landholders, in the shape of rents for the year.

Housatonic Railroad.

The annual meeting of the Housatonic Railroad company was held at Bridgeport on Wednesday. The following figures were reported, which show an increase of \$37,000 in receipts over last year. The freight has paid \$24,000 over any previous year. The whole receipts are as follows:

Passengers.....	\$108,861 22
Freight.....	207,302 16
Mails.....	5,142 84
Rents, etc.....	8,534 13
Total.....	\$324,990 35
Expenses.....	207,502 40

Net earnings.....\$121,497 94

From the apparent amount of net earnings must be deducted the rents paid to the Berkshire and Pittsfield and Stockbridge Railroads, (about \$74,000,) some \$10,000 paid in the adjustment of claims against the company for damages in past years, with an equal or larger amount of expenditure occasioned by the freshets in August and November last. Aside from this, the purchase of new engines and cars has been found necessary, in order to carry on the business of the road to advantage. Of course there is no prospect for a dividend under such circumstances. Morris Ketchum, of New York, was appointed a Director, vice Mr. Plunkett resigned.

Toledo and Indianapolis Railway.

We publish to-day the proceedings of the first meeting of this new company, lately organized under the General Law of the State. The Ohio portion of the line, from a point near New Corydon to Toledo, is already organized and acting most efficiently, and in co-operation with this Board. The road is intended to complete a direct line of railway, from our city to the nearest point of shipment on Lake Erie, about 185 miles distant; and to afford for freight especially, the shortest and easiest route to water carriage.

The intention is to connect, if possible, with the Indianapolis and Bellefontaine Railroad from this place to Muncie, 54 miles, and from thence to go directly toward Toledo, striking and connecting with one of the railroad lines (of which there are at least two), in Ohio, making out from Toledo, in this direction. The new road is to be made of the same gauge as the Indianapolis and Bellefontaine, and to continue that gauge to the Lake without transhipment.

It is believed that the new road to be made by the Ohio and Indiana Companies need not exceed 75 miles in length, probably less.

Arrangements, we understand, are already making to extend the Knightstown Railroad from its present terminus at Knightstown through New Castle to Muncie, and there connect with this new line. Such an extension will afford to Madison and Louisville probably as short and advantageous a route to Lake Erie as can be had. All these things considered, the Toledo and Indianapolis Railway must evidently be a very important line to our city and to the country, and its connections here with the South-western Railway, of which in fact it is a Northern extension, thus forming a direct line from Lake Erie to Vincennes and the mouth of the Ohio, and in the way to New Orleans, as well as to St. Louis, would seem to place the question of its value and its success beyond all doubt.

As such a line, we commend it to the attention

of the people, and we are satisfied that the affairs of both of these roads are in the hands of men who will administer them well and faithfully, and who will build them as economically as possible.—*Indiana State Journal.*

Charlotte and South Carolina Railroad.

The earnings of this road for the fifteen months from October 1st, 1852, to December 1st, 1853, have been as follows:

From Freights.....	\$162,639 25
Passengers.....	77,679 46
Mails.....	8,975 83
From other sources.....	738 00
	\$250,032 54

For errors and deductions.....365 26

\$249,667 28

For current expenses of road.....	\$143,464 97
For interest on bills payable.....	157 29
Coupons due on bonds July 1, 1853.....	9,651 00
Coupons due on bonds January 1, 1854.....	10,850 00
Which deduct.....	164,123 66

From income leaves a dividend fund of.....\$85,544 02 for the past fifteen months, out of which two dividends, of two and a half per cent. on the capital stock of the company, amounting to fifty-eight thousand dollars (\$58,000) have been declared, and leaves the balance of the fund, \$27,544 12, to be carried to the construction account.

The amount expended in the construction of the road to the 31st December, is.....	\$1,580,637 66
There is still due for graduation, etc.....	\$3,063 28
There is still due for timber.....	1,870 44
There is still due for buildings.....	1,015 00
There is still due for cars.....	4,238 00
There is still due for engines.....	17,961 43
	28,128 35

\$1,608,766 01

The amount still required to build the engine houses at Columbia and Charlotte, and freight and passenger house at the latter, is.....60,306 89

\$1,669,162 90

Southern Railroad.

We are greatly gratified to be able to state that the important contract entered into between Mr. Thomas A. Marshall, the President of the Southern Railroad, and a responsible and energetic company in the North, for the construction and complete equipment of the whole road from Brandon to the Alabama State line, was, on Saturday last, confirmed and ratified in every respect, by a full meeting of the Board of Directors of said road, held in this city. We have before said that this contract is, in our opinion, a most satisfactory and advantageous one, and we learn that it meets with the approbation of all who are interested in it who have made themselves acquainted with the terms of it. It also gives us pleasure to say that Mr. Marshall, the President, will at all times cheerfully give to stockholders and city taxpayers interested, information in detail in relation to the contract and the progress of the work. Now that this contract has been consummated, we confidently predict that we will be in railroad connection with Alabama in less than two years and a half, and with the Atlantic cities in a very short time thereafter. Success to the great work.—*Vicksburg Whig.*

Black River and Utica Railroad.

On the 24th December, 1853, the Statistics of the Road were as follows:

Capital Stock as per charter.....	\$1,500,000 00
Amount of Stock subscribed.....	1,091,000 00
Amount of Capital Stock paid in....	129,070 00

Cost of road.

For Graduation and Masonry.....	\$26,550 00
For Superstructure including Iron....	6,409 63
For Land and Land Damages.....	8,192 00
For Engineering and Agencies.....	12,281 04

\$53,432 67

Since the above report, there has been paid to Contractors, on their estimates for December, \$20,000 00, and the Iron contracted for, sufficient to complete the first 20 miles, which will be ready for use early in June.

The Black River and Utica Railroad Company, was organized on the 29th of January, 1853, to construct a railroad from the City of Utica, north through the counties of Oneida, Lewis and Jefferson, to the village of Clayton, on the River St. Lawrence. Articles of association were filed in the Secretary of State's office, on the 31st of January, 1853.

A corps of Engineers was immediately organized under the direction of Daniel C. Jenne, Esq., as Chief Engineer, surveys commenced and pressed forward with all diligence, until the whole line was located, and put under contract on the 11th of August, to Messrs. J. S. T. Stranahan, Samuel Farwell, Charles G. Case, James G. Lund and Josiah W. Baker, to be completed by the first of July, 1855. The grading on the first 16 miles was commenced about the first of September, and has been progressing rapidly since that time, and will be completed so as to run cars to Trenton Falls, by the first of June, 1854. Other portions of the Road are also in progress.

Cincinnati, Hamilton and Dayton Railway.

We give below a short statement of the Cincinnati, Hamilton and Dayton railway, having reference to the business of the road for the past six months. The earnings of the road for the month ending 31st January, 1854, were—for

Passengers.....	\$19,625 71
Freight.....	19,819 45
Mail and Express.....	2,074 75

\$41,519 91

Corresponding month last year.....29,645 36

Increase.....\$11,974 55

The earnings for the six months ending

Jan. 31, 1854, foot up.....248,158 34

Corresponding six months last year....165,145 29

Increase.....\$83,013 05

The above shows a vast increase in the receipts of the road, and when we take into consideration that all the necessary expenditures have been made, we cannot wonder that the stock is in such high repute and good demand.

Columbia Railroad.

BUSINESS FOR 1853.

The increase of business on the Columbia Railroad for the past year over 1852, was 24 per cent. The increase of 1854 over 1853 is estimated at 22 per cent., or 484,000 tons.

The gross receipts for the past year were.....	\$786,127 31
Total expenditures, including new engine, &c.....	405,582 99

Net profit.....\$380,544 32

The net profit is equal to nearly 8 per cent. on the original cost of the road, \$4,791,548 91. Deducting the expense of new locomotives, machinery, &c., the net profits for the year would be \$466,637 64 or nearly 9 3/4 per cent., on the cost of construction and equipment, as reported in 1852. The reduction of toll on the through tonnage equaled 30 per cent. on the whole business. The Superintendent says that after the completion of the south track the road will pay at least 12 per cent.

Marietta and Cincinnati Railroad Company.

The consolidation of the Hillsboro road with the above, which will result in the building of but one road through southern Ohio, instead of two, as was proposed, has had a favorable effect upon the market value of the securities of the above company, which may be now regarded as of the "first class." The road not only occupies an excellent line for business, but has a stock subscription unusually large for any part of the country. The stock is made up as follows:

Central Pennsylvania Railroad Company.....	\$750,000
City of Wheeling.....	250,000
City of Marietta.....	100,000
City of Chillicothe.....	50,000
County of Ross.....	300,000
County of Washington.....	200,000
County of Athens.....	200,000
Town of Harmar.....	50,000
Individual Stockholders.....	1,715,000

\$3,615,000

To this may be added a loan by the city of Cincinnati.....	150,000
Donations of Depot grounds, lands, etc.....	150,000

\$3,915,000

The subscriptions of the Pennsylvania Railroad Company, and the various municipal bodies, have realized very nearly their *par* value. The company propose to issue \$2,500,000 of bonds based upon the entire cost of the road. Of these, one-half have been already sold. The whole cost of the road will be about \$6,000,000. The total length 257 miles.

In addition to an ample local business, the road must, from its position, become one of the great trunk lines between Cincinnati, and Baltimore, Philadelphia and New York. The subscription made by the Pennsylvania Railroad Company shows the importance attached to the Marietta line by the former company. The road is equally indispensable to the Baltimore and Ohio railroad, and in fact to the Virginia Central which is now being pushed forward to the Ohio.

The following extracts from a document recently published by the company, will give a correct idea of the state and progress of the work, route of the road, its resources, connections, etc., etc.

Upwards of three millions of dollars of the above subscriptions have been paid in—and over two and a half millions of dollars have actually been expended in the work. Near 6,000 men were employed in the work during the Autumn, and upwards of half the force will be continued during the Winter, with the intention of doubling it again in the Spring.

The entire line from the Hillsboro' Road to the Jackson Coal Fields, is graded, being a distance of seventy-seven miles, twenty-five miles of which will be opened for business this day, and the iron rails are being rapidly laid, and will be completed by Spring, on fifty miles more, being from the junction with the Scioto and Hocking, to the Hillsboro' Railroad. The grading, masonry and bridging between Marietta and the coal fields, is half completed. The residue of the line from Marietta to Wheeling, was placed under contract in July last, and is rapidly progressing. The directors are expecting to complete the entire line within the present year.

Upwards of 11,000 tons of rails have been purchased and paid for, the cost of which was at least \$300,000 less than the same can now be purchased.

This entire line of road occupies an exceedingly favorable position, and is an important link in the great central chain of railways from New York, Philadelphia and Baltimore to Southern Ohio, Kentucky, Tennessee and the other Southwestern States, and will ultimately form a portion of the shortest and most direct route from the three great Atlantic cities to Cincinnati, the great commercial city of the Mississippi Valley.

It traverses a region of great fertility, and portions of it densely populated, having no other outlets to market. It penetrates perhaps the richest mineral region in the United States, coal and iron ore abounding along its course in Jackson and other counties, sufficient to supply a whole continent for ages.

The Geological Report of that State, made under official sanction, says that the estimated quantity of coal throughout Jackson and the adjacent County of Scioto, is equal to nine millions of tons per square mile, easily mined and of superior quality, much of it being cannel coal of the best quality.

The iron ore is of good quality and exists in the same districts to the extent of three millions of tons per square mile. This mineral wealth has heretofore been of little value, for want of the means of transportation to market.

The Ohio River, parallel with the general course of the road, is subject to such frequent and complete interruptions from ice and low water, that it cannot be regarded as a competitor, only in its high stages. This road shortens the distance between Cincinnati and Marietta 120 miles. It takes steamers from 40 to 50 hours to run it; by rails it will be 6 hours.

At Belpre, this line connects with the Baltimore and Ohio Railroad, now being made down to Parkersburg, on the opposite side of the river. At Wheeling, it connects with the same road, and the Hempfield, making the route direct to Philadelphia.

We see no reason why the above road may not become one of the most productive works of the kind in Ohio.

Pittsburgh and Connelsville Railroad.

Portions of this road, which would more properly be called the Pittsburgh and Cumberland Railroad, are advertised for contract. Among other work is a long tunnel which is well worth attention by contractors.

To Railroad Contractors.

OFFICE PITTSBURGH AND CONNELLSVILLE }
RAILROAD COMPANY. }

SEALED proposals will be received at the office of this Company, at Neville Hall, in the City of Pittsburgh, until 5 o'clock p. m., of Wednesday, the 22d day of March next, for the Graduation and Masonry of that part of the Pittsburgh and Connelsville Railroad extending from West Newton, in Westmoreland Co., to Connelsville, in Fayette Co., this State, a distance of 25 miles. This work is generally of a very light character. It will be divided into sections of about 1 mile each. Proposals will be received for one or more sections.

Proposals will also be received until the same time for the making of the Tunnel at the Sand Patch Summit, on the Alleghany Mountains, about 25 miles from Cumberland.—This Tunnel is to be forty-one hundred feet in length, through rock. The work is worthy the attention of the best contractors. It is an excellent region to do work cheaply.

Maps, Profiles and Specifications will be ready for the examination of bidders on and after the 6th day of March next, and all proper information given on application to Oliver W. Barnes, Chief Engineer, or the Assistant Engineers on the line.

Satisfactory testimonials will be expected from Contractors not known to the Company. By order of the Board.

W. LARIMER, JR., President,
Pittsburgh & Connelsville R. R. Co.

Notice to Contractors.

EUROPEAN & NORTH AMERICAN RAILWAY
NEW BRUNSWICK.

PROPOSALS will be received by the undersigned at his office, Princess street, St. John, N. B., up to the 5th day of April 1854, for the entire construction of that portion of the Eastern Division of the above Railway extending from the crossing of the Road from Scheldiac to Dorchester to the Bend of the Petitcodiac River being a distance of about twelve miles, comprising the Grubbing, Grading, Masonry, Bridging, and the Ballasting and Laying of the permanent Road.

The work will be divided into two sections which being adjacent to others to be proceeded with on their completion, is well worthy the attention of Contractors.

Proposals may be made for one or both sections and with or without the permanent Road and Ballasting.

Plans and Specifications will be ready for the inspection of bidders on and after the 5th day of March at the above office where all other necessary information may be obtained.

W. E. ROSE.

St. John, N. B., 27th Feb'y 1854.

Important to Railway Co's.

A **GREAT** improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

Knox & Skain,

MANUFACTURERS OF
LEVELS, TRANSITS AND SURVEYING
COMPASSES.

No 72 Dock st. first door south of Walnut, west side
PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Railroad Iron Via Quebec.

JOHN ANDERSON & CO.
COMMISSION MERCHANTS,
SHIPPING AGENTS AND BROKERS,
Quebec and Montreal.

PARTICULAR attention given to the Transhipment of Iron, &c., in Transit for the Western Lake Ports, and to the Shipment of Rails in Great Britain.
Quebec, Dec. 2, 1853.

To Contractors.

PACIFIC RAILROAD OF MISSOURI,
THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.
THOS. S. O'SULLIVAN, Chief Eng.
Pacific R.R. Office, St. Louis, Feb. 1854.

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.
WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their SYSTEM OF LOCOMOTIVE ENGINES in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture *Five different kinds of Engines* and several classes or sizes of each kind.

Particular attention paid to the strength of the machine in the plan and workmanship of all the details. Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowling Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

Notice to Contractors.

SEALD PROPOSALS will be received at the Office of the undersigned in Indianapolis until the 15th day of March next, for the Grading, Masonry and Bridging of that portion of the Indiana and Illinois Central Railway, between the West line of Edgar County and Decatur Illinois, being for a distance of about 53 miles.

The Map and Profiles together with the Plans and Specifications, will be ready for inspection at the Office of the Company in Decatur on and after the 1st day of March.

Any further information may be obtained at the Office of the undersigned in Indianapolis.

M. C. STORY & CO.

Indianapolis, February 7th, 1854.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
 ILLINOIS CENTRAL RAILROAD.
 Vandalia, Ill.

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of

Bolts and Bolt Ends

for Sale by
 BRIDGES & BROTHER,
 64 Courtland st., N. Y.

**To Railroad and Canal Co.'s,
Contractors, &c.**

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics, &c. of any description, and also to inform them that they forward such men to whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.
 No. 55 Greenwich street, New York.

New York and Erie R. R.**PASSENGER TRAINS**

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the B. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAY EXPRESS, at 12½ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAY PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.

These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

CHAS. MINOT, Supt.

Railroad Iron.

2000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and "Crawshaw" manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by
 P. CHOUTEAU, Jr., SANFORD & CO.,
 December 4, 1852. No. 51 New street.

To Contractors.**CONSTRUCTION OF THE NORTH SHORE RAILWAY.**

THE Directors of THE NORTH SHORE RAILWAY, from Quebec to Montreal will receive tenders for the construction of said Railway or sections thereof from this to the fifteenth day of March next.—For information, &c., apply personally or in writing to the undersigned.

HECTOR L. LANGWIN,

Sect'y. & Treas. N. S. R. C.

Quebec Feb. 14, 1854.

Buade St., Quebec.

OFFICE CINCINNATI, HAMILTON & DAYTON R. R. Co.
 CINCINNATI, Feb. 14, 1854.

THE Directors have this day declared a dividend of Five per Cent. on the capital stock of this Company, payable at the office of the Company in Cincinnati on and after the 25th inst., till which time the Transfer Books will be closed; and at the Ohio Life Insurance and Trust Company's Office in New York, on and after the 15th Proximo. By order of the Board.

FRANK. S. BOND,
Sect'y.**Passenger Cars for Sale.**

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Rail Road Letting.

PROPOSALS will be received at the Office of the Company in the City of Evansville, Indiana, until 6 o'clock, P. M., of Wednesday, 15th day of February, 1854, for the Grubbing, Grading and Bridging of that part of the 1st Division of the EVANSVILLE, INDIANAPOLIS, AND CLEVELAND STRAIGHT-LINE RAIL ROAD,

Extending from Evansville to the Crossing of the Ohio and Mississippi Rail Road, in Daviess County, a distance of fifty-four miles.

The work will be divided into sections of about one mile each, and proposals will be received for one or more sections, or for the whole line.

Maps, Profiles and Specifications will be ready for the examination of bidders on and after the 1st of February, and all necessary information given on application to W. C. MOORE, Chief Engineer.

O. H. SMITH, PRESIDENT,
W. CARPENTER, VICE PRES.

Evansville, Jan. 2, 1854.

Railroad Letting.

PROPOSALS will be received by the undersigned at the Engineer's Office, Dover, Delaware, until March 14th, inclusive, for the Graduation, Masonry and Superstructure of the DELAWARE RAILROAD, extending from the New Castle and Frenchtown Railroad to Seaford, a distance of 70 miles, through a healthy region, and convenient to procure hands and supplies.

The work will be divided into sections of about 4 miles each.

Maps, profiles, and specifications will be ready for the examination of contractors, after the 1st of March.

Bidders personally unknown to the undersigned, will be expected to produce satisfactory evidence of their responsibility.

D. H. KENNEDY,
Resident Engineer.

feb.18-1m14

Valuable**Engineering and Mechanical Works,**

IMPORTED and FOR SALE by
 JOHN WILEY, 167 Broadway.

DEMPSEY'S PRACTICAL RAILWAY ENGINEER. 1 vol. 4to, with 50 Engravings, bound in half Morocco.	\$11.00
SCOTT'S ENGINEERS' AND MACHINISTS' ASSISTANT, 2 vols. Quarto....	20.00
TREDGOLD on the LOCOMOTIVE ENGINE, half calf.....	15.00
" on the MARINE ENGINE, half calf.....	24.00
" on the STATIONARY ENGINE, &c., half calf.....	24.00
TREATISE on the STEAM ENGINE by the Artizan Club.....	6.00
WEALE'S THEORY, PRACTICE and ARCHITECTURE of BRIDGES, 3 large vols., half bound.....	25.00
" SUPPLEMENTARY VOL. (just published), half bound.....	14.00
TRAUTWINE on RAILROAD CURVES, turk.....	1.00
" on EMBANKMENTS AND EXCAVATIONS.....	1.00
WILMES' HANDBOOK of PLAIN and ORNAMENTAL MAPPING, and Engineering Drawing, for Civil and Mechanical Engineers.....	7.50
WOOD'S PRACTICAL TREATISE on RAILROADS, 8vo.....	5.00
RYDE'S TEXT BOOK for the USE of ARCHITECTS, ENGINEERS, SURVEYERS, &c. 1 vol Royal 8vo.....	8.50
GREGORY'S MATHEMATICS for PRACTICAL MEN. 8vo.....	6.00
BARLOW on the STRENGTH of MATERIALS and on CONSTRUCTION.....	4.50
LARDNER on the STEAM ENGINE. New Edition.....	2.00
SCRIBNER'S ENGINEER'S, SURVEYOR'S and CONTRACTOR'S POCKET TABLE BOOK.....	1.50
SCRIBNER'S ENGINEER'S and MECHANIC'S COMPANION.....	1.50
BUCK ON OBLIQUE BRIDGES. Illustrated with Plans, &c.....	4.00
EXAMPLES of RAILWAY MAKING. With PRACTICAL ILLUSTRATIONS..	3.50
SIMM'S on LEVELLING and SETTING OUT RAILWAY CURVES. 8vo.....	2.25
SIMM'S on MATHEMATICAL INSTRUMENTS, 8vo.....	2.25
HAUPT on BRIDGE CONSTRUCTION. 8vo.....	3.00
QUESTED'S TREATISE on RAILWAY SURVEYING and LEVELLING. 8vo....	1.75

Together with an extensive assortment of Books in every department of science.

**LAWRENCE SCIENTIFIC SCHOOL,
Harvard University.**

THE next Term of this Institution will open on the second day of March, 1854, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical Exercises, according to the nature of the Study, will be given in:

Astronomy.....	by Messrs. Bond.
Botany.....	" Prof. Gray.
Chemistry, analytical and practical.....	" " Horsford.
Comparative Anatomy and Physiology.....	" " Wyman.
Engineering.....	" " Eustis.
Mathematics.....	" " Pierce.
Mineralogy.....	" " Cooke.
Physics.....	" " Lovering.
Zoology and Geology.....	" " Agassiz.

For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

Cambridge, Mass., January 1854.

Railroad Iron.

1250 TONS Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in June and August, for sale by
BOORMAN, JOHNSTON & CO.,
99 Broadway, New York.

June 9, 1853.

Railroad Iron.

THE "Monroe Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to
THOS. CHAMBERS, President,

September, 1850.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.

VOSE, PERKINS & CO.,
9 South William St.

New York, June 1, 1851.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.

Mayville, Ky., Sept. 29, 1853.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
157 Broadway, New York.

CHARLES B. STUART,
DANIEL MARSH,

EDWARD W. SERRELL,
SAMUEL MOELROY.

Railroad Iron.

3000 TONS superior quality, delivery from April forward, with 5 to 600 tons per month, for sale by
NAYLOR & CO.,
99 & 101 John street
12½

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

JOHN H. HICKS,
99 Beaver street.

2d Feb'y.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West.

W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & CO.
Feb. 18. 1m.

**To Railroad Engineers and
Contractors.**

WANTED, a corps of efficient Engineers and Contractors, for the construction of a Railroad in one of the Southern States. Apply to
DUFF GREEN.

New York, Feb. 14th, 1854.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road, a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerative work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

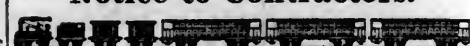
THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
17 Burling Slip, New York.

February 15, 1850.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Norfolk, Va., Jan. 8, 1854.

SEALED PROPOSALS will be received by the undersigned at this Office, from the 1st until the 20th day of March next, at sundown, for the "clearing" and "Graduation" on the line of the "Norfolk and Petersburg Railroad," between that portion of said road now under contract, and its terminus at Petersburg—covering a distance of about eighteen miles; also, for the "Culvert" and "Bridge" Masonry of the last section of said work.

At the same time, sealed proposals are invited for the "Abutment" Masonry of "Bridges" over the Eastern and Southern branches of Elizabeth River.

The work will be divided into sections of about three miles, and bids may be made for one or more of said sections.

The line, plan, profiles and quantities of work will be ready for examination on and after the 1st of March.

Specifications with forms of contract and proposal may be had of the undersigned after date.

Payments will be made in current funds during the progress of the work, in proportion of four-fifths of the amount due.

Of bidders personally unknown to the undersigned, evidence of their responsibility will be necessary; and of those to whom work shall be allotted, will be required bond and approved security in an amount not exceeding one-fifth of the amount of their contract, for the timely and faithful execution of the same.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

The line is easy of access; the country through which it passes abundant in supplies and of a climate highly favorable for the prosecution of work at all seasons.

The work here offered for contract is of a character well worthy the consideration of the most responsible contractors.

W. MAHONE,
Chief Engineer.

January 19.

Norfolk, Feb'y 10th, 1854.

Sealed proposals will be received between the dates mentioned in the above notice, for the construction of two Iron Bridges with stone abutments and piers, one over the Eastern Branch of the Elizabeth River, 630 feet long, and containing about 3,300 cubic yards of masonry, and the other over the Southern Branch of the same stream, about 409 feet long, and containing some 1,700 cubic yards of masonry. Plans of bridges, with quantities of material and working drawings, will be ready for inspection after the 1st March.

From this date proposals will be entertained for the Clearing and graduation of several sections not included in the 18 miles mentioned in the above notice, and also for the bridges and culvert masonry upon said sections,—of the former about 3,560 cubic yards, and the latter 670.

W. MAHONE,
Chief Engineer N. & V. R. R.

Spikes, Spikes, Spikes.

ANY person wishing a simple and effective Spike Machine, or a number of them, may be supplied by addressing J. W. FLACK, Troy, N. Y. or, MOORE HARDAWAY, Richmond, Va. March 6. 1850.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

BOORMAN, JOHNSTON & CO.,
99 Broadway, New York.

Sept. 7.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.
SECOND QUARTO SERIES, VOL. X., No. 10.] SATURDAY, MARCH 11, 1854. [WHOLE No. 934, VOL. XXVII.

The Mechanical Engineering department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Railroad Legislation of Pennsylvania.....	145
New York Central Railroad.....	146
Cleveland and New York City Railroad.....	146
Working of Railroads.....	147
Railway Signals.....	148
Pacific Railroad Surveys.....	148
Railroads of Indiana.....	150
Locomotive Building in St. Louis.....	150
Arrangement of Locomotives as effected by the gauge of railroads.....	151
Stock and Money Market.....	152
Evansville, Indianapolis and Cleveland Through Line Railroad.....	152
Proportions of Locomotives.....	154
Mississippi Valley Railroad.....	154
Freight Tariff on the New York and Erie R.R.....	154
Louisville and Sandusky.....	155
Statistics of Kentucky.....	155
Knoxville and Tennessee Railroad.....	155

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, March 11, 1854.

Railroad Legislation in Pennsylvania, and its Results.

We are happy to express our belief, that the "difficulties at Erie," are substantially settled. Negotiations may be carried on for some time to come, but the final result, a 4. 10 gauge for the roads entering that town from the East and West, we consider certain. We also believe it equally certain, that the two roads, will, in the end, be allowed to connect, so as to form one line, leaving transshipments to be made at such points as will best suit the convenience of the forwarder.

While we are exceedingly gratified at this result, and are desirous of getting away from, and of forgetting, this ugly controversy, we are unwilling to loose so favorable an opportunity, before public attention, which has been thoroughly aroused, shall sink into its old channels of indifference, to say a word or two upon the railroad policy of Pennsylvania, as illustrated, for several years past, by the action of its legislation and the progress of its railroads.

We may commence by asking, why it is, that the market value of the securities of the municipal corporations of this State, (which have been created for the construction of railroads,) are so much below those of New York? Philadelphia 6's are not up to par, while those of the city of New York command a premium of 14 or 15 per cent. Pittsburgh 6's may be quoted at from 82½ to 85, while those of Buffalo and Albany are at a premium of 2 or 3 per cent. Pittsburgh is a much larger city than either Buffalo or Albany. Its valuation is greater. Its credit is as untarnished. Its ability and disposition to meet all its liabilities is as unquestioned. In comparing them together, it would be difficult to say, as far as their intrinsic value is concerned, why the securities of the one should be preferred to the other. Why is it then, that there is a difference of some 15 or 20 per cent in their market value?

We think the answer is to be found in the difference of the principles which lie at the foundation of the legislation, and particularly the railway legislation, of the two States in which the above cities are situated. In New York, the construction of railroads is entirely free to any person who will undertake them. The State has ignored all connection with them, and has practically acknowledged herself to be incapable of directing either their mode of construction, management, routes, business arrangements, or connections. She treats these enterprises precisely as she does all other industrial interests; simply protects them from, and prevents their doing, injury to, others. The roads that are built, simply reflect the wants of the parties to be accommodated by them. The State does not pretend to decide what these wants are, nor how they shall be met. Railroad enterprises in New York, therefore, are in harmony with all other interests. They are legitimate transactions, and there is an additional credit attached to them for this reason alone. As they are regarded with favor from the principle of the thing, the law is construed favorably toward them in all cases, where their rights are involved. An omission to comply with the provisions of the law, or a misconception of the powers granted, is never, in this State, punished by a forfeiture of privileges or franchise. All such lapses are allowed to be corrected as readily as were the companies originally

allowed to be formed. The purchaser of their securities, therefore, knows that he has nothing to fear from legal quibbles; that his securities can be rendered worthless, only by the want of business for the road. The consequence is, that the market value of the stocks and bonds of railroads in this State, are as much greater than those of Pennsylvania, (the real value of which may be the same,) as there is between the municipal bonds of the two States.

We find, on the other hand, that an entirely different policy lies at the foundation of the railway legislation of Pennsylvania. In that State, legislation has not been an expression of the popular wants, but of local or sectional interests. It has been shaped in accordance with a policy, the object of which, to make commerce subserve the advantage of particular interests or sections, instead of leaving it free to move in just such direction as convenience demands. The merits of a particular project, are not so much regarded, as the fact, whether it will interfere with the policy which the State has marked out for herself. This policy, of course, proscribed certain lines, which were eminently demanded by the public convenience.

The history of the legislation of the State, as a necessary consequence, has been one of oppression on the part of the legislature, and of manoeuvring and log-rolling on the part of proscribed interests; the object of which, was to get by stealth, what would have been denied to an open request. In this manner a large number of railroad charters have been smuggled through the legislature, concealed under very harmless exterior. It was the policy described, that led to the system of omnibus legislation, as it is termed, which is peculiar to Pennsylvania; that of grouping a large number of matters, of entirely different character, in one bill. For instance: a bill is reported by a committee, who may entertain views different from those of the majority, "for the preservation of Pickerel in Smith's Pond, and for other objects." At a lucky moment the bill is called up, is smuggled through without discussion, and consequently becomes a law, without its contents being known to a dozen persons. The bill when unfolded, is found to have a much greater scope than the protection of the aforesaid "Pickerel." The second section, perhaps

authorizes the building a bridge over the Susquehanna; the *third*, divorces a refractory wife from her husband; the *fourth*, exempts a certain person from military duty, in consequence of a sprain of his ankle; the *fifth*—*charters a railroad company*; the *sixth*, corrects the records of a municipal corporation; etc., etc. In this manner has the State been covered with a batch of bastard charters, apparently legal on their face, but tainted with suspicion from the manner in which they were got. The *majority*, feeling itself overreached and defrauded, have thrown every obstacle in the way of the use of such charter, and have pretty effectually accomplished their object; so that, although there are charters in the State covering thousands of miles of line that should be built, there has hardly been one of the class named, that has been turned to any account.

Such are contests which for years past have embarrassed the action of the legislature, paralyzed the efforts of the people, and to a certain extent discredited the securities of this State. In no other manner can we account for her want of progress in the construction of railroads. In natural resources, Pennsylvania is the first State in the Union. She is second to none in position. She is *only* second in wealth and population. She has long held this rank. Yet she is the *fourth*, and will soon be the *sixth*, in the extent of her railroads. Even the State of Indiana with only about $\frac{2}{3}$ d the area, with a history extending back only a quarter of a century, has in the extent of her railroads, outstripped the Key Stone State. And why? Because she has thrown wide open the door to railroad competition, and has invited to herself, by the most liberal charters, every man who had a dollar to invest. In this way has she enfranchized her people from the thralldom which has been such an incubus upon the energies of Pennsylvania. Freedom of action has not only imparted confidence, but it has pointed out the way to success. The construction of a road of a hundred miles in extent, is regarded as mere pastime in Indiana, which has little accumulated capital, nor hardly a town of over 10,000 people. *Every mile of railroad in that State has been built during the period in which the Sunbury and Erie Railroad has been a prominent project in Pennsylvania*, and we may say, a favorite project of Philadelphia, a city of more than a half a million of people! Yet upon this this road, acknowledged by all its friends to be of paramount importance, hardly the first blow has been struck; and it is admitted, that without the aid of this city in her corporate capacity, it will be impossible to raise the means for the work. Indiana on the other hand, has constructed *all* her railroads without any considerable assistance from municipal bodies, and needs no no such aid for any road demanded by the public convenience.

Had Pennsylvania ten years ago adopted a law similar to the New York *General Railroad Law*, we have no doubt she would have had an equal extent of railroads as the latter State. The privilege of building railroads in whatever direction and manner they chose, would have turned universal attention to the subject. The people would have at once commenced the process of self-education, in the construction of the works, and would have soon acquired a confidence in their ability to surmount every obstacle in the way of

their plans, no matter how formidable. The study of the subject would have taught them the value of railroads, and would have secured concert and co-operation of action, the want of which has been one of the great reasons why Pennsylvania has accomplished so little compared with other States. Her legislation has not only paralyzed the energies of her citizens, but has tended to keep foreign capital out of the State. Parties from abroad, unwilling to take up with such charters as they could get, and unable to obtain such as they wanted, would do nothing. The people at home, hampered and distracted by partisan legislature have attempted and accomplished little. The result is that Pennsylvania has but half the number of miles of railroad that she would have had, with the liberal policy of New York; and the market value of such as she has and of the securities issued in their account, are very far below those of a similar character, and of equal intrinsic merit, in other States.

In reference to the general facts above stated there is no controversy. Are we not correct in our explanation of them? Is not Pennsylvania a giant that has shorn herself of the strength? Can she grow strong so long as she lies fast bound in the meshes of a mistaken policy? Is not freedom what she wants? Is it not her policy to invite capital into the State instead of repelling it? The lesson that she needs first to learn is, that the most direct way to accomplish the very objects she has in view, is to allow the most perfect freedom of personal action, and that the greatest good of the individual, is always in harmony with the greatest good of the State.

New York Central Railroad.

The following is a comparative statement of receipts from passengers and freight on the New York Central Railroad, for six months, commencing Aug. 1, 1852 and 1853:

	Passengers.	Freight.	Total.	Increase.
1853. Aug.	\$349,125	\$140,000	\$489,125	
1852. Aug.	294,510	79,575	374,075	\$115,040
1853. Sept.	371,322	200,000	571,322	
1852. Sept.	340,916	97,758	438,674	132,648
1853. Oct.	326,706	223,500	550,206	
1852. Oct.	300,649	115,891	416,541	133,665
1853. Nov.	242,327	215,893	458,221	
1852. Nov.	209,775	152,114	361,889	96,332
1853. Dec.	190,014	230,010	420,025	
1852. Dec.	160,657	197,059	357,717	62,308
1854. Jan.	160,790	167,356	328,247	
1853. Jan.	126,767	185,599	312,367	15,880

Total increase.....	\$555,882
Total receipts New York Central Railroad for six months ending 1st February, 1854.....	\$2,817,147 87
Total increase for six months.....	555,882 08
Average increase per month.....	92,647 01

Cleveland and New York City Railroad.

The above Company have been organized by the choice of the following persons directors: E. G. Williams, H. W. Clark, J. A. Morely, Cleveland; Uri Seely, R. Hitchcock, Painesville; W. W. Branch, Madison; Frederick Carlisle, Ashtabula. The Directors elected Ellery G. Williams, of Cleveland, as President, and W. H. Stanley, Secretary and Treasurer. The total amount of stock subscribed is \$417,000. It is proposed to to build this road with a six foot track from Cleveland to Erie, which will there connect with a road of like gauge, intersecting the New York and Erie Railroad, making a continuous track of equal gauge to New York City. Its western connection will be with the proposed road to Cincinnati and St. Louis, and roads terminating in Ohio City.

Journal of Railroad Law.

SUBSCRIPTIONS TO RAILROAD STOCK BY MUNICIPAL BODIES.

In our issue of September 17th, 1853, we published the decision of the Supreme Court of Pennsylvania which asserted the constitutionality of such subscriptions when sanctioned by legislative authority, two judges of that Court, however, dissenting from their brethren.

A corresponding decision has since been rendered by Hon. A. W. Graham, Judge of the Warren Circuit Court of Kentucky in the case of *Smith and others against the Louisiana and Nashville Railroad Company and others*. In 1849, this Railroad Company, together with others, was chartered and certain County Courts including that of Warren were authorized to subscribe for stock in said roads and to submit the question of the propriety of their so doing to the popular vote of the County. A vote was accordingly taken in respect to subscribing \$150,000 to the Bowling Green and Tennessee line road and the like sum to the Louisville and Bowling Green road, and it resulted favorable to the measure proposed. The subscriptions were in each case made, and a levy of a half of one per cent. on taxable property in Warren County declared, in consequence. The two Companies owning the said roads were then amalgamated, and the County Court proceeded to issue bonds with coupons attached, for the purpose of carrying out their undertaking. A tax of a fourth of one per cent., having then been ordered to be collected for the payment of interest, the plaintiff applied for an injunction against any further proceedings, on the part of the consolidated Railroad Company, the Sheriff and the Warren County Court.

The most important question argued at the hearing was whether the charters of the Railroad Companies above mentioned were constitutional.

The Judge decided this question in the affirmative, and in delivering his opinion in relation to this subject he substantially said that in Kentucky no railroad of any extent can be built without the aid of City and County subscriptions, yet the Constitution must be implicitly obeyed. In order to investigate this subject properly it is necessary to examine the adjudications of the Kentucky Courts upon the question presented before the meeting of the Convention for making the existing State Constitution. More than 20 years ago in the case of *O'Hara against the Lexington and Ohio Railroad Company*, Dana 233. the Court said "the commonwealth had a right to construct a railroad. It had the right to delegate this power to individuals." The same principle was asserted in the *City of Louisville against Hyatt* 9. Dana 516. "The Legislature may authorize a majority of the owners of property on a square in a city to decide that certain improvements shall be made at the expense of the lot-holders. In *Cheeny vs. Hoosen*, 9. B. Mon. 338, the Court said: "The legislature have the power of granting charters of incorporation, and have the constitutional power to confer taxing power upon towns and other local corporations, essential to their local convenience. All lands of the commonwealth are subject to the general power of the legislature to tax them either for general purposes of government or for local purposes within localities within which they may be situated." By an act incorporating the Louisville and Frankfort

Railroad Co., the city of Louisville was authorized to subscribe stock; to levy a tax on the property of the citizens for its payment, and each tax payer was to be entitled to the stock for which he had paid. In that case (see 9. B. Mon. 529,) the Court decided the act was not unconstitutional, nor was it rendered invalid, because the benefit might not be equal in its operation. "The legislature have constitutional authority to grant to towns and cities power to tax the property of their citizens for the construction of works of internal improvement for facility of access to, and of transportation to and from the town or city." See Leigh (Virginia) reports, 120. Connecticut reports 475; and Talbot vs. Dent, 9. B. Mon. 535. Other cases from the Supreme Court of Kentucky and other States might be referred to, sustaining and enforcing the principles recognized and adopted in the foregoing opinion. Thus when the Convention assembled, the members well knew it to be settled law that the legislature could empower municipal bodies to subscribe to the stock of railroad companies and to lay taxes therefor. And in their new constitution, they placed no restriction upon the power of the legislature in this respect. On the contrary the records of the Convention show that when the subject was distinctly presented to their consideration they refused to impose any such restriction of legislative authority, and refused to interfere with its exercise.

Again it is argued that this charter gives to the people of the county, the power to make the law. If it be so, the Act is unconstitutional, because the constitution has vested the law-making power, exclusively in the Legislature.—But this law is not thus objectionable. The Act is mandatory in some of its provisions, and leaves a discretion in others. It commands the vote to be taken, and if the subscription is made it imperatively directs all the subsequent proceedings. It submits to the voters of Warren and other counties who are chiefly interested and are to bear the burdens if assumed whether the subscription shall be made, and the law thus fully executed. It is not the vote which makes or alters the law, it is the law that directs the vote and prescribes every thing to be done consequent upon it. The law is perfect, final and decisive in all its parts, and the discretion given only relates to its execution.—It may be employed or not employed—if employed it rules throughout. If not employed it still remains the law, ready to be applied whenever the preliminary condition is performed.—21 Ohio Reports 86.

But the most prominent objection taken is that the Act violates that provision of the constitution which forbids the taking of any man's property for public use, without consent of his representatives and without just compensation previously made to him. If this clause of the constitution ought to receive the construction which has been given to it in the argument, no County Court could build bridges, improve the county roads, or even build court houses or jails; and yet it was admitted that by legislative enactment they had, and might well exercise such power. "How can that construction be correct which will authorize acts to be done for making one kind of public improvement and at the same time prohibit the like acts for making another kind; which will authorize a highway and prohibit a railroad?" Maine Reports, 34. vol. This railroad is surely not more private

in its character than is a grist mill, owned by a single individual, who derives all the profits; and yet the County Courts have ever had the power to compel the people to contribute their time and labor to open and keep in repair roads leading to the mill. Although the one is much more extensive and costly than the other, the principle of public good which justifies the one may well sanction the other.

But this Act does not take from any man his property; it does not divest him of his title, or in any manner effect it. It may be, that the taxation which a large majority of the people of Warren have by their vote imposed on themselves as well as on the minority may, in some instances, be oppressive; if it shall so turn out, it is to be regretted. On this subject the patriotic language of that very able and distinguished jurist, Judge Bibb, when delivering the opinion of the Court of Appeals in Beard vs. Smith 6. Monroe. 499. is in point. The design and good of civil society necessarily require that the natural and acquired rights of each member should admit of limitation several ways, and to a certain extent by authority of Government. It is better ever for men that the State in general flourish, though they themselves do not thrive in it, than that they should flourish in their private affairs and the public suffer. For let a man's private affairs be never so prosperous, yet if his country be lost, he must perish with it. That which is the preservation of States is the care of the public good, and that which destroys them is the minding only one's private advantage; therefore it concerns both the State and private men to prefer the interest of the public to that of particular persons." (A doctrine worthy of attention at Erie).

The Judge concluded by saying that he had intended to quote the decisions of the Court of Appeals of Kentucky, in the case of the Justices of Clark against the Paris &c., Turnpike Company. (11. B. Mon. 150,) and that of Slack and others against Lexington & Maysville Railroad Company, (13. B. Mon. 2.) but must refrain, because he had already protracted this opinion much more than he expected to do. No one who has read them will hesitate to say that they fully sustain the positions taken. He further remarked that the Supreme Courts of the States of Ohio, Tennessee, Maine, Virginia, Pennsylvania, Connecticut, New York, Louisiana, and other States with constitutions much like that of Kentucky, have fully and clearly sustained the constitutionality of Acts of their respective Legislatures very similar to the charters under consideration.

The injunction was accordingly refused.

COMMON CARRIERS, A RULE OF EVIDENCE CONCERNING.

In the case of *Berly vs. Newton* brought in our Supreme Court for injury to certain trunks containing merchandize, belonging to plaintiff, incurred while they were in the course of transportation upon defendant's steamer, evidence was admitted on the part of the plaintiff tending to show that it was the usage of the defendant always to charge freight on trunks such as those in which the plaintiff's merchandize above mentioned was carried. On a motion for a new trial the Judge held this evidence to have been rightly admitted. For it was necessary for plaintiff to show that the defendant knew or had due notice of the contents

of the trunks, and the evidence in question showed that from the size and form of trunks like plaintiff's the defendants usually inferred that they contained merchandize and disposed of them on board of their boats, accordingly.

Working of Railroads.

With each successive stage of completion attained by the railroad system of our country, an additional importance is given to *operation and management*. The time will come when our railroads will be all in operation, and no more will be built. The railroad system of a large part of the country is already completed, while a large amount of railroad work now in progress is advancing with extraordinary rapidity. The *constructing* talent employed on railroads, is transferred, upon their completion, to new works, leaving the duty of *management* chiefly in the hands of mercantile, rather than professional men. How far the speculative or temporary expedients of the one class should be influenced by the obvious tendencies of the other, may not be difficult to determine. Railroads will doubtless *pay* better in the hands of purely mercantile men, where a different quality of talent has *established* the system of operation, but even in operating, there may be an advantageous infusion of skill, such as goes beyond figuring up the gains, or economising in obvious expenditures.

There are two ways, most essentially different, of managing railroads profitably. The one, which is generally soonest adopted is that of "curtailing" obvious expenses in the closest manner, and in demanding the highest remuneration for the movement of persons and property. The other system does not reject the principles contained in either of these expedients, but adopts them to such an extent as must be inevitable from other circumstances; and in the meantime takes advantage of every *improvement* in construction and operation, in adaptation and in *encouragement* to business. The one assumes that the science of railway economy is established, and that all that is wanted is to keep the screws tight. The other perceives and admits *improvements*, in which word is comprised the sources of all the superior facilities possessed in present times.

The stringent system which aims to save all and get all, is severely tested, however, when touched by the influence of competition. When it is assailed by a stern demand for lower charges, or a withdrawal of business, it bustles about, endeavoring to show that such and such business, "cannot be done" under a certain cost. In other words, it can only show that in some situations, such cost has been incurred, and cannot state whether necessarily or not.

We believe that the science of *management* is the most important in its bearings upon the success of American Railroads: that it includes facts and principles which are deserving of a full statement and of elaborate discussion. Everything which cheapens communications promotes general prosperity in numberless ways. The access to distant markets; the increase of social and mercantile acquaintance, and of the new relations which spring from them; the spread of intelligence; all of which results are exhibited in the unexampled growth of our own country, are all due to the adoption of those mechanical expedients

which have reduced the resistance, and thereby the cost of locomotion.

In this field the *Journal* will ever strive to be a faithful laborer. There is yet necessity for a vast deal of information touching the subject involved. The construction, working, wear and renewal of every member of the railroad system must yet be discussed and illustrated. We shall be prepared to show in a short time that the assumption of the perfection of the railway system has operated most disadvantageously upon the interests of those who, by their adoption of a corresponding system, have shown their faith in such perfection; in other words, the respectable conservatives who control such roads as, with favorable routes can scarcely maintain their local business, and nearly all of which have zealously refused all advances of progress. It can be shown that this charge of uphill conservation is not the result of wild reasoning, but that it is borne out by facts.

In these discussions we shall expect to be supplied with the necessary materials. Physical facts developed in the construction or working of railroads and of their machinery will be always thankfully received, and we are confident that there is enough of such information in existence and that it only requires to be brought out. Every engineer, superintendent, master of machinery, locomotive and car builder has more or less of the materials necessary to the purposes of discussion.

Railway Signals.

A recent number of a foreign scientific journal gives illustrations and descriptions of an improved railway signal, which by its simplicity and the certainty of its indications, deserves to be widely adopted in our own country. Indeed upon the most careful inspection it will be seen fully to merit the preference which we have given it.

Fig. 1.

Fig. 2.

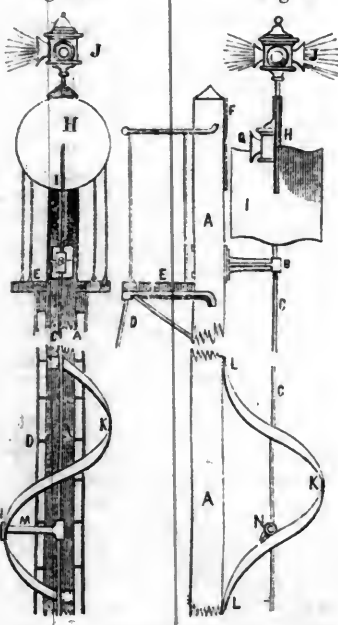


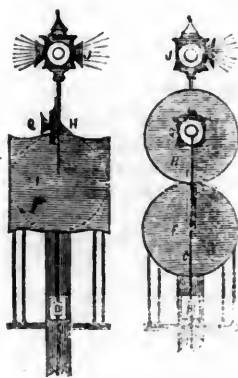
Fig. 1 is a front elevation of a signal of the improved kind, as arranged in its primary position, presenting a plain white disc to the view of the engine-driver, indicating that the line is clear, and therefore that the train may safely proceed. Fig.

2 is a corresponding side view of the signal at right angles to fig. 1. Fig. 3 is a detached front view of the actual signal portion alone, representing the indicating apparatus in its second position, to show that a passing train must proceed with caution, a square green disc being displayed for the purpose. Fig. 4 is a similar detached view of the disc-signalling details, wherein two distinct red discs are exhibited, to indicate danger.

The signal consists of a stout wooden pillar, A, carrying horizontal side brackets, B, in which brackets are plain eyes, to receive the parallel vertical iron rod, C. This main post, A, is fitted with a ladder, D, and platform, E, in the usual way, for the ascent of the signalman; and its inner front face carries a stationary circular disc, F, with a red face, pointing in the reverse direction to the train's motion. The adjusting rod, G, is passed freely through its plain eyes in the brackets, B, having liberty both to rotate and traverse longitudinally therein, a collar being on the lower end of the rod, to prevent it from traversing too high at any time. This rod is surmounted by a circular signal disc, H, coloured white on one side, as shown in fig. 1, and red on the other, as in fig. 4. Be-

Fig. 3.

Fig. 4.



neath this side, the rod also carries a second disc, I, of a square or rectangular shape, and checked or half-entered into the upper disc, H, forming one piece with it. These details, with the ordinary lamp, J, on the apex of the rod, C, form the entire signalling apparatus. The front face of the timber post, A, has also bolted to it, lower down, a spiral guidepiece, or incline, K, held at its two ends, L, in a fixed position. This spiral piece embraces the rod, C; and an adjustable arm, M, standing out at right angles from the rod, carries a small pulley, N, upon its outer end, bearing upon the edge of the incline as a support, a small handle, O, being fitted up with a catch, as shown in dotted lines, for adjustment. Or, when the signal is to be actuated from a distance, by cords or ropes, in the usual way, the common signal wire-ropes is passed round a pulley, keyed on near the lower end of the rod, A. An additional lamp, Q, may be attached to the red face of the upper disc, H, as a security against danger, arising from colour blindness, or an inability fairly to distinguish different colours. When the signal is in its first position, as delineated in figs. 1, 2, and 3, the circular disc, having its white face towards the approaching train, completely covers or conceals the fixed red disc, F, on the wooden pillar, from view; whilst the green disc, I, being turned with its edge towards the coming train, is also invisible. Under these circumstances, then, the engine-driver, seeing only the white face, or a single round disc, knows that the line is clear for his journey. But if, from any cause, "caution" is to be signalled, the signalman, either by his wire-rope and pulley, or the adjusting handle, O, turns the rod, C, one quarter round upon its axis. Then, as the arm, M, is fast on the rod, C, it goes round with it; and in the traverse of the pulley, N, over the incline, K, the rod, C, is caused to rise up

through its bracket bearings, so as to bring the signal discs into their second position, as represented in fig. 3. The circular red and white faced disc is now turned with its edge towards the train, and is therefore invisible; whilst the rectangular green disc, I, faces the train, and covers up or conceals the fixed red disc, F, entirely from the driver's view; so that, as the look-out on the train sees only the green disc, he at once knows that he must run slowly and with care. If "danger" is to be signalled, for the purpose of stopping the train, the signalman turns the rod, C, another quarter around, the resulting traverse of the arm, M, over the spiral guide, K, carries the rod still further upwards in its bearings, bringing the signal discs into their third position, fig. 4. The circular disc, H, having thus been turned a full half round, now presents its red face towards the train; and its increased elevation, due to the spiral guide action, having brought it to a higher level than that of the stationary disc, F, the engine-driver now sees two separate red-faced discs of circular shape, forming a very striking "stop" signal. On reversing the action of the rod, C, the discs are obviously brought back into their normal position, as in figs. 1, 2, and 3.

For night-work, the lamp-signals will act in this manner:—In the first position, the lamp, J, on the top of the rod, C, will give a white light, indicating "all clear;" whilst the lower, or secondary lamp, Q, is screened by the circular disc, H. In the second position, when the rod, C, is turned one-fourth round, the upper lamp, J, has a new branch brought forward to throw out a green light, indicating "caution," the secondary lamp, Q, being still shaded. In the third position, the third branch of the compound lamp, J, will give out a red light, whilst the single secondary lamp, Q, is now brought to bear, and gives a similar red light, both in the direction of the approaching train. In this case, should the look-out be effected with colour blindness, he will yet be put on his guard by the appearance of two distinct lights, indicating danger.

Survey for the Pacific Railroad.

The Secretary of the Treasury has sent to the Senate a document containing the reports of the different parties who have been in the field the past season, making surveys and explorations of the proposed routes for a railroad to the Pacific.

The following is a summary of the report made by Governor Stevens, of the Northern route:

Accompanying Governor Stevens report, is a map sketch on a scale of 1-600000 of the route of the proposed road from St. Paul to the Shayanne river, and Governor Stevens is "confident no grade will be found of more than twenty feet per mile," and "cost without equipment will not exceed \$20,000 per mile."

Another map sketch is given on a scale of 1-1200000, from St. Paul to Fort Union. He says the "enclosed sketch of a railroad route is certainly practicable at a cost not probably exceeding \$40,000 per mile. * * The great key points of the country are the valley of the Moose river, and the region of the Bois de Sioux." No grade is mentioned, nor profiles given, of any portion of the route.

West of Fort Union no sketches of the country have been received. The rivers along the route are reported as being very much out of place on the maps, and indeed it is impossible to trace the route definitely upon ordinary maps. No astronomical positions are given.

The nature and substance of the results obtained west of Fort Union, so far as reported are as follows:

At Fort Benton.—Governor Stevens says, "up to this point we have found the country entirely practicable. Whichever pass in the mountains is

decided upon, the Milk River Valley will furnish a good approach."

At St. Mary's Valley.—He reports that two approaches to Cadot's pass were examined, both requiring a tunnel, "not exceeding a mile in length," and a grade that will not "probably exceed forty or forty-five feet per mile."

To the West, "the descent down the Hell-gate River was mostly through an open valley, till the Hell-gate passage is reached, where the river winds in a narrow defile, requiring for a railroad expensive sustaining walls and embankments, and probably some small tunnels to avoid short curves." "It can be turned by tunnelling a marble mountain to the south of it, or by crossing over from a tributary of the Hell-gate in the open valley of the pass to the valley of the river Joeko, one of the principal southern tributaries of Clarke's fork." This was explored and a barometer profile taken; "in the absence of it, can only state it will probably furnish a practicable mode of avoiding the Hell-gate defile."

Cadot's Pass is reported as being "nearly 3,000 feet below the South Pass," and "a much better one, both in summer and winter." A small party examined a Pass in the Rocky Mountains south of Cadot's Pass, and was fitted out to examine the Marias Pass to the north of it.

The Bitter Root range, west of St. Mary's valley, are said to be impracticable.

At Olympia, Dec. 5.—Governor Stevens reports that a route was surveyed over the Cœur d'Eleine Mountains from St. Mary's to Fort Colville, but no barometer profile taken for want of an instrument. "It is probable" these mountains might be passed with a tunnel not exceeding "six or perhaps four miles, without involving impracticable grades." Difficulties from snow "should be carefully investigated."

Lieutenant Donelson surveyed the general line of Clarke's fork. Governor Stevens says he "reports the route from the debouché of the Hell-gate Pass to the banks of the Spokane" * * * as "practicable, involving no other difficulties than are usually met with in the Atlantic States, and that it will connect well with a route through the Marias Pass, should a practicable one be ascertained. The grass is generally good, there having been a scarcity only two nights."

The Columbia was explored from Fort Colville to the forty-ninth parallel. Captain McClellan explored the Cascade range as far north as the forty-ninth parallel, and his examinations were connected with the others under Governor Stevens.

Governor Stevens refers to Captain McClellan's examinations, and "I apprehend no difficulty whatever in the Snoqual-me Pass to the passage of a railroad; and from information I have received from old residents, particularly from Mayor Goldsborough, a civil engineer who has carefully examined the country, it will be an easy matter to carry it to a good harbor on the sound."

According to Captain McClellan's report of September 18, the Snoqual-me Pass "is at the head of the main Yakima," some thirty-five miles north of Mount Rainier. The lowest point of the divide is 3,543 feet above Vancouver. The descent to the east to Lake Katchelas, a distance in a direct line of about three and one-fourth miles, is 1,129 feet; beyond this, "there is no difficulty in the construction of a road of any kind." He did not "proceed more than a few miles beyond the divide" to the West, but as far as he went, "the valley was narrow and the descent steep." He reports Nah-ches Pass as 4,966 feet above Vancouver, and not so favorable as the other. In both Passes the snow accumulates in the narrow valleys, probably 20 feet, and in the mountains, five or six feet.

Owing to the lateness of the season, the survey was to be confined to Puget Sound by the line of the Columbia and Conlitz.

Governor Stevens does not mention any grade as the probable maximum from the summit of Cabot's Pass to Puget Sound. The extent of country adapted to cultivation, and the facilities for wood and water, are not particularly alluded

to. At the date of Governor Stevens' last communication, (December 5,) the finished drawings and estimates had not been made for any portion of the work. The explorations west of the Cascade range are not terminated. The reports of those sent to gauge the snows had not been received, nor of the party left to finish the survey of the Missouri river, nor the one to run a line from St. Mary's to Fort Hall.

REPORT OF THE SURVEY OF WALKER'S AND THE NEIGHBORING PASSES.

Depot Camp, Pose Creek, Aug. 31, 1853.

I have just returned here from a twenty day's examination of the various passes of the Sierra Nevada, and give the results so far.

I started from this point, which is eight miles North of Kern River, and went through Walker's Pass, the northernmost point on the Sierra, where it is supposed possible to carry a railroad across. Then re-ascending to the summit of the pass, I wished to follow the back bone of the mountain, southwardly, till it joined the coast range; thus necessarily seeing every depression in the ridge. Having thus ascertained the lowest points, I then intended to ascertain if they were accessible from both bases. This plan I followed most successfully, and I have now a good knowledge of these mountains—am certain that no pass exists (within the above limits) that I have not examined—and am now prepared to commence a survey of the best of them.

I regret to say that the difficulty of crossing the mountains is much greater than I anticipated; but I think there is no doubt of the practicability. I have been through eight passes, most of which are very bad, and I will briefly describe some of them. You must understand, however, that my opinions here expressed may be modified, when I get a more accurate knowledge from surveys.

With this understanding, I will commence by saying, that *Walker's Pass is out of the question.* To reach this we ascend Kern River (properly the Potum-ko-la) for some fifty miles, where a branch comes in from the East. This we ascend, in a wide and gently ascending valley, for some twelve miles, when we leave it, cross the divide and enter the plain or basin beyond. The difficulties are: 1st, ascending Kern River; 2d, ascending to the summit from the valley of the branch; 3d, descending to the basin.

1st. On Kern River high mountains come down abruptly on each side, forming a canon of five or 6 miles in length, impassable for mules, and probably for footmen, since there is no Indian trail through it—and these mountains cannot be turned. Hence, to go by Kern River, an immense deal of cutting, blasting, &c., would have to be done. Rock, granite. This river falls in the fifty miles—fifty feet to the mile on an average.

2d. The ascent to the summit for five miles is over 300 feet to the mile, and rugged rocky mountains on each side, cut up by precipitous ravines, prevent a winding course to gain distance.

3d. The descent from the summit to the basin is 8 miles, and over 250 feet to the mile. The altitude of Walker's Pass is over 4,500 feet above the Tulare Valley, and over 5,000 above the sea. The basin is 2,500 feet above the valley.

Proceeding south, the next pass worthy of note is one never before passed through so far as I can ascertain. The ascent from the basin is uniform, and not more than a hundred feet to the mile, arriving at the lowest point but one of the Sierra Nevada—3,100 feet above the Tulare Valley. A creek runs from the summit to the valley, but the descent for 10 miles is 300 feet to the mile: Possibly, by winding in the hills a more gradual descent could be found—still it would be difficult and very expensive. Instead of following this creek we can follow along the crest of the mountain, on nearly a level for 15 miles, and then descend nearly the whole vertical distance in 3 or 4 miles. If inclined plane, with stationary engines, have to be resorted to, this would be a good point.

Still further south there are two passes leading into the head of the Tulare Valley, at a place

called Tejon. A wagon road passes through one, which is beginning to be known as the Tejon Pass, and it is the worst wagon road I ever saw. The pass fortunately presents some good features for a railroad. Two small streams run from near the summit—one into the basin, the other into the Tejon—but their sources are separated by a narrow divide over 1,500 feet high. I have great hope that a survey will show that should this ridge be tunneled, the road can pass up one creek through the tunnel, and down the other. The summit of the Tejon Pass is 4,500 feet above the Tulare Valley.

The other pass coming into the Tejon is called the Canada De Las Uvas (grape ravine). In this a small brook descends into the Tejon, 1,400 feet in 4 miles, while the rest of the pass is of gentle ascent and descent. The summit is 3,100 feet above the Tulare Valley—the same height as that of the passes before mentioned. Two modes would naturally suggest themselves for making a road through this pass. One, a system of inclined planes with stationary engines over the 4 miles above mentioned; a second, by following along the side hills. Before I express an opinion on these points, I must wait till a survey of the pass is made. I intend to leave here to-morrow for the Tejon, 25 miles distant, and shall run a line of levels through the Tejon Pass and the Canada De Las Uvas, at the same time making an accurate sketch of the hills and ravines on each side. From the data thus obtained, I shall be able to give full information on the subject. So much for passes.

R. S. WILLIAMSON.

The little that was received from Capt. Gunnison previous to his massacre is not favorable for the route he was commissioned to explore, which was what is termed Benton's route, by way of the *Huerfano* and the *Coo-chi-to-pec* pass. The information furnished by him is altogether too meagre to be of any particular value.

The survey of the route upon the 35th parallel was entrusted to Lieut. Whipple. When last heard from, he was at the *Zuni* villages. We give his dispatch, though not very intelligibly, for want of a map of the route.

Camp No. 70, near Pueblo Zuni, Nov. 25.

Colonel: I have the honor to enclose a geological and a pencilled sketch of a general profile of our route from Fort Smith to Rio del Norte. The vertical scale of the latter not being exaggerated, the minor deflections are unappreciable. However, it may serve, like the rough topographical sketches already sent, in the charge of Senor Don Ambrosio Armijo, to guard against a total loss of our work, in case, by any accident the notes we carry should be destroyed. By examination you may perceive that no great obstacle is opposed to the construction of a railway along the route traversed by the wagons, the profile of which is given from barometric observations, taken at every point wherever occurred a change in grade. This profile, however, is intended merely as the basis for a reconnaissance upon which the profile of deflections for a better route may be projected. Several such deviations have been made, but not yet represented upon the profile: One through a level prairie south of the road and extending nearly from the Poteau to the San Bois; another passes over a slightly undulating country, from the head waters of Coal Creek to the waters of Boggy, leaving the Shawnee villages north. It is a question, also, whether the valley of the Canadian should not be kept nearly the whole way to the mouth of Tummecari creek, thus avoiding the ascent to the Llano estecado, and proceed to the Pecos, north of Anton Chico, where the canon is believed to be narrow enough to be spanned by a bridge. From Rio Pecos to the Valley of the Rio del Norte is doubtless the most expensive of the first division of our route. Still the ground is difficult only in comparison with that previously passed over. Two passes of the Rocky mountains were examined; one leading by Rio Galisteo

to the Pueblo de San Felipe, the other by Carmel pass to Puebla de Isleta. The first makes a short deflection to the North, by which a blind man would never suspect the vicinity of a range of mountains. A branch of the Galisteo is encountered about 25 miles east of the mountain range, and makes a broad open valley, with a descent, unappreciable by the eye, to Rio del Norte. The Carmel pass is more directly west, and its cannon, with some slight cutting, will afford a good route. Debouching from the mountains, a wide array, with a grade of about 50 or 60 feet to the mile, leads to Isleta. At these pueblos, San Felipe and Isleta, are found the two best crossings of the Rio del Norte. At both places the diluvium drift infringes upon each side of the river, affording natural abutments for a bridge. From the latter point the survey has been continued, with a sweep to the South, to ascend the Mesa, nearly 700 feet in height, which divides Rio del Norte from Rio Puerco. Thence we ascend Rio de Gallo to near its head waters, where parts the road leading to Fort Defiance. Sending a party to reconnoitre that route, we proceeded by the Camino del Obispo to our present camp, near the Zuni. Upon the route of the survey, toward the southern slope of the mountain, by a gradual ascent of about sixty feet to the mile, we arrived at the foot of the hill which forms the summit of the Sierra Madre. Here might be required a tunnel about a mile in length, which would reach a similar ravine upon the Pacific side, leading by a beautiful slope, not exceeding in any part 61 feet to the mile; three days' journey to Zuni. The party which explored the northern pass reports much more favorably. The summit is said to have been passed unperceived, and a grade of twenty-five feet to the mile will conduct from Ojo Azul, which flows toward the Gulf of Mexico to Rio Puerco of the West, which, emptying into the Rio Colorado, seeks the Pacific Ocean. We are, therefore, now upon the Pacific waters, having found excellent passes through the range of Rocky Mountains and the Sierra Madre. Timber for the construction of a railroad is abundant from the Choctaw nation to Walnut and Deer creeks, also from Rio Pecos to Sandia Mountain, and in the Sierra Madre. For masonry, there is excellent material over the whole route. Coal is abundant in the Choctaw nation, on Rio Galisteo, in the Carmel canon, on Rio Puerco, and at Ojo de Gallow. Extensive beds of gypsum also occur in various localities. From the headquarters of the Washita, which approach within two or three miles of the Canadian, an excellent route for a railway extends east-south-east as far as that river was followed by us. Well-wooded valleys, flowing streams, fertile soil and charming climate, all invite the emigrant thither. To pursue the stream to its mouth, and thence to New Orleans, would doubtless form one the main branches of a railway from California, by way of the Canadian. The appearance of the country north of the Canadian, in the direction towards the western part of the Missouri, showed nothing to lead us to infer greater obstacles in the construction of a branch from the great bend of the Canadian to Springfield than we had found on our route. Indeed, our geologist, Mr. Marron, having previously paid particular attention to the geological character of that section of country, assures me that it is highly favorable for the object proposed. Without doubt, therefore, a main branch of this road would lead to St. Louis. Water for camping purposes, on the whole route from Fort Smith to this place, has failed us but once. That was on the Sierra Madre, where water could be easily obtained by tanks, in others by aqueducts, while in a few places Artesian wells may be resorted to with greater advantage. To-morrow we proceed hence, taking a due west course, which we hope will lead us to the Pacific in time to lay before Congress a more full report in Feb'y next.

In great haste, I remain, very respectfully,
Your obedient servant,

A. W. WHIPPLE,

First Lieut. Corps Topographical Engineers.
Colonel J. J. ABERT.

Of all the reconnoissances made thus far, that of Governor Stevens seems to show the most satisfactory result, from the fact that it is the most complete. His surveys demonstrate a railroad to be entirely practicable upon his route, across the continent. No insurmountable difficulties will be met with in crossing the Rocky Mountains, and the coast range can be avoided by following down the Columbia River. Upon none of the other routes have the surveys been carried from the Mississippi to the Pacific, so that we are not yet in possession of sufficient evidence to make a comparison of the several routes proposed.

Railroads of Indiana.

The Indiana State Journal gives the following table, showing the number of miles of railroad in that State in progress, operation and contemplation:

In operation—

	Miles.
Central Michigan.....	40
Southern Michigan and Northern Indiana.....	120
New Albany and Salem.....	258
Lafayette and Indianapolis.....	66
Terre Haute and Indianapolis.....	73
Evansville and Crawfordsville.....	51
Martinsville and Franklin.....	25
Jeffersonville.....	77
Madison and Indianapolis.....	86
Indianapolis and Cincinnati.....	90
Shelbyville and Edinburg.....	16
“ “ Columbus.....	23
“ “ Knightstown.....	20
Ohio and Mississippi.....	55
Indiana Central.....	72
Richmond and Eaton.....	4
Richmond and Newcastle.....	28
Bellefontaine and Indianapolis.....	84
Peru and Indianapolis.....	72
Ohio and Indiana.....	20

Total, miles completed.....1,280

The following list comprises the number of miles in progress:

	Miles.
Indiana and Illinois Central.....	75
Evansville and Union.....	235
Wabash Valley.....	172
Cincinnati, Logansport and Chicago.....	165
Gosport and Indianapolis.....	43
Fort Wayne and Chicago.....	140
Fort Wayne and Sandusky.....	18
Logansport and Pacific.....	63
Marion and Mississinewa.....	84
Peru and Chicago.....	73
Cincinnati and Fort Wayne.....	114
Cincinnati, Cambridge and Chicago.....	130
Ohio and Mississippi.....	125
Junction.....	86
Cincinnati, Union and Fort Wayne.....	66

Total.....1,592

The following list comprises some of the contemplated roads, the distances given being those within this State:

	Miles.
Fort Wayne and Detroit.....	40
Fort Wayne to Coldwater.....	50
Cleveland and St. Louis, air line.....	175
Indianapolis and Cincinnati, valley line.....	82
New Albany and Sandusky.....	112
Fort Wayne and Sandusky.....	165
Indianapolis and Vincennes.....	108

Total.....782

RECAPITULATION.

Miles in operation.....	1,280
“ “ progress.....	1,592
“ “ contemplation.....	782

Total.....3,604

Locomotive Building in St. Louis.

In the abstract of trades and manufactures of St. Louis, published in a recent number of the Missouri Republican we find the following particulars of the works of Messrs. Palm and Robertson, the Pioneer locomotive builders of the country west of the Mississippi.

The foundry and machine shop of Palm and Robertson, on South Third street, is a little over five years old. In the summer of 1848 the first building was erected, a frame shop 30 feet square. Since then the business has grown so as to require more ground as well as more buildings. The establishment at this time, embraces about 61,000 square feet, or nearly one and a half acres, of which about 31,000 square feet, nearly three-fourths of an acre, is covered by substantial brick buildings, containing the different work shops, and the rest is occupied as yard room for materials, &c., and partly covered, by wooden sheds. The establishment contains a pattern maker's and carpenter's shop an iron foundry, a brass foundry, smithshop, a boiler maker's shop, a coppersmith shop and a finishing or machine shop. It employs at present 150 men, chiefly in building locomotives, of which, up to this time, five have been finished, the first being turned out in July last, and the fifth about the 10th of December. As soon as the demand shall justify it this shop will turn out one locomotive every two weeks. A portion of the force is employed in manufacturing tools for machine shops and railroad repair shops, and the tools already manufactured there will compare with the best Eastern built tools. The proprietors have, during the past year, introduced a feature which is of great benefit to the workman, and deserves to be imitated by others. They have engaged one of the best physicians of this city for the workmen. He has an office and dispensary in the establishment, and calls every day to minister to the wants of any of the men who may be sick, without expense to them.

From the same source we have the following interesting account of the manufacture of refined iron in the city of St. Louis.

ST. LOUIS ROLLING MILLS.

Owned by Messrs. Chouteau, Harrison and Valle, projected and erection commenced during the summer of 1850.

This establishment is situated in the upper part of the city, and with its appurtenances, covers near fifteen acres of ground. The Rolling Mill building is 256 feet in length by 130 feet in breadth. A row of eighteen brick houses is attached to it, presenting a front of 300 feet by 80 in depth, and affording ample and comfortable lodgings for 36 families. Warehouse 100 feet square, and balance of ground occupied by blacksmith and carpenter's shops, sheds, outhouses, stables, stock and coal yards.

Thirty-nine furnaces are at this time in full operation, subdivided as follows, viz: 11 boiling, 2 scrap, 1 lump, 3 bar mills, 2 billet, 2 slab, 2 sheet, 1 dandy, 1 annealing, 1 nail plate, 2 railroad chairs, and 1 spike and rivet machine.

The motive power used is steam, obtained from waste heat, by means of 18 boilers suspended over the furnaces and feeding three engines; first, the doctor, which supplies the boilers and the entire establishment with water, secondly the bar mill engine 27 inches diameter, 6 feet stroke, driving the muck mills, squeezer, hammer, merchant mills, and saw; thirdly, the sheet mill engine, 26 inches diameter, 5½ feet stroke, driving the small or guide mill, boiler, sheet and nail plate mills, nail machines, 28 in number, 1 railroad, boat spike and rivet machine, 2 railroad chair machines, turning lathe and shears.

This mill derives its main supplies of pig metal, blooms and ores, from the Iron Mountain, and turns out a weekly average of 125 tons of finished iron, in the shape of bar iron, boiler plate, sheets, nails, railroad spikes, boat spikes, rivets and railroad chairs.

Three hundred and fourteen men and boys and

thirty-nine wagons and carts find constant employment, exclusive of special jobs and contracts. The average consumption of fuel amounts to 1,600 bushels of stone coal daily.

More Consolidation.

The *Baltimore Sun* says:

"We learn that a project is in contemplation and, indeed, that steps are about to be taken by the parties interested, to consolidate the railroad companies comprising the lines of route between Baltimore and Harrisburg, with a view to a more effective and economical administration of their operations. The companies constituting this line are the Baltimore and Susquehanna, York and Maryland, and York and Cumberland—the former in this State and the two latter in Pennsylvania."

Arrangement of Locomotives as Affected by the Gauge of Railroads.

BY ZERAH COLEBURN.

There has been within a few years such a general revolution of sentiment in respect to the merits of the "wide gauge," so called, that it seems almost useless in most localities to revive any discussion upon the subject. Yet there are occasionally some schemes brought up wherein the entire basis is determined by *gauge*, in other words, a *narrow gauge* is not needed, and the assumed objects of the road are such as are contingent upon a *preference* for a *wide gauge*.

There is a case at issue, at the present time, of precisely the above description. A proposition is made to extend the 6 feet gauge from the New York and Erie line to Cincinnati, thus forming, through the Ohio and Mississippi road, a continuous broad gauge from New York to St. Louis.

The advantages of the proposed road are estimated upon those of a wide gauge and of a continuous connection. But, so far, all experience has established the superiority of the narrow gauge of 4 feet 8½ inches, as regards application of *power*, and it is demonstrably true that the expenses of *power* are the most important in amount of the whole expenses of operating railroads. The through business between New York and St. Louis will be done at a *disadvantage* upon such portion of the distance as lies upon a six feet track, a disadvantage such as should prevent its further extension, and which will amply warrant the delay and expense of a change at any one or two points, from such, to a better and more economical gauge.

In the respect of continuous connections, it is easily seen that the local business, and that of tributary roads, which must be the principal resources of all paying roads, will be taxed with double, and perhaps quadruple, the expense for breaking bulk, by the interposition of a gauge different from that of all the sources through which that business must be supplied, than were the gauge uniform in Ohio. If all cannot be uniform, it is better that the *tributaries* be all alike, let the *outlet* be what it may.

Our present subject is, however, the adaptation of the locomotive to the gauge of railroads. One of the principal advantages claimed by the advocates of a gauge wider than that in general use, was the better arrangement which could be made of the machinery of the locomotive. At about the time that this claim began to be urged, the locomotive was reaching the height of complication, and its plan was such as to impose almost impassible limits to any sensible increase of size and power. This plan was such as to place the essen-

tial working parts directly beneath the boiler and in the width intervening between the driving wheels. A space of little over three feet was occupied by two complete engines, with all of their apparatus for reversing, and complicated expansion gear, pumps, etc. It involved the use of heavy crank axles, which were very objectionable from their weight, cost, friction, danger of fracture, and space occupied, vertically, laterally and horizontally. It required a greater distance between the driving wheels, or a reduction in the length of furnace; a difficulty in arranging the whole engine on driving wheels for purposes requiring the greatest adhesion; it involved a bad arrangement for a truck frame, and unduly crowded the valve motion. By elevating the boiler, the height of chimney was reduced, to pass under a given height of bridge, or otherwise, the frontage, and consequent resistance was increased. But much more than all the rest, the height of the boiler became a limit for the size of the driving wheels, so that practically but a moderate sized wheel could be had, by which the reciprocations, and consequently the friction and wear of the working parts, were unduly increased, for a given speed, besides the resistances of compression, blast, etc., so that high speeds were more difficult of attainment, by reason of the resistances of the *locomotive*, than by the resistances of the *train*.

As this general arrangement was objectionable, an increase of gauge only made it still more so, by allowing an increase of its weight, cost, friction, bulk and danger.

But by a different plan, which has been brought into use in this country, and to an extent in England, in cases where the width of gauge imposed no limits on the arrangement of the engine, the locomotive has been so much simplified as to adapt it so well to the ordinary gauge, as to make any considerable increase of width decidedly objectionable, by impairing the value of the proportions and arrangements of the machinery. This plan is that of the outside connection, upon which the largest locomotives ever required may be easily constructed. The capacity of expansion possessed by this arrangement is greater than is ever availed of in any ordinary transportation, so that it may be well said that it provides for engines of practically unlimited power. It has none of the objections of the inside connected arrangement and involves none peculiar to itself.

The limit which a narrow gauge imposes upon the dimensions of the evaporative apparatus of the locomotive is really a useful one. The limit to the diameter of the boiler of a passenger engine, with over 5 feet wheels, is 51 inches for the narrow gauge. Very few builders give over 43 inches, and generally not nearly all of this opportunity for increase of size is availed of. The limit to the width of grate, with ample surrounding water spaces, is 45 inches; whereas very few builders give over 38 inches. Now it is wholly useless to talk of the "incapacity of the narrow gauge until these limits are generally approached.

The proportion of a grate of 45 inches width to a boiler of 51 inches diameter is not out of a good proportion of locomotive boilers, while it gives a much greater relative width of grate than is generally allowed. With the usual length of locomotive boilers, and the opportunities for still further

extension, a boiler of over 51 inches in diameter is not required, and inasmuch as the strength of boilers diminishes as their diameters are increased; a larger diameter cannot be considered as safe. A boiler 51 inches in diameter is about *one-half* larger than one of 42 inches, which latter is a common size for powerful engines. By the adoption of the "elevated crown" upon the fire-boxes of modern boilers, and the use of two steam domes in place of one, the water level may be carried much higher than formerly, besides securing other important advantages. It is not, therefore, difficult to obtain twice or three times, the *usual* capacity for locomotive boilers, if required, upon the narrow gauge.

There is one important consideration to be regarded, which is, that by any increase of gauge, and consequent increase of resistance, the engine must be made larger to do a given work, as compared with the narrow gauge. It is well known that no ordinary trains, such as are run upon the Erie Railroad, can be worked on that road by engines such as are used for a similar weight of trains on the narrow gauge. The weight of engines, and business done on the different gauges, is sufficient confirmation of this statement. The Erie road is not one having extremely difficult features, being better off in that respect than the Pennsylvania Central, Baltimore and Ohio, Western, and many other great roads.

The question of *gauge*, is one of much importance to the interests of railroads, and deserves to be intelligently discussed. To say "intelligently discussed" would seem to imply forgetfulness of all the discussion which has attended the progress of the question in England and in America, but not to my knowledge, have the *mechanical* merits of the gauges ever been discussed, in any stage of the controversy. The question of the *power* necessary to work the respective gauges, is the real one of importance, for the power must be proportional to resistance, and the chief good of railroads is in their reduction of resistance. *Power is money*, the two being mutually convertible in the operations of transportation.

The following is an argument which I have presented before, in demonstrating the mechanical disadvantage of a wide gauge, and its deductions are in exact harmony with practical operations of the New York and Erie Road. It was given in the *Journal* of November 12th, 1853:

"The least limit of the width of gauge is that which will afford the necessary capacity and insure the necessary steadiness of the carriages to be used. The most advantageous application of the power of draught, is that where the load tends to move in the direction in which the power is applied. The position of the wheels, or in common phrase, the "*tracking* of the wheels," determines the direction in which the load tends to move. This direction may not be essentially the same as that in which the power is applied, in which case, the flanges of the wheels are forced against the rails and produce much friction, or "*binding*."

With the truck frame, in almost universal use in America, the center pin becomes a fulcrum, upon which the wheels turn and adjust themselves to the track and to the direction of the draught. The distance of the wheels from this fulcrum is the amount of leverage which a resistance on *one* rail has to change the position, or "*tracking*" of

the wheels, and to give the car a tendency to move in a direction out of the line of traction. The truck, moreover, cannot turn beneath the car except by slipping the wheels on one or the other side, and the wider the truck, the greater is the amount of slip and friction in obtaining the same angular change of position.

American Railroad Journal.

Saturday, March 11, 1854.

Back Numbers of the Journal.

Those who wish back numbers of the JOURNAL for binding are requested to order them at once, as we shall be able to supply them but a few weeks longer.

We can furnish BOUND VOLUMES for any or all years complete since 1831—price \$5—per year.

Our RAILWAY MAP in sheets will be sent by mail to any address on the receipt of \$1.50—price on rollers \$3.00.

We have a few copies of MR. JOHNSON'S valuable work on the Northern route to the Pacific—price by mail \$1—with maps.

Stock and Money Market.

The foreign news is not considered favorable for stock operations, and there has been a consequent decline of 2 or 3 per cent. in most of the fancies. The apparent certainty of an European war, is calculated to excite a depressing influence upon all speculative movements. First class securities are only slightly affected, and the market for bonds appears to be without alteration. The demand is not active, but the market is steady. Of the best secured bonds, considerable amounts are constantly finding their way to Europe, which, of course, relieves a large amount of capital for less current securities.

The earnings of railroads for February continue to show a satisfactory result. As far as received, they are as follows:

	1854.	1853.
New York and Erie.....	\$345,026	\$303,569
Hudson River.....	160,620	126,028
Michigan Central.....	90,348	40,045
Baltimore and Ohio, (main stem).....	279,856	99,017
Cleveland and Toledo.....	45,172	27,000
New York and New Haven..	54,257	49,441

Evansville, Indianapolis and Cleveland Straight Line Railroad.

The letting of the first general division of 54 miles of the above road, extending from Evansville, Indiana, to the crossing of the Ohio and Mississippi railroad, took place at Evansville on the 15th of last month, and the contractors are already upon the work. This road is designed to be the great Central line from Buffalo and Cleveland by way of Indianapolis and Evansville; connecting the North with the South by a straight line, through Indianapolis, Evansville, Henderson, Paducah, and Memphis, to New Orleans; and also by a line from Evansville and Henderson to Nashville, Tenn., and the railroads radiating from that place. The work is in the hands of energetic and experienced men, resolved to put it through at the earliest possible day. The subscriptions of the cities and individuals on the line, are, we understand, large; upon which the company are preparing bonds to a limited amount, to aid in the rapid construction of the work. Although this is

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	809,878	1,016,500	2,064,458	140,561	80,053	none	30
Kennebec and Portland..... "	72	952,621	291,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	98½
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	32
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	110
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	38
Northern	82	3,016,634	.....	.....	328,782	163,075	5	59
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	91
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	109
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	none	21
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	26
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9½
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	13
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	97
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	.....	1,995,249	388,108	180,881	7	91
Boston and Maine..... "	83	4,076,974	150,000	4,092,927	659,001	338,215	7	102
Boston and Providence..... "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	84
Boston and Worcester..... "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	101
Cape Cod branch..... "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River..... "	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern	75	2,850,000	500,000	3,120,391	488,793	241,017	7	88
Fall River	42	1,050,000	none.	1,050,000	229,445	99,589	8	99
Fitchburg..... "	66	3,540,000	112,305	3,623,073	574,574	232,787	6	91½
New Bedford and Taunton.. "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County..... "	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony..... "	45	1,964,070	282,300	2,293,534	374,897	122,816	none	98½
Taunton Branch..... "	12	250,000	none.	307,136	137,406	24,399	8	.....
Vermont and Massachusetts.. "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	21½
Worcester and Nashua..... "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	59
Western	155	5,150,000	5,319,520	9,953,759	1,525,224	740,736	7	97
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	71
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	97
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	129
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	102½
Naugatuck	62	928,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	58
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	81
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	69
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	56½
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	"one	34
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	101½
Ogdensburg (Northern).... "	118	1,579,969	2,989,760	5,133,884	480,137	195,847	.....	27½
Oswego and Syracuse..... "	35	350,000	201,560	607,803	90,616	43,609	.....	70
Plattsburg and Montreal.... "	23	174,042	181,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,492	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	478,000	8,245,720	603,942	816,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	8	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburg and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	80
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,235	868,088	541,769	5	80

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,156	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton....	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch.....	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna..	57	.....	.....	.....	413,673	152,536	.....	....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	62	1,357,778	640,000	2,108,467	62,762	.....	.....	....
Virginia Central.....	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac....	32	180,000	120,000	416,532	89,776	.....	12	....
Wilmington and Raleigh.... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia....	140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina.....	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester.	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	536,608	8	115
Georgia.....	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western.....	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee.....	71	.....	.....	In prog.	59,590	21,731	.....	....
South Western.....	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston....	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point.	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington....	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort....	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington....	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	91
Cleveland and Toledo.....	147	2,000,000	1,600,000	.....	.....	.....	.....	99½
Cleveland, and Erie.....	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus....	135	3,027,000	408,200	3,655,000	777,793	483,454	12	121
Columbus, Piqua and Indiana.	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.....	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	104½
Cincinnati and Marietta....	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western.....	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan.....	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami.....	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro.....	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami.....	84	2,668,402	482,000	3,169,733	667,559	352,133	10	109½
Mansfield and Sandusky....	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie....	167	2,387,200	1,767,000	4,110,148	540,518	118,401	.....	77½
Ohio Central.....	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania.....	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana.....	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Xenia and Columbus.....	54	1,291,000	300,000	1,257,714	317,000	158,500	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central.....	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern.....	131	.....	.....	.....	.....	.....	.....	115
Indianapolis and Bellefontaine	83	.....	.....	.....	Recently opened.	.....	.....	87
Indianapolis and Cincinnati.	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	72
Lafayette and Indianapolis....	62	.....	.....	.....	opened.	.....	.....	.....
Madison, Indianapolis & Peru	138	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Peru and Indianapolis.....	40	.....	.....	In prog.	.....	.....	.....	65
Terre Haute and Indianapolis	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.....	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central.....	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago.....	92	1,932,361	500,000	In prog.	473,548	286,152	.....	118
Michigan Southern and Ind. N. Mich.	315	2,800,000	3,741,564	7,276,616	1,200,922	586,929	17	119½
Michigan Central.....	282	4,856,700	3,977,563	8,618,505	1,145,598	582,816	8	106½
Pacific..... Mo.	88	1,000,000	none	In progress	Recently opened.	.....	.....	.....

a new line, yet the importance of its connections, and the aid it will afford the roads already built, with which it will be the connecting link, will make it an exception to the remarks we have made as the construction of new works at this time.

Edwin F. Johnson upon the Pacific Railroad.

We have published, and have for sale, E. F. Johnson's recent work upon the Pacific Railroad. Mr. Johnson is admitted to be one of the first Engineers in this country, and his reputation is a good guaranty that the subject under discussion has been thoroughly considered and discussed. The work is illustrated by a large map, showing all the proposed routes, a profile of the Northern Route, a map of the mountain chain traversed by it, and seven lithographic views of various points upon its line. The whole work is elegantly got up, and makes a volume of 176 Pages, Octavo.

Persons wishing to procure copies of the above work, by forwarding one dollar to our address, can have a copy of the same with the maps, forwarded by mail post paid.

Working of Railroads in New England.

We have in preparation, and shall present at an early day, an elaborate investigation of the operation and results of the working of New England railroads, with especial reference to their application of motive power. We shall attempt, and shall expect to show, that, leaving out the subject of their gross receipts, their expenses of operation have been largely increased by the insufficient character of their motive power, in general use. The consideration of the subject will include an illustration of the systems of motive power in use on the Baltimore and Ohio, Reading, and New York and Erie roads, with suggestions for improvement of the locomotive, in its plan, proportions, manufacture and management. Believing the subject to be of especial importance to the interests of many of our railroads, we thus wish to bespeak the attention of their managers on its appearance.

Progress of the Sugar Interest in Louisiana.

The Hon. Thomas G. Hunt, member of Congress from Louisiana, furnishes the National Intelligencer with the following results of the sugar interests of his State, on the basis of the crop of 1853:

Estates.	Yield in hhds.	Value each.	Total.
548.....	100 or less	\$40,000	\$21,920,000
347.....	100 to 200	75,000	26,025,000
232.....	200 to 300	90,000	20,884,000
132.....	300 to 400	125,000	16,500,000
81.....	400 to 500	150,000	12,150,000
64.....	500 to 600	175,000	11,200,000
33.....	600 to 700	200,000	6,600,000
14.....	700 to 800	225,000	3,150,000
9.....	800 to 900	250,000	2,250,000
10.....	900 to 1000	275,000	2,750,000
6.....	1000 to 1100	300,000	1,800,000
2.....	1100 to 1200	325,000	650,000
3.....	1200 to 2000	350,000	1,050,000

Total value.....\$126,929,000

There were in operation, in the year 1853, 1,418 sugar estates, of which there were worked by steam, 943; and by horse power, 538. Using the old process by open kettles, 1,428; using the vacuo process, 53.

Proportions of Locomotives.

The perfection of the Locomotive is an object not confined only to mechanics and engineers; it affects the financial prosperity of railroads everywhere. The adaptation of locomotives is one of the most important parts of the system of railroad management, because "power is money," and is available in this conversion in proportion as it is made effective. It is with these views that the *Journal* has devoted so much space to discussions relative to the locomotive, in all of which, it has endeavored to present correct principles as the basis of improvements. In the mechanical structure of the machine, we have many examples of a very high degree of perfection, but in the *adaptation* of engines to the business and physical features of our railroads, there is yet ample room for improvement, and to such an extent as sensibly to increase the *profits* of railroad business. In the view of the greatest part of the management of railroads, the system is *perfect*, and this most erroneous opinion is one of the greatest difficulties in the way of improvement. We *know*, from direct observation, that, generally, the roads doing the most unsatisfactory business, are stocked with the most inefficient motive power. The great secret of economy in the operations of all of our great freight roads, has been in the *adaptation* for which we contend. The most successful builders have appreciated these principles and established their system of engines, and their engineering reputation also, upon their application. Read the card of M. W. Baldwin & Co., who are now advertising in this paper, and note the expression of engineering principles contained therein. Mr. Wians, long since established a similar system, and this *system of engines* introduced by these builders, is that under which the Baltimore and Ohio, and Reading Roads now conduct their freight transportation at such notoriously low rates. It has enabled them to carry maximum trains at low speeds, which has been the entire means of their brilliant success in that branch of transportation.

In considering the proportions of locomotives, we take the *weight* of steam expended in a given unit, as a standard of comparison. With some engineers, this unit is one of *time*, say one hour, but for freight engines we make it one of *distance*, as one mile. The weight of steam is proportional to the product of its volume and pressure. The standard of distance is always the same, that of time varies with the speed accomplished.

The only object of speed on railroads is *accommodation*; it is certainly not *economy*. Heavy freight *pays* no better if carried at thirty miles an hour than at fifteen, while the *cost* of carrying at the former speed would be more than *doubled*, in cases where the usual trains were up to the capacity of the engines.

Now the most economical proportion of a locomotive, is that which will not *permit* of being run at anything above an economical speed. And to this would have to be added a strict supervision upon the enginemen, that they should not carry such pressure of steam as to exceed that speed, for an engine with small wheels may injure the road, and wear itself more, at a speed higher than that at which it was designed to be run, than another engine designed for a higher speed.

Those proportions which, with a given pressure,

are of chief importance in determining the speed of locomotives, are the length of stroke and size of driving wheel. As the stroke is lengthened, and driving wheel reduced in size, the velocity is diminished, while the tractive power is increased. Hence, the large cylinder and small wheel require but little larger boiler, as more *time* is given to generate, with the same boiler, the increased quantity of steam. This is the reason why the Baltimore and Philadelphia freight engines have so small boilers, as compared with their expenditure of steam per mile, and why they always furnish an abundance of steam. Their present allowance of boiler room is indeed so ample, that enginemen, out of the reach of supervision, can easily raise such a pressure of steam as to run these engines at injuriously high speeds, for which they were never intended. The engines in use on the Baltimore and Ohio road, are generally worked at a lower pressure than on most of the northern freight roads, a custom which, whatever may be its economy, shows that the necessary pressure on the *piston* is maintained with a reduced pressure in the *boiler*.

The economical speed of freight trains is a subject to which railroad companies must direct their most serious attention, as it involves the profit of much of their business, and affects the general value of railroads, as facilities for communication. And contingent upon the determination of the speed, should be the proportions of locomotives designed for that speed.

The Air Line Railway to Montreal--Contract for the Missisquoi Road Executed.

At a meeting of the Directors of the Missisquoi Railroad Company held at Island Pond on Tuesday last, contracts were executed with the eminent and wealthy firm of Gzowski & Co., for building the entire line from Island Pond to Montreal. An amalgamation of the Canadian and Vermont Companies has been effected, and the Missisquoi road or that portion of the line lying within the State of Vermont, has contracted with the Montreal Junction Railway Company of Canada, to lease its road for the term of 999 years, so that by the terms of agreement between the two Companies, their interests are made one, and the entire line thus consolidated, or amalgamated, is under contract on terms that secures its completion.

The firm of Gzowski & Co., is composed of Messrs., A. T. Galt, M. P., Luther H. Holton, D. L. McPerson, C. S. Gzowski, Esqrs., names well known to the business men of Portland, whose eminent ability and high character are a guarantee of success to any enterprise in which they may choose to embark.

The contracts with this firm embrace the entire cost of construction, including land damages, station houses and equipment, from the Terminal Station of the Grand Trunk Railway at the Victoria Bridge at Montreal, to the Depot at Island Pond, a distance of about 100 miles. This line shortens the distance from Montreal to Portland 40 miles, over the present line, by the way of Sherbrooke and Richmond. and is more favorable also, in point of grades and curvature.

Messrs. Gzowski & Co. are building that portion of the Grand Trunk Railway from Toronto to Port Sarnia, and it is understood that their present contract for this short line to Montreal, is made with the hearty approbation of the Grand Trunk Railway.

Mr. Galt, in company with the Hon. Francis Hincks, sails from New York by the Baltic, on Saturday next.

About sixty miles of this line are within the limits of Canada, and 40 miles in Vermont. Toward the Canadian portion, municipal subscriptions have been obtained exceeding \$500,000, and

some private subscriptions are already made in Montreal.

The President of the Canadian Company, is the Hon. John Young, of Montreal, and Hon. Homer E. Royce of Berkshire is at the head of the Vermont Company.

The importance of this enterprise to Portland, and in fact to the whole State, is now fully apparent, and we intend to speak further of it, in this view, at an early day.—*State of Maine.*

Freight Tariff of the New York and Erie Railroad.

The construction of a freight tariff for railroad transportation, involves a great amount of labor, and of general examination of the nature, weight, bulk and risk of the articles to be carried. For the assistance of companies, engaged in framing, or revising freight tariffs, we give herewith a careful abstract of the conditions and charge of freight transportation, on the Erie Railroad, and of the estimation and classification of freight. At the conclusion, we shall append some deductions of a general nature, having a relation to the subject.

New York and Erie Railroad Freight Tariff—

Adopted September 12th 1853.

CONDITIONS.

The business of the Freight Department of the Corporation, is to carry Property that is properly the subject of transportation in Freight Cars.

The Corporation will not, however, receive or carry on any Train, any Bank Bills, Drafts Notes, Deeds, Contracts, or other Writings, or be responsible for their loss.

No Conductor or other Agent of the Corporation is authorized to take charge of Bank Notes, Money, or other valuable Papers or Packages.

No Gold or Silver Coin, Bullion, or manufactured Articles of Gold or Silver, Jewels, Watches, Pictures, Plated Articles, Glass, Silks or Lace, will be carried by the Corporation, for the loss of which it will be responsible, unless with such Articles, when delivered, is also delivered a Memorandum in writing, stating the character and kind of Articles and their value, and unless a proper extra price for the carriage and responsibility of such Articles be paid.

Gunpowder, Friction Matches, and the like combustible Articles, will not be taken on any terms, and if found secreted, or among other Goods, they will be forfeited or destroyed, and in case of damage the Shipper or Consignor will be held liable therefor.

Articles will not be received for transportation unless properly Packed in suitable Casks, Boxes, Bales or Packages, and such must be well and clearly Marked, with the name of the Consignee and of the Station where they are to be delivered.

Goods in Bundles will not be considered as properly Packed, and will not be received on any terms.

No allowance will be made for deficiency of Lemons, Oranges or other Fruits in Boxes, Baskets or Barrels, unless the same are well covered with canvass, and clearly Marked.

The Corporation will not be responsible for Property unless duly receipted for by an authorized Agent, and the destination of Property cannot be changed after Shipment.

The Corporation will not be responsible for Damages occasioned by delays from Storms, Accidents, or unavoidable causes, or by decay or injury of Perishable Articles, or for injury to Property produced by frost, heat, or the elements.

Perishable Property must always be prepaid.

The Corporation will only be liable as Ware Housemen for Property while in their Store Houses, reserving the right to charge storage or send to store all Property not taken away within 48 hours after arrival.

In New York, all produce and other commodities must be removed from the Boats and wharf within 24 hours after their arrival.

When receipts are required, duplicates ready

for signing, must be furnished by the consignor.

All articles will be at the risk of the owners, at the several *Way Stations* and *Platforms* where Depot buildings have not been established by the Corporation, from the moment such articles are delivered as *directed or marked*; or until taken into cars, as the case may be.

No separate article or parcel, however small, unless forming part of an invoice will be taken for less than 100 lbs., and if part of an invoice, for less than 50 lbs.

Invoices not amounting to 25 cents at regular rates will be charged 25 cents.

When articles are designed after transportation upon this Railroad, to be forwarded by some other corporation or an individual to their final destination, the duplicate receipt furnished by the consignor must specify the same and the articles be marked accordingly. This Corporation will not be responsible for such articles after they are so delivered.

Stoves, Stove Plates and Furniture, and other light castings, and machinery of all kinds, will only be taken at owner's risk as to breakage.

One day only will be allowed for loading and unloading cars, unless a special agreement to the contrary be made in writing, and whenever a car is suffered to remain loaded for 24 hours, unless otherwise agreed, it will be at the option of the Corporation to unload the car and charge the classified rate without any deduction, or to charge for the use of the car while standing loaded, at the rate of \$1.00 per day.

Locomotive Engines and Tenders will be drawn at 30 cts. per mile in Freight Trains, in all cases. Passenger cars at 2 cts. per wheel per mile. Freight and Baggage Cars at 1 cent per wheel per mile.

Pig Iron, Gypsum, mineral Coal, Brick, Building Stone, Firewood, Posts and Rails, Clay, Sand, Lime, in bulk, and Manures must be loaded and unloaded by the owner. Should the Corporation, for their convenience in any case, choose to do the loading, then 10 cents per ton will be charged in addition; and for unloading under such circumstances, a charge of 10 cents per ton will also be made.

Freight delivered at side Tracks or Turnouts, will be accounted for as it tallies or weighs into the cars by the Corporation's Agent at the point where it started.

Freight taken from side Tracks or Turnouts, where the Corporation has no Agent, will be accounted for as it weighs or tallies out from the cars at the point of delivery.

Freight destined for Stations where the Corporation has no Agent, must be prepaid.

No article that the Agents of the Corporation do not consider worth the charge for Freight at forced sale, will be taken unless the freight on the same is prepaid to the Agent to whom it is delivered.

Articles in the Third or Fourth Class will be taken at the convenience of the Corporation.

This Corporation will not be accountable for the breakage of Glass, Glass Ware, Looking Glasses and Marble, or for damages to the hidden contents of packages, or for breakage and bursting, or by improper packing, or for loss of Nuts and Shot shipped in bags, nor for any deficiency in Dry Goods, Boots Shoes, Hats, Caps, and Straw Goods, unless the packages are properly strapped and sealed, when shipped.

Articles enumerated below, will be estimated to weigh as follows:

Carriages of all kinds will only be carried at owner's risk.

The character † denotes articles which in the classification of freight are specified to be carried by estimated weights.

† Stage Coaches, Omnibusses and very large Wagons or Sleighs will be rated at 5000 lbs. each.

† A two-horse Carriage, Hack, Wagon or Sleigh, not boxed, will be rated at 3000 lbs.

† A one-horse Buggy, Chaise, Cab, Cart, Gig, Sulky, or Sleigh, not boxed, will be rated at 2000 lbs.

Carriages, when well boxed, double weight, at Owner's risk.

But if the owner of the carriage, &c., or his agent, shall load the same and assume the risk of any damage arising from exposure, fire, weather, chafing, or any other injury that may arise from imperfect packing, then the price to be charged will be Second Class Rates, at the above estimated weights.

Common Wagons and Carts, when sent five or more together, taken to pieces and closely packed, will be rated at actual weight.

Wood work of New Lumber Wagons or Carts not ironed, packed, in lots of five or more at one time, will be taken at actual weight.

† Household Furniture will be taken at owner's risk, well boxed, and at estimated weights, as follows: Sofas, 700 lbs.; Mahogany and Rosewood Bureaus, boxed, 500 lbs.; Mahogany Bedsteads, 300 lbs.; Mahogany Tables, 400 lbs.; Mahogany Washstands 300 lbs.; Mahogany Chairs, 100 lbs.; Shower Bath, 300 lbs.; Common Chairs, Toilet Tables and Washstands, 50 lbs.; Common Bedsteads and Tables, 100 lbs.

† Flour, 200 lbs.; Beef and Pork, 320 lbs.; Salt, 300 lbs.; per bbl.; Apples and Potatoes, 150 lbs. per bbl., and 50 lbs. per bushel in bags or baskets; Mackerel and Shad, 320 lbs. per bbl.

Wheat, 60 lbs.; Rye and Corn, 55 lbs.; Barley, 48 lbs.; Buckwheat, 45 lbs.; Oats, 30 lbs.; per bushel.

Packages of Butter weighing less than 50 lbs., will be rated at 50 lbs. each.

† Charcoal, in bulk, if dry, at 14 lbs. per cubic foot, or 23 lbs. per bushel.

† Stone, entirely unwrought, 4000 lbs. per cubic yard.

No allowance will be made for damage to any article, unless notice thereof is given before it is received by the Consignee.

All articles, the bulk of which renders it necessary to be shipped in open Cars, will be taken by special contract as to price and risk of damage, and the contract must be in writing.

All property will be subject to a charge for necessary coöperation.

A Statement of the rates of Storage, Conditions, and manners of receiving and shipping goods and merchandize, may be seen on application to the respective Freight Agents at the several Stations.

The Corporation reserve the right to change any of the above rates, classes, or conditions, at their pleasure.

Terms, cash on delivery.

RATES OF TOLL IN CENTS PER 100 POUNDS.

Names of Principal Freight Stations.	Distance from New York. Miles.	Rates between New York and several Stations.			
		1st Class.	2d Class.	3d Class.	4th Class.
Pier, (barges to N. Y.)	24	10	8	6	4
Piermont	25	14	11	9	7
Suffern	41 3/4	17	14	11	8
Turner's	57	21	16	13	10
Monroe	59 1/2	21	17	13	10
Oxford	62	22	17	13	10
Newburg	62	26	20	15	12
Chester	65	22	18	14	10
Goshen	69 1/2	23	18	14	11
Middletown	76 1/4	24	19	15	11
Delaware	98	29	22	17	13
Narrowsburg	132	36	28	21	16
Deposit	186 1/2	46	36	27	21
Susquehanna	202	50	38	28	22
Binghamton	224 1/2	54	41	31	24
Owego	246 1/2	58	45	33	26
Elmira	283	66	50	37	29
Corning	300 3/4	69	53	39	31
Hornellsville	341 1/2	77	59	43	34
Cuba	392 1/4	88	67	48	38
Olean	404 3/4	90	68	50	39
Dunkirk	469 1/4	100	75	55	40

Names of Principal Stations.	Distance from Dunkirk. Miles.	Rates between Dunkirk and several Stations.			
		1st Class.	2d Class.	3d Class.	4th Class.
Olean	64 1/2	24	19	14	10
Cuba	77	27	21	15	11
Hornellsville	127 3/4	37	28	21	16
Corning	168 1/2	45	34	25	19
Elmira	186 1/4	48	37	27	21
Owego	222 3/4	56	42	31	24
Binghamton	244 3/4	60	46	33	26
Susquehanna	267 1/4	65	49	35	28
Deposit	282 3/4	68	51	37	29
Narrowsburg	337 1/4	79	60	43	34
Delaware	371 1/4	85	65	46	37
Middletown	392 1/2	90	68	49	38
Goshen	399 1/2	91	69	49	39
Chester	404 1/4	92	70	50	39
Newburg	407 1/4	96	73	52	40
Oxford	407 1/4	93	70	50	40
Monroe	409 3/4	93	70	50	40
Turner's	412 3/4	94	71	51	40
Suffern	427 1/2	97	73	52	40
Piermont	444 1/4	99	75	54	40
Pier	445 1/4	99	75	54	40
New York	469 1/4	100	75	55	40

From November 1st, to April 15th, Ten per cent. will be added to these rates.

ENUMERATION AND CLASSIFICATION OF ARTICLES.

All articles not enumerated will be charged first class rates.

This character † refers to articles carried at estimated weights.

This character * refers to articles in the Third Class which are carried at Fourth Class Rate, in specified quantities.

First Class.

Apples, green.
Baskets, double weight, Batting, cotton, Blinds, Berries, Bonnets, Books, Boots and Shoes, Bread, Brushes and Brooms, Buffalo Robes, Bacon, loose, Beeswax, Beans and Peas, green, Bottles, empty, Boxes and Barrels, empty.

† Cabinetwork, boxed, at owner's risk, Codfish, in bundles, Candies, in boxes, Cards Cotton and Wool, † Chairs, boxed, Cotton waste, in sacks or bales, Copper and Brass vessels, Carpetings, Cigars, Cigar Boxes in cases, † Carriages, well boxed, owner's risk, Clocks and Weights, Cradles and Baskets, double weight, Cork, Covers and Sieves, Cocoa Nuts, † Cattle and Calves, Caps, Cassia, Cultivators, Camphene, at owner's risk of leakage.

Dry Goods, boxes and bales, Drugs, in boxes, Demijohns, empty, double weight, Deer Skins, loose in bundles.

Feathers and Furs, owner's risk, Furniture, old, loose, 1500 lbs. cart load at owner's risk, Fruit, green, at owner's risk, Figs, Flax, in bales, covered, Fish, fresh, at owner's risk, † Furniture, new well boxed, Fowls, in coops, one and a half weight.

Game at owner's risk, Garden Seeds, Glassware at owner's risk of breakage, Grapes, Glass, window, over 12 x 20, owner's risk.

Hair and Moss, upholster's, in sacks, Hats and Caps, Harnesses and Saddles, Hams, loose, † Hogs and Pigs, Hollow ware, Honey, † Horses and Mules.

Indigo, Ink, in boxes, at owner's risk of breakage.

Lemons and Oranges, packed, Looking Glasses, owner's risk of breakage, Leather, loose, going West, † Live Stocks of all kinds.

Machinery, well boxed, at owner's risk, Marble, wrought, at owner's risk of breakage, Mats and Rugs, Measures and Tubs, in nests, Medicines, owner's risk, Musical Instruments, Moss, in sacks, Muskets, and other fire arms, Melons and Cucumbers at owner's risk.

Nuts, in bags.

Oysters, in kegs or cans.

Paper Hangings, in bundles, Palm Leaf, in bales, Paper and Stationery, Peaches, in baskets, prepaid, at owner's risk, Pianofortes, 1,200 lbs., owner's risk, † Pigs, Peltries, Ploughs, Pumps, Pine Apples, at owner's risk, Porter and Ale, in glass, Plaster Paris Casts, owner's risk, Poultry, at owner's risk, Powder, not taken under any circumstances.

Quinces, at owner's risk.

Rattan.

Saddlery, Scale and Scale Beams, † Sleighs, well boxed, Shingles, loose, † Sheep and Lambs, Soap, fancy, Soda Water, Spirits of Turpentine, at owner's risk of leakage, Stove Pipe, Stove Furniture, at owner's risk, Stoves, mounted, at owner's risk, Straw Goods, Stove Plates, at owner's risk, Starch, Sweet Potatoes, Spices, ground.

Tinware, Trunks, Trees and Shrubbery, at owner's risk, Toys, boxed, Tea, Twine.

Umbrellas, boxed.

Veneering, Varnish, Veal and Lamb, dressed, at owner's risk, Venison, at owner's risk.

Waggons, children's, double weight, Waste, in sacks or bales, Wine, in boxes or baskets, Whips, boxed, Wadding, Wicking, Waggons and Carts, common, in pieces, Wheelbarrows, Whalebone, Wooden ware, Wool, in sacks, going West, Willow ware, double weight.

Yarn.

Second Class.

Alcohol, in bbls., Ale and Beer, in casks, Axes, Axletrees, iron, not car axes.

Bacon and Hams, in casks, going West, Bags and Bagging, in bales, Bells, Brimstone, Beef, fresh, at owner's risk, † Beef, salted, in bbls., going West, Blankets, in bales, Burlaps, Binder's Boards, Broom Corn, pressed in bales, Boilers for engines, Brandy, Gin and Rum, in wood, Bulk Meat, Butter, Beans, in bags or bbls.

Cannon, Canvass, Candles, Cranberries, Carts and Waggons, common in pieces, closely packed in lots of five or more, Chair and Turned Stuff, Clover Seed, Coffee, Copper, plate, sheet and bolt, Copper, pig, wire, rods and nails, Crockery, boxes and bbls., Currants in bbls. or casks.

Deer Skins, closely packed in bales, Domestic Shirtings, and Sheetings, in bales, Dried Apples and Peaches, Dried Fruits, Domestic Woollen Goods, going East on manufacturer's account, Drugs and Dyewoods, in bbls. or bags.

Eggs, at owner's risk, Earthen and Stone ware.

Fish, pickled, dried, salted or smoked, Flax or Grass Seed, Forks, Hay and manure.

Glass, window, under 12 x 20, owner's risk, Glue and Gum, Groceries, not enumerated in other classes, Grass Seed, Gunny Bags.

Hair, Saddler's and Plasterer's, Hardware, Hops, Hemp, in bales or bags, at owner's risk, Hoofs and Horns, Herrings, in boxes or kegs, Hides, dry, less than 100, Hoes, Hay and Straw, pressed in bales.

Iron Safes, Iron, hoop, band and sheet

Lead, in pipe, bars, pig and sheet, Leather, in rolls or boxes, Liquors, in casks or bbls., at owner's risk of leakage.

Moss, in bales, Mahogany and other Foreign Wood of value, Marble, unwrought, in slabs, at owner's risk.

Nuts, in bbls., Nail Rods.

Oakum, Oil Cloth, Oils, at owner's risk of leakage, Oysters and Clams, in shell, at owner's risk, prepaid.

Paints and Dye Stuffs, Paper, Printer's, Paper Hangings, in boxes, Pasteboard, Pickles and Cucumbers, in casks, Pork and Mutton, fresh, at owner's risk, † Pork, salted, in bls. going West, Peas, in bags or bbls.

Rope, Rags, at owner's risk of fire and wet, Rice, Raisins.

Straw Paper, Scales and Scale Beams, boxed, Scythes and Snaths, Shot, in bags, Saleratus, Soap, common, in boxes, Sheep Skins, in bales, Spelter and Zinc, in pigs, Stoves and Stove Plates, by the car load, on manufacturer's account, at

owner's risk, Shovels and Spades, Stove Plates, boxed.

Tobacco, in bales, Tow, pressed, Type, Tobacco, manufactured, going West.

Water, mineral, Wood, in shape, Wool, pressed in bales, Wines, in casks or bbls., at owner's risk of leakage, Whiskey; going West, at owner's risk of leakage.

Third Class.

Acids, Pyroligenous, in casks, * Anchors, Anvils, * Ashes, dry, house and leached, * Ashes, Pot and Pearl, Axes, going East on manufacturer's account.

* Bacon, in casks, * Bleaching Powders, in casks or bbls., * Bacon, in casks or boxes, going East, † Beef, salted in bbls., going East, * Bark, Tanners, Bones, * Bran or Feed, in bags or bls., * Brick or Building Stone, to Pier only, * Burr Blocks, * Barilla.

† Charcoal, to Pier only, Cheese, in boxes or casks, at owner's risk of weather, Cider, * Clay, Marl and Sand, to Pier only, * Coal, Mineral, to Pier only, Codfish, in hlds. and boxes, Crockery, crates and hlds., Copper, Ore, * Cotton, in bales, * Cement, in bbls., * Chain Cables, Copper in boxes, * Chalk, * Car Wheel and Car Axles.

Dye Wood in sticks, Domestic Cotton Goods, on manufacturer's account going East.

* Earths and Manures, to Pier only.

† Fire Wood, Posts and Rails, * Flour or Meal, in bags, † Flour and Meal, in bbls.

† Grain of all kinds, in bags, * Grain of all kinds, in bbls., * Gypsum, Guano, Grindstones.

Hemp, Manilla, in bales, Hemp Yarn, in reals, * Heading and Staves, Hides and Skins, green, Hides, dry, in bales, Hog's Hair, in bales, * Hoops, and Hoop Poles, owner to load and unload.

* Iron, bloom, bar, scrap, pig, boiler, and railroad, * Iron Castings, plain and heavy, not machinery, * Iron Ore.

* Junk, Joiner's Work.

* Lard and Lard Oil, in bbls. and kegs, * Lath, actual weight, * Lead, in pigs or bars, going East, Leather, undressed, in boxes or rolls, going East, * Lime, in bbls. or casks, * Lime, in bulk, Locomotive Engines.

* Mill Stones, Molasses, * Marble and Stone, unwrought, in blocks, Mahogany, in log.

* Nails, Spikes and Bolts.

Oars, at owner's risk, to Pier only, owner to load and unload, * Oil Cake, in casks.

* Plaster, † Pork and Beef, salted in bbls., going East, † Potatoes and similar roots in bags or bbls., * Pitch.

Railroad Cars, * Rosin, Rigging.

* Salt, Saltpetre, * Soda Ash, * Shingles, in bunches, actual weight, Starch, in bbls., on manufacturer's account, Sugar, hlds., bbls. and boxes, Shot, in kegs, * Steel, in boxes, bundles or bars, Steel Springs, going East on manufacturer's account, Sumac, † Stone, unwrought.

* Tallow, in bbls., * Tar, Tin, * Tobacco, in hlds. or boxes, unmanufactured, Tobacco manufactured, going East.

Vinegar.

* Whiting, * Whiskey, going East, Wire.

* Zinc, in casks.

Fourth Class.

Anchors, 10 tons, Ashes, leached, 10 tons, Ashes, Pot and Pearl, 10 tons.

Bacon and Hams, in casks, 10 tons, † Beef and Pork, salted, in barrels, 10 tons, Burr Blocks, 10 tons, Barilla, 10 tons, Bleaching Salts, 10 tons, Bark, ground, in bags or casks, Bark, Tanner's, 10 tons, Brick and Building Stone, to Pier only, owner's to load and unload, 10 tons.

Chain Cables, 10 tons, Chalk, 10 tons, Coal, Mineral, 10 tons, to Pier only, Cement, 10 tons, Clay, 10 tons, Car Wheels and Axles, 10 tons, Cotton, in bales, 10 tons.

Earth and Manure, 10 tons, to Pier only.

† Flour, 100 bbls., Flour, in bags, 10 tons, Fish, salted, in bbls., 25 bbls., † Firewood, 10 tons, to Pier only, Feed, in bags, 10 tons, Feed, in bbls., 100 bbls.

† Grain, in bags, 10 tons, Grain, in bbls., 100

bbls., Gypsum, 10 tons, to Pier only, Guano, 10 tons, Grindstones, 10 tons.

Heading and Staves, 10 tons, Hoops and Hoop Poles, 10 tons.

Iron, bar, pig, scrap, bloom, bolt, shapes, boiler and railroad, 10 tons, Iron Ore, 10 tons, Iron Castings, heavy, not liable to damage, 10 tons.

Junk, 10 tons.

Lime, in casks, 10 tons, Lime, in bulk, to Pier only, owner to load and unload, 10 tons, † Lumber under 25 feet long, to Pier or Newburg, 10 tons, Lath, 10 tons, Lead, pig and bar, 10 tons, Lard and Lard Oil, in bbls., 10 tons.

Marble, unwrought, in blocks, 10 tons.

Nails, 10 tons.

Oil Cake, in casks, 10 tons.

† Potatoes, in bbls., 100 bbls., Pitch, 25 bbls., Plaster, 10 tons, owner to load and unload, Posts and Rails, 10 tons, owner to load and unload.

Rosin, 25 bbls.

Spikes, common, ship and railroad, 10 tons, † Stone, unwrought, 10 tons, Steel, in boxes, 10 tons, Sand, 10 tons, to Pier only, † Salt, in bbls. or bags, 10 tons, Soda Ash, 10 tons, Shingles, 10 tons, Shooks, 10 tons.

Tallow, in casks, 10 tons, Timber under 25 feet long, 10 tons, Tobacco, unmanufactured, 10 tons, Tar, 25 bbls.

Whiskey, 10 tons, Whiting, 10 tons.

Zinc, 10 tons.

RATES FOR HIDES AND SOLE LEATHER.

Dry Hides sent from New York, and Sole Leather sent to New York, when taken in quantities of 100 or more Hides or Sides, at one time, will be charge by the piece as follows:

Shippers of Hides and Leather are required to mark each Hide (dry) or Side of Leather with paint or brand. This rule is found necessary to avoid errors in delivery.

From and to	Per Side to N. Y.	Per Hide from N. Y.
Suffern and all stations between Suffern and New Hampton.....	3	4
Middletown.....	3½	4½
Delaware.....	3½	4½
Narrowsburgh.....	4½	5½
Deposit.....	5½	7
Susquehanna.....	6	8
Binghamton.....	6	8
Owego.....	6½	8½
Elmira.....	7½	9½
Corning.....	7½	10
Hornellsville.....	8½	11
Cuba.....	9½	12
Olean.....	9½	12½
Dunkirk.....	11½	13

RATES FOR WELL SEASONED PINE AND HEMLOCK BOARDS AND PLANK NOT MORE THAN 25 FEET LONG, PER M. FEET, B. M. IN LOTS OF 10 TONS OR MORE, AT ANY ONE TIME.

If only partially seasoned, 10 per cent., and if green, 20 per cent. will be added to these rates. For pine and hemlock logs and timber not more than 25 feet long, fifteen per cent. will be added to these rates.

	Owners to load and the RR Co. to unload.	Owners to load and unload.
	To Pier.....	To Newb's.....
From Dunkirk.....	\$8 80	\$8 52
" Olean.....	7 70	7 42
" Cuba.....	7 42	7 16
" Hornellsville.....	6 43	6 16
" Corning.....	5 50	5 22
" Elmira.....	5 50	5 22
" Owego.....	4 84	4 56
" Binghamton.....	4 40	4 12
" Susquehanna.....	4 01	3 74
" Deposit.....	3 57	3 30

To determine the contents of each car when

loaded with lumber, it will be measured by solid or cubic feet. Each cubic foot will be estimated to contain 10 superficial feet or B. M. In all cases, where lumber of different lengths is loaded promiscuously on the same car, the whole load will be estimated to be of the length of the longest on said car; but when loaded separately, the actual dimensions of each length will be taken. Planted lumber, joist, scantling and plank, exceeding two inches in thickness, will be estimated to contain eleven feet B. M. to each cubic foot.

On Norway or Yellow Pine, not more than 25 feet long, from and to Stations named in the above table, 25 per cent. will be added to the stated rates in said table.

Lumber of all kinds, not more than 25 feet long, headings and Staves, shooks, Tanners bark, shingles and hoop poles, (which must be tied up in bunches,) in quantities of 10 tons or more, to or from stations not named above, will be taken at fourth class rates, to be loaded and unloaded by the owner, and estimated to weigh as follows:

†Firewood, posts and rails, if dry, at 4000 lbs. or if green, at 4500 lbs. per cord.

†Tanner's bark, if dry, at 2000 lbs. per cord.

†Pine and hemlock boards, planks and scantling if well seasoned, at 2500 lbs. or if not well seasoned, at 2750 lbs.; if green, at 3000 lbs. per M. feet, B. M.

†Norway or yellow pine, dry, 3,000 lbs.; partly dry, 4,000 lbs.; if green, 5,000 lbs. per M. feet, B. M.

†Ash, maple and cherry, if dry, 3500 lbs. or if not dry, 4000 lbs. per M. feet, B. M.

†Oak and walnut, if well seasoned, 4000 lbs.; if not well seasoned, 5000 per M. feet, B. M.

†Green basswood boards 3000 lbs.; if dry, 2500 lbs. per M. feet B. M.

Timber and spars over 25 feet long, will be carried at special prices, to be agreed upon between the General Freight Agent or Lumber Freight Agent and the owner.

Ship timber, staves, heading and hoop poles, will be charged for at actual weights.

Lumber must be removed from Piermont pier within five days after notice of its arrival has been given to the consignee, or twenty cents per M. feet B. M., will be charged for each day that it remains there more than five days after such notice. The want of room to store it at the pier, renders this rule necessary, and the Agent there will be required to enforce it rigidly.

REDUCED RATES FOR HORSES, CATTLE, SHEEP, LAMBS, HOGS, AND OTHER LIVE STOCK PER CAR LOAD OF NOT MORE THAN TEN TONS, WHEN TAKEN ENTIRELY AT OWNER'S RISK, BETWEEN THE STATIONS NAMED AND NEW YORK, PATERSON AND NEWBURG, THE OWNER OR DRIVERS, ONE TO EACH CARLOAD, TO ATTEND TO THEIR STOCK, WILL BE CARRIED FREE, BUT AT THEIR OWN RISK OF PERSONAL INJURY FROM ANY CAUSE WHATSOEVER:

From	To New York.	To Newburg.
Dunkirk	\$90 00	\$84 00
Olean	83 00	77 00
Cuba	81 00	75 00
Hornellsville	70 00	64 00
Painted Post and Corning	66 00	60 00
Elmira, Wellsburg and Chemung	65 00	59 00
Owego and Campville	62 00	56 00
Binghamton and Great Bend	60 00	54 00
Susquehanna	59 00	53 00
Deposit	58 00	52 00
Narrowsburg	50 00	44 00
Delaware	44 00	38 00
Middletown	32 00	26 00
New Hampton	28 00	22 00
Goshen	24 00	18 00
Chester, Oxford and Monroe	20 00	14 00
Turner's and Greenwood	16 00	10 00

LIVE STOCK.

In quantities less than a car load, will be taken at the following estimated weights, at first class rates:

†1 Horse or horned animal will be rated 2,000 lbs.
 †2 Horses or horned cattle " " 3,500 "
 †3 Horses or horned cattle " " 5,000 "
 †(Any excess over 5,000 lbs., and less than a car load, at actual weight.)

†Calves not more than three months old.. 150 lbs.
 †Sheep 125 " || †Lambs | 100 " |
| †Pigs and store Hogs | 125 " |
| (Calves over three months old, actual weight.) | |

A deduction will be made from the above named prices per car load, for Cattle, Horses, Hogs, Pigs, Sheep, Lambs, Calves, or other live stock, if taken off at the following stations, viz: At Delaware, or Narrowsburg, \$8; at Middletown, \$6; at Goshen or Chester, \$5; at Sufferns, or any other point on the Railroad east of that station, \$3.

MOVEMENT OF FREIGHT TRAINS—EASTWARD BOUND.

Slow Freight.		Miles.
Monday, leaves Dunkirk	6.20 A. M.	
" " Olean	6 1/2	2.10 P. M.
arrives at Hornellsville	9.52 "	
Tuesday, leaves Hornellsville	12.7 1/2	7.00 A. M.
" " Corning	168 1/2	12.07 P. M.
" " Elmira	186 1/2	2.22 "
arrives at Owego	222 3/4	6.33 "
Wednesday, leaves Owego	6.05 A. M.	
arrives at Susquehanna	12.00 M.	
Thursday, leaves Susquehanna	267 1/4	4.00 A. M.
" " Deposit	282 3/4	5.44 "
" " Narrowsburg	337 1/4	12.27 P. M.
arrives at Delaware	371 1/4	3.45 "
Friday, leaves Delaware	2.00 "	
arrives at Pier	445 1/4	10.47 "

Fast Freight.

Monday, leaves Dunkirk	12.30 P. M.	
arrives at Hornellsv.	127 3/4	11.52 "
Tuesday, leaves Hornellsville	4.00 A. M.	
arrives at Susquehanna	267 1/4	4.43 P. M.
leaves Susquehanna	6.00 "	
Wednesday, arrives at Delaware	371 1/4	4.15 A. M.
leaves Delaware	6.00 "	
arrives at Piermont	445 1/4	1.35 P. M.
From Piermont to New York by river in barges.		
Distance 24 miles.		

WESTWARD BOUND.

Slow Freight.		Miles.
Monday, leaves Piermont	4.00 P. M.	
arrives at Delaware	74	11.30 "
Tuesday, leaves Delaware	8.00 A. M.	
arrives at Susquehanna	178	9.50 P. M.
Wednesday, leaves Susquehanna	1.15 "	
arrives at Owego	222 1/2	6.47 "
Thursday, leaves Owego	6.45 A. M.	
arrives at Hornellsville	317	6.15 P. M.
Friday, leaves Hornellsville	7.15 A. M.	
arrives at Dunkirk	445	7.40 P. M.

Fast Freight.

Monday, leaves Piermont	6.00 A. M.	
arrives at Delaware	74	1.20 P. M.
Tuesday, leaves Delaware	6.00 A. M.	
arrives at Susquehanna	178	4.55 P. M.
Wednesday, leaves Susquehanna	6.00 A. M.	
arrives at Hornellsville	317	8.00 P. M.
leaves Hornellsville	10.00 "	
Thursday, arrives at Dunkirk	445	10.30 A. M.

Average load for the same engine on each Division:

Piermont to Delaware	74 miles.	14 cars.
Delaware to Susquehanna	104 "	25 "
Susquehanna to Hornellsville	139 "	40 "
Hornellsville to Dunkirk	123 "	16 "

By these conditions and charges, it will be seen that local freight, in the summer, for the first 100 miles from New York, including shipment from New York to Piermont, costs as follows:

First class	5.9 cts. per ton of 2000 lbs. per mile.
Second class	4.5 " " " "
Third class	3.47 " " " "
Fourth class	2.65 " " " "

For the first 200 miles from New York:

First class	4.95 cts. per ton per mile.
Second class	3.76 " " "
Third class	2.77 " " "
Fourth class	2.16 " " "

For the first 300 miles from New York:

First class	4.6 cts. per ton per mile.
Second class	3.52 " " "
Third class	2.59 " " "
Fourth class	2.06 " " "

Through freight:

First class	4.26 cts. per ton per mile.
Second class	3.14 " " "
Third class	2.34 " " "
Fourth class	1.7 " " "

Through freight, between November 1st and April 15th:

First class	4.69 cts. per ton per mile.
Second class	3.45 " " "
Third class	2.57 " " "
Fourth class	1.87 " " "

Through winter rates, per article of heavy freight, in lots of 10 tons and over. Distance 469 1/2 miles:

Flour, per bbl.	88 cents.
Beef and Pork, per bbl.	141 "
Wheat, per bushel	26 1/2 "
Oats, per "	13 1/2 "
Rye and Corn, per bushel	24 1/2 "
Lumber, per M. feet	\$8 80
Iron in heavy castings, forgings, bars or masses, per ton	8 80
All heavy minerals, earths, fuel, building materials, produce and provisions, per ton.	8 80

Nine per cent. discount from these rates between April 15th and November 1st.

ABSTRACT OF FREIGHT BUSINESS OVER THE NEW YORK AND ERIE RAILROAD FROM OCT. 1st, 1852, TO SEPTEMBER 30th, 1853.

Number of tons carried one mile	101,626,522
Miles run by freight trains	1,249,594
Average load per train, tons	81
Gross earnings for freight	\$2,587,214 52
Average receipts per ton per mile, cents	2.5
Average through trips, each way	1,404
Average through trips each way per day, for 313 days	4 1/2

The following is a special freight notice, issued in the month of January:

NEW YORK AND ERIE RAILROAD—(Special Freight Notice.)

General Freight Office, }
 New York, Jan. 28, 1854 }

On and after Wednesday, February 1st, the New York and Erie Railroad Company will transport from Dunkirk, Buffalo and Tonawanda, to New York, as follows:

Articles not enumerated	\$1 00 per 100 lbs.
Dressed poultry, and fresh meats (except hogs) at owner's risk.	1 25 " "
Furs in bales and boxes, merchandize, fowls in coops, at once and a half actual weight	1 00 "
Books and papers in boxes, wine in boxes, bacon and hams loose, curled hair, sheep and deer skins, wool, hemp in bales uncovered, domestic dry goods of all kinds	0 60 "
Dressed hogs (at owner's risk).	0 80 "
Dried fruit in barrels and boxes, beeswax, clover, grass and flax seed, ginseng, hops, hair in bales, nuts, oil cloth, potatoes, printing paper, roofing paper, rags in sacks, buffalo robes, wood in shape, wrap-	

ping paper, yarn pressed in bales, hogs' hair and bristles. 0 60 " "

Butter, cheese, and eggs in barrels, (at owner's risk,) hemp in bales, (at owner's risk,) starch in boxes and barrels (on manufacturer's account. 0 60 " "

Beans and peas, unmanufactured leather in boxes and rolls. 0 50 " "

Ground bark in casks, grain and flour in bags, lard oil, linseed oil, lard in barrels and kegs, cracklings, oil cake, sausage, skins, bacon, hams, tobacco, cotton in bales, tallow and grease in casks and barrels, potash, pearlash. 0 44 " "

Beef, pork, and pickled meats in bbls. and tcs., domestic spirits. 0 44 " "

Flour in lots of 50 bbls. or more 1 00 per barrel.

Cleveland and New York City Railroad.

The following gentlemen were chosen Directors of this projected road on Friday: Cleveland, E. G. Williams, H. W. Clark, J. A. Morley; Painesville, Uri Seely, R. Hitchcock; Madison, W. W. Branch; Ashtabula, Frederick Carlisle.

Saturday evening Ellery G. Williams, of this City, was unanimously elected by the Directors as President, and W. H. Stanley, Secretary and Treasurer.

\$417,000 Stock has already been subscribed in this City, and adjoining counties, and from the high character of the Directors and the President, for enterprise and experience in railroad matters, the prospects of the road are every way encouraging.

The road will form a connection with the other six feet gauge roads contemplated to Cincinnati and St. Louis, and with New York and Erie Road, and is an important connection of our City.—*Cleveland Herald*.

Louisville and Sandusky Railroad.

This Company has been organized by the choice of the following officers, viz: Directors, E. Cooke, J. A. Camp, A. A. Harbison, Robt. Young, J. P. Williamson, George Nishwitz, and Alfred Denny. The officers are, President, E. Cooke; Secretary, Wm. Elliott; Treasurer, Robert Young; Chief Engineer, T. R. Jones.

The line of the proposed road extends from Sandusky, on Lake Erie, to New Albany, opposite Louisville, Ky. It connects with the Mad River R. R., at Huntersville, and will be extended thence in a south westerly direction, via Piqua, Milton, and Eaton, to the Indiana State line where a junction will be formed with the New Albany and Sandusky city Junction Railroad.

Georgia.

The estimated cost of the Western and Atlantic road is placed at \$5,059,331. The action of the legislature has been adverse to the sale of this work to individuals.

Kentucky Statistics

We gather the following items of taxation in that State, for 1853: 20,667,448 acres of land, valued at \$166,857,626; 38,119 town lots, valued at \$44,859,205; 199,949 slaves, valued at \$79,462,188; 331,211 horses and mares, valued at \$15,186,215; 57,671 mules, valued at \$3,300,981; 2,917 jinnies, valued at \$311,334; 607,876 cattle, valued at \$3,848,648; 4,268 stores at \$10,978,487. Value under the equalization law \$44,943,519. Total valuation \$366,752,852, and increase of 88 millions over the valuation of 1852.—The tax on this and on the pleasure carriages, watches, plate, pianos, &c., makes a total revenue of \$646,024 46. The total number of white males over 21 years old is 162,477, total number of children between 6 and 18, 219,239.

Taunton and New Bedford Railroad.

The receipts of the New Bedford and Taunton Railroad Company for the year ending November 30, 1853, have been as follows: Amount received for transportation of passengers, \$74,135 31; of merchandise, \$34,970 22; of mail, \$5,873; of Taunton Branch Railroad Corporation, \$8,544 02; sundry receipts for expresses, &c., \$3,079 61—total \$122,602 16. The expenditures for the same time have been as follows:—Repairs of road, \$15,305 48; do. of engines and cars, \$12,979 89; fuel, oil, salaries, &c., \$47,477 66—total \$75,763 03. Net earnings after deducting expenses, \$46,839 13. There have been declared two dividends during the year, amounting to \$35,000. Total surplus not divided \$30,916 41.

Knoxville and Kentucky Railroad.

The stockholders of the Knoxville and Kentucky Railroad Company met at Knoxville on the 5th of Feb'y. A sufficient amount of stock having been subscribed, the stockholders elected the following persons directors of the company, viz: Thos. C. Lyon, Wm. G. Swan, P. Dickinson, C. M. McGhee, A. L. Maxwell, O. P. Temple, C. H. Coffin, John H. Crozier, Wm. H. Sneed, and Jos. L. King. The board of directors then organized by electing John H. Crozier president and O. P. Temple secretary and treasurer.

Naugatuc Railroad.

The following is a statement of the receipts and expenses of the Naugatuc Railroad for the past year. The receipts show a large increase, and the net earnings are greater than any previous year, notwithstanding the heavy losses by the recent floods. The statement is as follows:

Receipts for the year 1853.....	\$246,687 43
Expenses.....	122,059 25

Total.....	\$124,628 18
Less State taxes.....	3,036 49

Net earnings.....	\$121,591 69
Net earnings 1852.....	113,466 50

Increase of net earnings over 1852...\$8,125 19

Commerce and Tonnage of Boston and New York.

From recent published statistics it appears that the tonnage of the port of New York surpasses that of the ports of London and Liverpool combined. That of Boston is about one-half of the tonnage of New York, and these two cities wield over one-half of the total navigation of the United States. The great excess of the tonnage of New York over Boston consists in its immense fleet of European packets and of ocean and inland steamers. In many great branches of commerce, such as the East India, African, Pacific, South American and Mediterranean trade, Boston has the largest tonnage employed. The city of Philadelphia is now importing many dry goods in her new lines of steamships to England, and her trade in this branch is rapidly growing. But, with this exception the great commercial transactions of the country mostly centre at New York and Boston, and all other ports are very limited and contracted in the sphere of their commercial operations. The wealth of these two cities now amount to nearly seven hundred millions of dollars, which enables them to control all the great commercial and monetary interests of the country, thus rendering all other cities in some degree tributary to them. The tonnage of Boston was never increasing faster than at present, probably at the rate of more than 10 per cent a year. Not a ship-yard in New England is without a ship, building for some Boston house, and in many places all that are building are to come here.

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors' Compasses Manufactured on the most improved principle and of the Best Quality by THOMAS HUNT, No. 53 Fulton Street, New York.

1y10*

SHANAHAN & LOEBER,

181 William-st,
(1st floor-Up Stairs.)
NEW-YORK.

MANUFACTURERS OF
THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
Chains, Scales, Levelling Rods, &c. 1y10

To Railroad Contractors.

OFFICE PITTSBURGH AND CONNELSVILLE }
RAILROAD COMPANY. }

SEALED proposals will be received at the office of this Company, at Neville Hall, in the City of Pittsburgh, until 5 o'clock p. m., of Wednesday, the 22d day of March next, for the Graduation and Masonry of that part of the Pittsburgh and Connelville Railroad extending from West Newton, in Westmoreland Co., to Connelville, in Fayette Co., this State, a distance of 25 miles. This work is generally of a very light character. It will be divided into sections of about 1 mile each. Proposals will be received for one or more sections.

Proposals will also be received until the same time for the making of the Tunnel at the Sand Patch Summit, on the Alleghany Mountains, about 25 miles from Cumberland.—This Tunnel is to be forty-one hundred feet in length, through rock. The work is worthy the attention of the best contractors. It is an excellent region to do work cheaply.

Maps, Profiles and Specifications will be ready for the examination of bidders on and after the 6th day of March next, and all proper information given on application to Oliver W. Barnes, Chief Engineer, or the Assistant Engineers on the line.

Satisfactory testimonials will be expected from Contractors not known to the Company. By order of the Board.

W. LARIMER, JR., President,
Pittsburgh & Connelville R. R. Co.

THE

New Yorker Handels-Zeitung

A GERMAN Commercial Paper, containing Prices Current, Market Reports, Exchange and Stock Rates, Shipping List and Correspondence from all parts of the world, appears twice a week in two separate editions, viz: one for home circulation, published each Wednesday and Saturday morning; the other for circulation in Europe, Belgium, Holland, Denmark, Sweden, &c.—the only German Paper published in the United States admitted to the German States—appears before the departure of each mail steamer for Europe. Terms:—The paper, per annum, at New York, \$5. Advertisements taken at liberal terms.

Duggan's Work on Bridges.

SPECIMENS OF THE

STONE, IRON AND WOOD BRIDGES,
VIADUCTS, Tunnels, Culverts, etc., of the United States Railroads; illustrated by a series of drawings, from actual measurement of the works; including plans, sections, elevations, and details of each structure, and an appendix, illustrative of the art of bridge building, as at present practiced in Europe.

Illustrated With Numerous Accurately Engraved Drawings.

15 Numbers, 75 Cents, each.

*A few sets of the above work, may be had by applying to the subscriber.

JOHN WILEY, 167 Broadway.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment. Reference will be given to well known companies and contractors.

MORRIS & COHNERT,
European, American Employment Office,
1t 287 Broadway, corner Reade-st.

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.
WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their **SYSTEM OF LOCOMOTIVE ENGINES** in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture *Five different kinds of Engines* and several classes or sizes of each kind.

Particular attention paid to the *strength of the machine in the plan and workmanship of all the details.* Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowing Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

Notice to Contractors.

SEALED PROPOSALS will be received at the Office of the undersigned in Indianapolis until the 15th day of March next, for the Grading, Masonry and Bridging of that portion of the Indiana and Illinois Central Railway, between the West line of Edgar County and Decatur Illinois, being for a distance of about 53 miles.

The Map and Profiles together with the Plans and Specifications, will be ready for inspection at the Office of the Company in Decatur on and after the 1st day of March.

Any further information may be obtained at the Office of the undersigned in Indianapolis.

M. C. STORY & CO.

Indianapolis, February 7th, 1854.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions,
 ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of
Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
 64 Courtland st., N. Y.

**To Railroad and Canal Co.'s,
Contractors, &c.**

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics, &c. of any description, and also to inform them that they forward such men to whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.,
 No. 55 Greenwich street, New York.

New York and Erie R. R.

PASSENGER TRAINS
 leave Pier foot of Duane street,
 as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the B. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAY EXPRESS, at 12½ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAY PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.

These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

O. H. MINOT, Sup't.

Railroad Iron.

2000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and "Crawshaw" manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by
P. CHOUTEAU, JR., SANFORD & CO.,
 December 4, 1852. No. 51 New street.

To Contractors.**CONSTRUCTION OF THE NORTH SHORE
RAILWAY.**

THE Directors of **THE NORTH SHORE RAILWAY**, from Quebec to Montreal will receive tenders for the construction of said Railway or sections thereof from this to the fifteenth day of March next.—For information, &c., apply personally or in writing to the undersigned.

HECTOR L. LANGWIN,

Sect'y. & Treasr. N. S. R. C.

Quebec, Feb. 14, 1854. Buade St., Quebec.

OFFICE CINCINNATI, HAMILTON & DAYTON R. R. CO.
 CINCINNATI, Feb. 14, 1854.

THE Directors have this day declared a dividend of Five per Cent. on the capital stock of this Company, payable at the office of the Company in Cincinnati on and after the 25th inst., till which time the Transfer Books will be closed; and at the Ohio Life Insurance and Trust Company's Office in New York, on and after the 15th Proximo. By order of the Board.

FRANK S. BOND,
Sect'y.**Passenger Cars for Sale.**

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.
 New York, Feb. 21st, 1854.

Railroad Letting.

PROPOSALS will be received by the undersigned at the Engineer's Office, Dover, Delaware, until March 14th, inclusive, for the Graduation, Masonry and Superstructure of the **DELAWARE RAILROAD**, extending from the New Castle and Frenchtown Railroad to Seaford, a distance of 70 miles, through a healthy region, and convenient to procure hands and supplies.

The work will be divided into sections of about 4 miles each.

Maps, profiles, and specifications will be ready for the examination of contractors, after the 1st of March.

Bidders personally unknown to the undersigned, will be expected to produce satisfactory evidence of their responsibility.

feb. 18-tm14
D. H. KENNEDY,
 Resident Engineer.

**LAWRENCE SCIENTIFIC SCHOOL,
Harvard University.**

THE next Term of this Institution will open on the second day of March, 1854, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical Exercises, according to the nature of the Study, will be given in:

Astronomy.....	by Messrs. Bond.
Botany.....	Prof. Gray.
Chemistry, analytical and practical.....	" Horsford.
Comparative Anatomy and Physiology.....	" Wyman.
Engineering.....	" Eustis.
Mathematics.....	" Pierce.
Mineralogy.....	" Cooke.
Physics.....	" Lovering.
Zoology and Geology.....	" Agassiz.

For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

Cambridge, Mass., January 1854.

Notice to Contractors.

EUROPEAN & NORTH AMERICAN RAILWAY
 NEW BRUNSWICK.

PROPOSALS will be received by the undersigned at his office, Princess street, St. John, N. B., up to the 5th day of April 1854, for the entire construction of that portion of the Eastern Division of the above Railway extending from the crossing of the Road from Schediack to Dorchester to the Bend of the Petitcodiac River being a distance of about twelve miles, comprising the Grubbing, Grading, Masonry, Bridging, and the Ballasting and Laying of the permanent Road.

The work will be divided into two sections which being adjacent to others to be proceeded with on their completion, is well worthy the attention of Contractors.

Proposals may be made for one or both sections and with or without the permanent Road and Ballasting.

Plans and Specifications will be ready for the inspection of bidders on and after the 5th day of March at the above office where all other necessary information may be obtained.

W. E. ROSE.

St. John, N. B., 27th Feb'y 1854.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

Knox & Shain,

**MANUFACTURERS OF
 LEVELS, TRANSITS AND SURVEYING
 COMPASSES.**

No 72 Dock st. first door south of Walnut, west side
PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Railroad Iron Via Quebec.**JOHN ANDERSON & CO.**

**COMMISSION MERCHANTS,
 SHIPPING AGENTS AND BROKERS,
 Quebec and Montreal.**

PARTICULAR attention given to the Transshipment of Iron &c., in Transits for the Western Lake Ports, and to the Shipment of **Rails in Great Britain.**
Quebec, Dec. 2, 1853.

To Contractors.

PACIFIC RAILROAD OF MISSOURI,
 THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.

THOS. S. O'SULLIVAN, Chief Eng.

Pacific R.R. Office, St. Louis, Feb. 1854.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57 1/2 lbs. per yard, to be shipped from Wales in June and August, for this port—for sale by
BOORMAN, JOHNSTON & CO.,
90 Broadway, New York.
June 9, 1853.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to
THOS. CHAMBERS, President,

September, 1850.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.

VOSE, PERKINS & CO.,
9 South William St.

New York, June 1, 1851.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.

Mayville, Ky., Sept. 29, 1853.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
157 Broadway, New York.CHARLES B. STUART,
DANIEL MARSH,EDWARD W. SERRELL,
SAMUEL McELROY.**Railroad Iron.**

3000 TONS superior quality, delivery from April forward, with 5 to 600 tons per month, for sale by
NAYLOR & CO.,
121st 99 & 101 John street

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

JOHN H. HICKS,
90 Beaver street.
2d Feb'y.**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West.

W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
Feb. 18. 1m.**To Railroad Engineers and Contractors.**

WANTED, a corps of efficient Engineers and Contractors, for the construction of a Railroad in one of the Southern States. Apply to
DUFF GREEN.

New York, Feb. 14th, 1854.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day. On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloohah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.**To Locomotive Engine Builders and Engineers.**

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3 1/2 to 6 1/2 inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

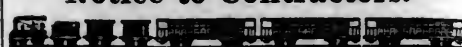
THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
17 Burling Slip, New York.

February 15, 1850.

Notice to Contractors.CHIEF ENGINEER'S OFFICE,
Norfolk, Va., Jan. 8, 1854.

SEALED PROPOSALS will be received by the Undersigned at this Office, from the 1st until the 20th day of March next, at sundown, for the "clearing" and "Graduation" on the line of the "Norfolk and Petersburg Railroad," between that portion of said road now under contract, and its terminus at Petersburg—covering a distance of about eighteen miles; also, for the "Culvert" and "Bridge" Masonry of the last section of said work.

At the same time, sealed proposals are invited for the "Abutment" Masonry of "Bridges" over the Eastern and Southern branches of Elizabeth River.

The work will be divided into sections of about three miles, and bids may be made for one or more of said sections.

The line, plan, profiles and quantities of work will be ready for examination on and after the 1st of March.

Specifications with forms of contract and proposal may be had of the undersigned after date.

Payments will be made in current funds during the progress of the work, in proportion of four-fifths of the amount due.

Of bidders personally unknown to the undersigned, evidence of their responsibility will be necessary; and of those to whom work shall be allotted, will be required bond and approved security in an amount not exceeding one-fifth of the amount of their contract, for the timely and faithful execution of the same.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

The line is easy of access, the country through which it passes abundant in supplies and of a climate highly favorable for the prosecution of work at all seasons.

The work here offered for contract is of a character well worthy the consideration of the most responsible contractors.

W. MAHONE,
Chief Engineer.

January 19.

Norfolk, Feb'y 10th, 1854.

Sealed proposals will be received between the dates mentioned in the above notice, for the construction of two Iron Bridges with stone abutments and piers, one over the Eastern Branch of the Elizabeth River, 630 feet long, and containing about 3,300 cubic yards of masonry, and the other over the Southern Branch of the same stream, about 400 feet long, and containing some 1,700 cubic yards of masonry. Plans of bridges, with quantities of material and working drawings, will be ready for inspection after the 1st March.

From this date proposals will be entertained for the Clearing and graduation of several sections not included in the 18 miles mentioned in the above notice, and also for the bridges and culvert masonry upon said sections,—of the former about 3,560 cubic yards, and the latter 670.

W. MAHONE,
Chief Engineer N. & V. R. R.**Spikes, Spikes, Spikes.**

ANY person wishing a simple and effective Spike Machine, or a number of them, may be supplied by addressing
J. W. FLACK, Troy, N. Y.
or, MOORE HARDAWAY, Richmond, Va.
March 5, 1850.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

Sept. 7.

BOORMAN, JOHNSTON & CO.,
90 Broadway, New York.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 11]

SATURDAY, MARCH 18, 1854.

[WHOLE No. 935, VOL. XXVII.

The Mechanical Engineering department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Grants of Lands to Railroad Companies.....	161
Lake Erie, Wabash and St. Louis and Toledo and Illinois Railroad.....	169-163
Alleghany Valley Railroad.....	165
Mississippi and Atlantic.....	166
New Channels of Trade.....	166
Chilled Slip Tire.....	166
Ohio and Mississippi Railroad.....	167
Railroad Construction in the West.....	167
St. Louis and Iron Mountain Railroad.....	167
Stock and Money Market.....	168
Cincinnati and Marietta Railroad.....	169
Position and Progress of St. Louis.....	170
Freight Traffic of the Baltimore and Ohio RR.....	170
Journal of Railroad Law.....	171
Street Railroads in New York.....	172
Railroads in Tennessee.....	173
Evansville and Indianapolis Railroad.....	174-178
Girard and Mobile Railroad.....	174

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, March 18, 1854.

Grants of Lands to Railroads by the General Government.

It is well known that there are a very great number of petitions before Congress, for grants of lands to aid the construction of railroads. As the passage of these bills must necessarily introduce a new and powerful element into the railway economy of the country, it is certainly proper to enquire, what will be their probable influence upon the railway interests, upon the financial condition, upon the political movements, and we may say, upon the morals, of the country.

In the first place, it may be asked, whether the public convenience calls for the construction of any railroads that would not be built without aid from Government? We think it does not. The very fact that such aid is necessary to any road, proves such project to be premature. Railroads are purely commercial enterprises; and should be subjected to precisely the same laws that govern all similar enterprises. They are certain to be built wherever wanted, or wherever there is a bu-

siness adequate to their support. They should be built under no other circumstances, no more than should a ship, a cotton factory, or an iron mill, for which there will be no employment. Railroads are subject to the same "law of demand and supply," as are all other industrial interests. The prospect of a remunerating business is the test which should always determine their construction. That such a case cannot be made out, should always be taken as sufficient evidence against the project. Wherever railroads do not pay upon their construction, the fact shows that the business is over done.

There is still further necessity of subjecting railroad enterprises to the ordinary principles that govern all commercial transactions, for the reason, that, from the social advantages they confer, and from their influence in increasing the value of all kinds of property, the public is in much greater danger in running to excess in their construction, than in the prosecution of any other industrial pursuit. The results they have achieved have been most marvellous; and it is natural that those of the most successful roads should always be predicated of every project brought forward, no matter what may be its real merits. As the experience of the operation of the road can only disprove the claims put forth in its favor, it often happens that their soundness comes to be fully admitted by the public, and becomes the basis of its action, when in fact, they may be entirely unfounded.

Take, for instance, the Vermont Central Railroad. When this project was first brought forward, the results achieved by the most successful road in New England were claimed for it. These claims were received with full credit by the most sagacious and successful merchants of Boston. So confident were they of the success of this road, that its stock was taken in large quantities by them, and "salted down," as the phrase is, as something to lean upon when everything else should fail. All now see how groundless and absurd were such high wrought expectations, and what a stupendous catastrophe the road has proved itself to be. There are still a plenty of "Vermont Centrals," in embryo, in all parts of the country, about which just as flattering hopes are raised, with as little reason, to be followed by

like results, if allowed to be built. People can be made to see only the bright side of the picture, till the other forces itself upon their vision. Hence the danger of overdoing in the construction of railroads. It is almost inevitable that they should be carried to excess. They have been in Old England, in New England, and are beginning to be in in other portions of the country, which can be taught wisdom, only by tasting the fruits of their own folly.

Our people need no incitements in the shape of adventitious aid, to the construction of railroads. If government interfere, it should be to restrain, instead of exciting the public sentiment in their favor. No stimulants are wanted, nor means, that a particular community interested in a work that is really needed, cannot supply. Take the State of Indiana for example, now the third State in the Union in the extent of her railroads. One would naturally suppose that this State had no accumulated capital to put into railroads, and in fact she has none; yet she contrives to build all the railroads she needs, and threatens to, and probably will, build some that she does not. Railroads seem to spring up and come to maturity in this State as easily and as naturally, as do corn and wheat. Yet there are extensive portions of this State that have not a half a dozen of inhabitants to the square mile. But these secluded districts, are not without their lines of road.

We cite the case of Indiana for the purpose of showing that the progress of railroads, unaided even by city, or county, much less by the State, or general government, fully keep pace with the ability of the people to supply them with a remunerating traffic. The States of Illinois and Wisconsin, more recently settled, are cases equally in point. In a year or two more, Illinois will be the third State in the extent of her railroads, and will have all the roads required for the accommodation of her people. All her roads with one exception have been constructed without any adventitious aid. In Wisconsin, the Milwaukee Railroad is traversing what 8 years since was a wilderness. In every portion of this State, railroads are making most active progress, and which in a few years will supply all the needed accommodations to its inhabitants; roads built entirely by the people of the State, without any other aid

than that commanded by the *credits* they offer based on their own means. The same may be affirmed of Iowa, and in fact of every new State; so that were we asked which of all the industrial, or commercial interests of the West, were making the greatest, and perhaps we may say a disproportionate, progress, we should unhesitatingly say, RAILROADS.

Having shown, as all must admit, that railroads in the new States progress much faster than other interests, and as fast, if not faster, than the ability of the people to supply them with a remunerating traffic, the question then became a pertinent one, why should government interpose to accelerate this tendency, which, left to itself, will acquire, probably, too great a momentum. She most manifestly should not. She cannot do so, without precipitating and rendering inevitable, a crisis, which, with all the checks, that reason and argument can offer, threatens.

This tendency to excess, is the fact above all others, which the history of railroads throughout the world, has demonstrated. In no part of the world are the causes that have produced this tendency so strongly felt as in the United States; and in no part of the United States, as in the newly settled portions of it. For government to come in under such circumstances and assist this tendency by grants of land can only be followed by the most disastrous results.

Railroads in the newly settled States are not only constructed as fast as needed, but it is by far better that they should be built *without*, than *with*, foreign aid. Money obtained without an *equivalent*, always goes without accomplishing any useful results. We have a good illustration of this fact in the result that followed the first attempt of Illinois to construct a system of internal improvements. Will any one tell us where has gone the 17,000,000 for which the State debt was created? The money was had for the asking, and was spent as if its value were measured by the labor of getting. The history of Illinois is not a solitary one of the kind. The cause of the failure of the early attempts to construct railroads and canals in the new States, is to be found in the fact, that the manner of getting money controlled the spending of it. All the money expended upon such works was *borrowed*. The use of this money was coupled with no proper appreciation of its *value*. It was expended upon schemes in which no sensible man would risk a dollar of his *own* money, under the management of parties that would not be entrusted by individuals, or private companies, with the least responsibility, nor the custody of a penny. The millions which many of the Western States borrowed have produced no other results than immense and burdensome debts. The sums might have been quadrupled with precisely the same result. But what was the result when the States themselves, ignoring all connection with these works, left their execution entirely to the unaided exertions of individuals. Order then took the place of chaos; responsibility of profiggacy; common sense of visionary plans of politicians. Routes, the advantages of which were entirely assumed, gave place to such as commerce had pointed out to be the proper ones. The parties engaged in building railroads under the *new regime*, put their own money into them, knowing that it would be lost if not well laid out, and

looked after. The most complete success has been achieved, experience has shown that individuals can easily accomplish what the collective ability and credit of the State was unable to effect. The railroads of the West have been built with economy. They are worth their *par* value in the market. Their cost has not been felt to be a burden; nor has it crippled the means of those engaged in their construction. Why not leave them then, to progress as they have done in a natural, safe, economical manner, reflecting the wants of the community, instead of throwing in a new element which cannot fail to disturb, and if not to overthrow a policy which has been productive of such beneficent results.

Land grants to railroads may be divided into two classes. Grants to roads that would be built *without* such aid, and grants to lines that would not. Of the former class, we take the Mobile and Ohio Railroad as an example; of the latter, the Illinois Central. Grants to companies of the first class, are nothing more nor less than an unjust partiality. There is no more reason why the Mobile and Ohio should be singled out as the special favorite of Congress than any other of the numerous roads of the States which this traverses. If made to lines that would not otherwise be built, it is simply a waste of means, and is overdoing a business already carried to excess. It would be like a grant of lands to a cotton mill, which *private* enterprise would not construct, and could not sustain. The investment would not only prove a total loss, but the tendency of its construction would be to injure legitimate interests. In every point of view would such interference be prejudicial to the public trade by competing for its business.

Precisely of the character described, is the Government grant of lands to the Illinois Central Railroad. Here is a vast work in which *private* enterprise would never have invested a penny, undertaken and carried out upon the strength of grants of land, which when completed will be without use or function. To get the lands, the business of the road had to be sacrificed. The obvious, natural, and ascertained routes of commerce and travel were forsaken. The road by universal consent, is a superfluous addition to the railroad system of the country. Yet for this work, some \$20,000,000 has been drawn from the capital of the country, seeking investment in railroads, to be unproductively invested, which would have constructed an equal extent of road really called for, or would have enabled meritorious projects struggling for existence, to have supplied their necessities, at reasonable rates. The construction of this road is equivalent to locking up an amount of money nearly equal to its cost. And who is to profit by the transaction? Not the public, but a few capitalists whose wealth enabled them to monopolize the grant, and who figure out for themselves some \$25,000,000 of profits.

It is inevitable that all grants made to *illegitimate* projects should take such direction. The grant made to the Mobile and Ohio Railroad inures to the benefit of a very numerous body of stockholders, who were stockholders *before* the grant was made, and who would have been stockholders provided it never had been made. They would probably have built their road as soon

without, as *with*, the grant in their favor. On the other hand, there *never* would have been any stockholders in the Illinois Central, *but for* the grant. There is no one interested therefore to save *such* projects from the jaws of *speculation*. In fact, a considerable number of the bills before Congress are nothing but *speculations*. The Illinois Central Company could not figure out a net profit of \$25,000,000 without lighting a torch that has set the whole country in flames. Why should not other parties, equally deserving, perhaps, have a chance to make *another Illinois Central*. There are now a number of petitions urged upon Congress that have no other object than to make money by a similar operation. There are numerous others against which this charge cannot and should not be made; petitions offered by parties who have no selfish or personal ends to accomplish; and who apparently make out a good case for aid, as far as such case can be made out in favor of a project that private enterprise would not embark in. Were it possible to restrict the proposed grants to *such* projects, the force of the objections against them would be very much reduced, we admit. But it is not *possible*. Where there is a prospect that \$10, or 20,000,000 of *profits* can be made out of such grants, there will not be wanting a plenty of parties who will resort to every kind of corruption to carry them through. Ought Congress to hold out an encouragement to fraud and venality, when the very effect of such grants, as we have already shown, cannot fail to be injurious not only to the interests of railroads, but to the general welfare of the country.

We believe we have made out a sufficient case against the grants of lands to aid in the construction of railroads from the general *ine expediency* of the thing. It would not be difficult to urge others of a more particular character, but of equal, if not greater force. By a system of grants of lands, the burden of building railroads is imposed upon those least able to bear it; the poor and needy settler and pioneer. For the ostensible purpose of making government whole, all the bills making such grants, provide for a largely increased price for the lands retained by it in vicinity of the road. The land conveyed to the railroads is immediately advanced from the ordinary price of \$1.25 to \$10, \$20, \$30 per acre. And who pays this great advance? The western farmer or emigrant, who can ill afford to pay even the Government price of \$1, 25 per acre. Out of such persons is to be eventually wrung the cost of the road. What *they* pay is the measure of the profit of the lucky recipient of Government bounty. The Illinois Central Company claim that *their* road will be good property. If so, its stockholders will make some \$25,000,000, besides having a profitable road. Would it not be better for the public that this bonus should be shared by 25,000 people, than by 25? Should it turn out that the road was wanted, capital would have built it, and would have remained contented with the *legitimate* profits of the enterprise. If not wanted it should not be built. The effect of government aid, therefore, must be to encourage *illegitimate* projects to the injury of good ones, or to impose an enormous tax upon the laboring man in favor of capital. It entirely conflicts with the spirit of the Homestead Bill which has just passed the House of Representatives, and which makes the public

domain a *gratuity* to the actual settler, instead of compelling him to pay for it, at the rate of \$10 and \$20 per acre.

Another objection to grants to the extent of millions of acres to private companies, is the fact that they tend to withhold from sale, and consequent improvement, for an indefinite period of time, vast bodies of lands, and in this way create an injurious and oppressive monopoly, and check the progress of the country. The value of our public domain is not to be measured by the price at which it is sold, but by what it can be made to yield. Twenty years ago, the soil of the State of Wisconsin had no more commercial value, than so much *desert*. It now sustains a population of over 450,000, whose wants give activity to the manufacturing interests of the country, and whose products form no inconsiderable portion of the basis of our foreign and domestic commerce. If the value of the soil be estimated at \$10,000,000, the incidental profit arising from its improvement, to the whole country, is certainly tenfold greater. The settlement of the public lands therefore should be encouraged in every possible manner. To throw millions of acres into the hands of a few individuals, who have no other interest in the soil, but to get the largest price for it, is a direct blow inflicted upon the vital interests of the country. As an *economic* measure it should not be tolerated for an instant. As a political one it is equally to be reprobated. The safety of our institutions consists in the *subdivision*, instead of the *concentration*, of power. As far as government interferes in the internal economy of the country, its influence should always be exerted in harmony with the true interests of the people.

Such are the views, to which, from a careful consideration of the whole matter, we have come upon the subject of grants of lands to aid in the construction of railroads. We are aware that they cannot be acceptable to numerous parties relying upon such aid in carrying out what they believe will prove useful and valuable works. There are many projects which we should like to see assisted; but we must deal with the *principle* involved, and not the facts of *isolated* cases. We are satisfied that our views are in harmony with the general welfare of the country, and particularly of railroad companies. This interest can be maintained in its present healthy condition only by withdrawing all extraordinary and accidental stimulants to their construction. We are proceeding safely only when we are providing for the accommodation of a business actually existing; and never when we are providing for contingencies that may never arise. Let the *want* of a railroad *precede* its construction and every step will be one of *progress*. If we throw aside such an obvious guide, our course may be one of retrocession instead of advancement.

St. Louis and Western Railroad.

A company has been organized in Missouri for the construction of a railroad from St. Louis to the West line of the State. The following gentlemen constitute the board of Directors, viz: Jesse Morin, C. A. Perry, of Platte; A. W. Doniphan, J. G. Price, M. Arthur, of Clay, (with the recommendation of Col. Doniphan for President of the Board); W. Boyce of Ray; H. Wilcoxen, of Carroll; L. Salisbury, of Chariton; J. E. Finks, A. J. Hernon, of Howard; W. Woodson of Boone; P. B. Reed of Callaway; D. C. Garth of Randolph.

Exhibit of the Lake Erie, Wabash & St. Louis and Toledo and Illinois Railroad Companies.

The Lake Erie, Wabash and St. Louis Railroad Company presented their scheme, in connexion with their associate work the Toledo and Illinois Railroad, to the public on the 12th of July last, in a circular of that date. Important negotiations since that time concluded, for a western extension, under the control of a single interest, to the Mississippi river, for which the necessary legislation has now been obtained, as well as to show the satisfactory progress of the work, renders it proper for the Directors, at this time, to issue a second circular.

They are now enabled to present a continuous and consolidated line from Toledo to the Mississippi river, at Hannibal, there connecting in direct extension with the Hannibal and St. Joseph Road; and such arrangements with other Companies as have also secured their entrance into Alton and St. Louis.

Premising that their plan is now complete for a connexion with the great emigrant route to St. Joseph, where most of the outfits are made for Nebraska, Utah, California, and Oregon—as well as with the commercial city of St. Louis, they will proceed to announce more in detail the arrangements by which these ends have been accomplished, with the state of forwardness of their own work, and of the lines with which they are, or are to be, consolidated, or with which they have made business engagements.

At the date of our exhibit in July, we had just placed on the line, from Toledo to Danville, (which embraces the Ohio and Indiana divisions) six locating corps of Engineers, under the charge of Warren Colburn, Esq., well known for his efficiency in the survey and construction, of the "Rochester, Lockport and Niagara Falls" and other Roads. These surveys, embracing a careful location through twelve considerable towns, and others of smaller size, have been completed. Maps, profiles, plans, drawings and specifications of the Road, bridges, &c. &c., have been made and filed. Rights of way, with some inconsiderable exceptions, have been obtained along the whole route, and station and machine grounds have been secured at all the principal Points, including most valuable grounds at Toledo, to which further reference will be made. The Contractors, Messrs. Boody, Ross & Co., have apportioned the whole work in suitable divisions, to sub-contractors, responsible and experienced men, who are now vigorously engaged in their several divisions.

To prepare so long a line (241 miles) for contract—to organize the forces of men, teams, tools, &c., at the several points, was necessarily a work of time; and being undertaken so late as July, it was not expected that much progress could be made in construction before winter set in. The Directors are, however, gratified to report that by the efficiency of the Engineers and Contractors, not more than ten miles on the whole line remains to be grubbed and cleared. There is not a division, and scarcely a section of the Road on which considerable earth work has not been done. As large a force is now employed as the season of the year will justify. The Contractors have made arrangements to increase it to at least 5000 men by the time the frost is out.

On the Ohio portion of 74 miles and contiguous, the work is so far advanced as to enable us to announce that the grade will be entirely finished from Toledo to Fort Wayne, (93 miles) by the first of July next. Track-laying will be commenced on this division in June, and that portion of the Road will be opened to the public early in the autumn.

The heavier portions of the work, and which embrace the only rock-cuts on the line, exist between La Gro and Logansport. On this portion an increased force will soon be placed, and after the first of May the heavy jobs will be worked both day and night. If no unforeseen hindrances arise the road bed will be made ready for the superstructure by the middle of Autumn to Attica, 224 miles, and soon thereafter to Danville. The facil-

ities by means of the canal, lateral roads, &c., for delivering materials and construction trains at any point on the line are such as to dictate to the Board the policy of pushing the whole work forward at once, and laying track from several points, although the eastern end will first be brought into use.

There is considerable bridging. In this department even greater progress has been made than in the graduation, the winter not impeding. The stone for the entire masonry of the line is now quarried, and most of it is cut and ready for the walls. Several of the foundations of the larger bridges are laid. The Chief Engineer is confident that every bridge will be ready for the superstructure by the first of August. Timbers for the superstructure are engaged and most of them are now ready.

To be secure against disappointment in their contracts for ties, Messrs. Boody, Ross & Co., are placing a number of steam sawmills on the line.

Monthly estimates have been paid since July and the work has proceeded steadily.

Twenty-eight thousand tons of heavy T rail (enough for the main line and a large amount of side track) have been purchased in England, all deliverable in New York by the first day of July, next. Of this, enough to lay 30 miles of track has already reached Toledo and the line. Other large quantities are constantly arriving at New York. So important has it been deemed to secure rails of the best manufacture, that an increased price has been given.

In every department the work has been planned and executed for a first class road, and in adaptation to the large business so confidently expected. It is not an experimental route of road but traverses a country now thickly settled and highly cultivated. Being on the leading and shortest approach from the West to Lake Erie, it is already the channel of a large affluent commerce; and in respect to lateral tributary roads, it stands without a rival on the western map. We have reason to believe that the contractors, themselves largely interested in the success of the work, will not be long, if at all, behind their engagement in having it ready for use, which, as heretofore announced, is fixed for the first of May, 1855.

In January last an agreement was entered into to consolidate upon equitable terms the Toledo and Illinois, and Lake Erie, Wabash and St. Louis Railroads, with the Great Western Railroad of Illinois, each to be first finished and equipped by their respective Companies, the period for which was limited to first of May, 1855. At that time the charter proper of the Great Western extended from the *terminus* of the Lake Erie, Wabash and St. Louis Railroad, on the Indiana State line near Danville to Naples on the Illinois river. Although a Road under another charter, partly finished, connected the Great Western with the Mississippi river at Quincy, still it was a cardinal object to have a direct extension from Naples into the Hannibal and St. Joseph Road. The late extra session of the Illinois Legislature furnished that opportunity.

A Charter was granted for the 37 miles between Naples and Hannibal with leave to unite with the Great Western. The passage of a general consolidation act at the same extra session of the Illinois legislature, similar to the law of Indiana, has now added the necessary for the consummation of the above provisional agreements, to constitute the entire route from Toledo to Hannibal, a single line and under one control. Without adverting now to its terminal relations, it is enough to say in regard to its local advantages, that it passes along the Wabash Valley, and through the Capital of Illinois.

Our consolidation with the Great Western Railroad, furnishes us also a direct outlet from Springfield over the Chicago and Mississippi road, now finished, to Alton and St. Louis. Important considerations, however, induced our Company to enter into a series of negotiations with the Cleveland and Toledo, Northern Indiana, Terre Haute and Alton Railroad Companies respectively, by which valuable objects have been secured to the mutual advantage of the contracting parties. These objects on our part are principally, free connexions with Cleveland over the Cleveland and Toledo

Road. the joint use and occupation with that Company, and with the Northern Indiana, of the extensive and valuable depot and warehouse grounds, at and adjoining the harbor of Toledo, the property of the last named Company (known as the "Middle Grounds")—a guaranty against rival roads sustained by the aforesaid interests—and a connexion with the Terre Haute and Alton Road at some point near the eastern limits of Illinois, to be mutually agreed upon. The alignment of the last named Road, owing to certain points being fixed in the charter, such as Paris, &c., had given it a very fair direction towards Attica, where our road crosses the Wabash river. As the city of Alton is almost in the immediate direction of a line drawn from Toledo to St. Louis, and as it would occasion so inconsiderable a defection to pass from Attica by a short connecting link into the Terre Haute and Alton, instead of building a long and nearly parallel line from Danville to St. Louis, we could not doubt that an enlightened policy dictated this arrangement. The base of the American system is the multiplication of roads, draining the same region and leading to the same market. Our business arrangements with the Terre Haute and Alton enable us to avoid this evil and place both roads at once in a commanding business position, we occupying exclusively the Maumee and Wabash Valleys, and they becoming the recipients of this business. Whatever merits other lines from St. Louis, crossing the Wabash further south, and opening to a different region, may have, they can never interfere with the legitimate business of the Road from Toledo to St. Louis.

It may be added that a charter has been obtained for the connecting line here spoken of, and means for its construction have been raised. At the same time three hundred thousand dollars were added to the subscriptions of the Terre Haute and Alton stock, which, with means on hand, will enable them to complete their Road *pari passu*, with ours. That Company have also secured the right to build from Alton to St. Louis in the prosecution of which there will be no delay.

A brief reference may properly be made to the condition and prospects of the Roads with whom we have thus been negotiating.

The "Great Western Railroad" of Illinois acquired their rights by purchase from that State at a low price, of their road, then partly completed by the State. It was the Road most favored by Illinois, and the only one of which any considerable part had been completed. Since their purchase, the Company have re-placed with a heavy T rail the fifty five miles between Naples and Springfield, laid by the State with a flat bar. This part of their line has a compact and well settled road-bed, and is laid with red cedar ties. The Company have just finished, with T rail, the 39 miles from Springfield east to Decatur. Thus 94 miles of the Road are now in operation, leaving less than 80 miles additional to complete to the Indiana State line near Danville, of which the heavier portions have already been graded by the State, the finished portions being light work. This division will be finished during the present season.

A reconnaissance of the line from Naples to Hannibal has been made by S. D. Eaton, Esq., Civil Engineer, and measures will doubtless be taken for its early prosecution. The grant as before stated, having only recently been obtained. The Northern Cross Railroad, connecting Quincy with the Great Western, near Naples, makes that the shortest route from Quincy to the Atlantic cities.

The history of the line now constructing across the State of Missouri from Hannibal to St. Joseph, is so well known as scarcely to need a reference. This road is the recipient from Congress of a grant of land, equal per mile to that made to the Illinois Central; besides which it has received a loan of the credit of the State of Missouri to the extent of a million and a half of State bonds. The whole line has been let to a company of responsible contractors, and is now under construction. It is probably the first line that will reach the Missouri river at any considerable distance above its mouth.

The region around St. Joseph, from its mildness and fertility, and being in advance of other settlements on the Upper Missouri, has become well known as the place of rest and outfit for emigrants bound to our distant frontier and is daily increasing in commerce and agriculture.

Of the Terre Haute and Alton Road enough has already been said to show its suitable connection with St. Louis for the Toledo line, emerging from the Wabash Valley at Lafayette or Attica. By a report of their President published in July last, it appears that their rails had been purchased, and that it was expected to complete the Road during 1854.

Having thus secured what was confidently anticipated in our first Circular, an approach to St. Louis and the central regions of the Mississippi river, the occasion is a suitable one to review the geographical position and business prospects of our Road when as a finished work, it shall take its rank in the American system.

The most remarkable feature that meets the eye on opening the Map of North America, is that vast chain of navigable inland water that stretches from the Gulf of St. Lawrence for thousands of miles in a right line to Toledo, and still further by a circuitous and indirect course to Chicago. This chain to Toledo maintains an average distance from the Atlantic coast of about 400 miles, and is nearly parallel with it. Looking outward from Toledo in the same general direction with the Lakes, over a plain of little more than 400 miles miles in breadth, we meet that other inland sea, (for such really the Mississippi is,) whose tides flow within the tropics, and near the head of whose reliable navigation stands the ancient city of St. Louis—ancient in its history, modern in its growth. Between this Lake Chain and the Atlantic, but a few years ago there was not a single portage facile enough for any valuable purpose of commerce—except the slow moving wagon, the Erie Canal was the pioneer. Now, Cleveland, Erie, Dunkirk, Buffalo, Niagara, Rochester, Oswego, Cape Vincent, Ogdensburg and Montreal, have each opened their eastern gates to thousands of travellers, and by steam and water are sending forward in both directions a commerce unparalleled in any history.

The whole trade of the Lakes excluding those west of Erie, arose from \$65,000,000 in 1841, to \$326,000,000 in 1851, employing 212,000 tons of steam and sail. Of this trade, the large proportion of \$209,712,520 belonged to Lake Erie alone, on which Lakethe first steamer was launched in 1818. The licensed tonnage of these Lakes in 1851 was 77,061 tons steam, and 138,941 tons sail.

Tons entered at all the Lake ports in 1851,	9,469,506
" clear d "	9,456,346

How much this commerce will be augmented by the enlargement of the Erie Canal, now ratified by the people and Legislature of New York, may be judged from the fact that the new Canal will pass boats of 224 tons burthen; that a barrel of flour can be transported from Buffalo to Albany for twenty-five cents; and that the coast of transporting ordinary merchandize will be reduced to \$1 82 per ton from Albany to Buffalo, tolls included.

It follows as a necessary corollary that the Ports at the western extreme of the Lakes, receiving or discharging the same business with the eastern outlets we have named, besides what finds its way through the Gulf of St. Lawrence, must have a corresponding growth and increase. From the scarcity of harbors, those ports are few in number, each representing vast tracts of country. Cleveland, Sandusky, Toledo, Detroit, Chicago and Milwaukee, comprise almost the list. The commerce of Toledo, young as she is, and until her canals were built almost inaccessible from the interior, was—

In 1847,.....	\$8,068,809
In 1851,.....	31,285,465

It is estimated that during the present season there will be shipped from that port, of the single article of corn (maize) 6,000,000 bushels.

The limits of this paper will not admit of a reference to the immense and growing traffic of St.

Louis and other Mississippi towns. It is difficult to set limits to its future development. St. Louis had a population

In 1820 of.....	4,123
In 1840 of.....	16,649
In 1852 of.....	94,000

St. Louis is but the type of the country between her borders and Toledo. The overflow of business is fast rearing other cities of considerable magnitude, not only on the banks of the Mississippi, but on those of the Illinois and the Wabash. Still the central city grows with the growth of its lesser neighbors, and the tribute of the intervening country will continue in large measure to be paid, to the commercial cities of St. Louis and Toledo.

It will be obvious to all who are familiar with the route and course of business west of Lake Erie, that the channels through which the great commercial business must pass between the East and West, are mainly confined to a belt of country between Lake Erie and the Mississippi river, measuring some two hundred miles in width. Every line of railway communication hitherto opened in this limit of territory, having an eastern bearing has proved successful and profitable beyond the most sanguine expectations of its projectors. The lines of road projected by our consolidated Companies, extend through the most fertile portion of this belt of country hitherto unopened, already populous, and as before stated, having many towns of great commercial importance, each the centre of trade and the natural depot for the vast productions of a large adjacent territory. By an examination of the accompanying map it will be seen that a number of roads, having a north and south direction, intersect the line of our road at various points. Each of these roads will bring to our line a large amount of local business from their respective localities. Many of these lateral roads will have their main eastern connection through our line, as being the most direct and accessible.

Although there are other lines of road projected, connecting St. Louis with the sea-board, and which, doubtless, will in time be completed, there are none which can present the same facilities that will be offered by our united Companies for the transaction of a large commercial and passenger business. St. Louis and Quincy are thereby connected with the navigable waters of Lake Erie by a line 80 miles shorter than any other completed or that can be projected without following the course of our road. At Toledo passengers can have their choice of three routes, all favorable, leading thence to the Atlantic, viz: to Buffalo via Cleveland—by lake steamers—and via Detroit through the Great Western Road of Canada and the New York Central. Incipient measures have been taken to construct a road between Toledo and Detroit, by which the latter connection will be made complete, the link to be supplied being less than 60 miles. It is believed that no other road from St. Louis can, at its terminal point, present eastern connections so favorable for passengers and freight.

The arrangements made with the Northern Indiana Railroad Company for using adjacent business grounds and a common passenger building, will enable the two companies jointly to build and maintain in the most liberal manner, a line of first class steamers to run direct to Buffalo, giving unequalled facilities for the transportation of emigrants and light freight; and affording to passengers an opportunity to obtain rest without losing time, which will doubtless be appreciated by those who are travelling on long routes.

It needs no argument to prove the value of a railroad line which shall connect the most commercial town on the Upper Mississippi with the nearest harbor on Lake Erie. The dry goods and manufactures of the North, and the groceries, hemp, tobacco and other staples of the South, discharged respectively at Toledo, and St. Louis, must be exchanged over this thoroughfare, while the productions of the country, seeking a vent towards one market or the other, are even now in magnitude and amount beyond the capacity of

a single railroad. The country with its numerous towns and villages, loudly demands the convenience of the thoroughfare we are constructing, and the Directors are resolved to prosecute the work with a despatch corresponding with its importance. Of this they think they have given some evidence to the public, in not allowing the work to flag during the recent severe pressure in the money market. No road in the Western States will have so long a continuous line under one organization, or be better fortified in its business by its easy connexion with the systems on either side of Lake Erie, and by lateral and tributary roads in Indiana and Illinois.

The subscriptions to the stock of the Toledo and Illinois Railroad Company amount to \$900,000, and of the Lake Erie, Wabash and St. Louis Railroad Company, to \$2,000,000, on both of which 65 per cent. has been paid. The whole amount of first mortgage 7 per cent. convertible bonds issued by the first named Company, is \$900,000, and by the last named, \$2,500,000.

The Boards of each road do not hesitate here to express the opinion that the mortgage bonds of both offer a security most fully reliable, and they look forward to the time, as not far distant, when the convertible privilege may be availed of with a handsome profit to the holders of the bonds.

A. S. WHITE, President,
Lake Erie, Wabash and St. Louis Railroad.
JOHN ROSS, President,
Toledo and Illinois Railroad.

Alleghany Valley Railroad.

The city of Pittsburgh owes its wealth and prosperity as much to its position as to its mineral resources. Its natural channels of communication, the Alleghany, Monongahela, and Ohio rivers, are not, however, always available, owing to the irregularities in their volume, and to the effects of frost. This fact, especially, has induced the construction of artificial routes, parallel to, but independent of, the water lines. The completion of one great work of this kind, the Ohio and Pennsylvania Railroad, has already secured to Pittsburgh a position such as even her favorable river communication would have forever denied to her. The efforts of her citizens are now directed to the construction of similar works in the valleys tributary to the one already occupied. The Alleghany Valley Railroad, one of these enterprises, has long engaged the attention of the people of Western Pennsylvania, as a means, both of the accommodation of a local and the creation of a foreign trade. Although chartered seventeen years ago, its construction has been delayed, until the results of the operation of the Erie road have demonstrated the resources of districts, similar to that intersected by the line of the Alleghany road.

From the first regular annual report of the Directors of the Alleghany Valley Railroad, lately published, we present the following particulars relative to the condition and prospects of their work.

The first division of 43 miles, from Pittsburgh to Kittanning, is under contract to be finished by the first of November of the present year.

The second division of 45 miles, from Kittanning to Brookville, is under contract for completion by July 1st, 1856; the third division of 48 miles, from Brookville to the Clarion River, by July 1st, 1856; and the fourth division of 43 miles, from the latter point to the New York State line, is also under contract, to be finished by December 1st, 1855.

To bring the 4th division into early use, for carrying coal to the lake ports, a contract has been made with the Corning and Olean Railroad Com-

pany, for the immediate construction of that portion of the line. Said company agree to furnish \$500,000 bona fide subscription, and to pay for the use of ten miles of the road of the Alleghany Company at the rate of eight per cent. on its cost of \$25,000 per mile.

Three-fifths of the grading, masonry, and bridging of the line between Pittsburgh and Kittanning, are already finished, and the completion of all of this portion of the road is anticipated at an early day.

The revised estimate of the Engineer, W. Milnor Roberts, Esq., states the cost of the road in complete running order, and all incidental expenses, but without equipment and depot buildings, as—

The subscriptions by individuals and contractors are.....	\$1,400,390
County corporations.....	1,251,254
City and boroughs.....	450,000
Corning and Olean Railroad.....	500,000
	<hr/> 3,601,644 00

To be provided by an issue of bonds. \$1,969,716 07

The connections of the Alleghany Valley Railroad are of the most ample and direct description. This road is in fact a direct route connecting not only Pittsburgh, but all the trade and travel within the influence of all the roads and canals centering there, with the principal cities of Western New York, forming a connection of Lakes Erie and Ontario with the Ohio river, Throughout its course it intersects the most important railroads and canals in the country. Leaving the Pennsylvania Central, Ohio and Pennsylvania, Chartiers Valley, Steubenville and the Connellsville railroads at Pittsburgh, it follows the Alleghany river, and for a distance, upon the route of the Pennsylvania Canal; crosses the Cleveland and Mahoning road, and the line also of the proposed Sunbury and Erie road; meets the Corning and Olean railroad at the State line, and, through the northern extension, runs across the Erie, New York Central, and other roads which connect those two roads with each other and with every important town in the western portion of the State. It also meets the Genesee Valley Canal, and thereby connecting, by 188 miles of railroad, the Pennsylvania and the Erie Canals.

The northern extensions of the Alleghany Valley road are the Buffalo and Pittsburgh and the Rochester and Pittsburgh roads, the construction of both of which has been determined upon wholly with reference to that of the Alleghany Valley road, with which a unity of interest prevails.

The local resources of this road and of its tributaries are of the most valuable description. In Pennsylvania it intersects a region abounding in coal and iron, while the agricultural products and the vast quantities of lumber, abounding throughout the whole of this and contiguous regions, would alone occupy the equipment of an important road. Where cleared, the soil of Western Pennsylvania is known to be of the best description, and such as will attract and support a population equal in wealth, enterprise and intelligence to that in any other part of the country. It is well known that the Alleghany Valley road is regarded by the New York and Erie and the Albany and Susquehanna railroad interests as securing the shortest and best route from New York, Albany

and Boston to the whole of Southern Ohio, including Cincinnati.

In general terms, the Alleghany Valley road combines every requisite of local and terminal support, and occupies a position in the through routes of commerce, sufficient to ensure, with proper management, the most ample returns on its cost, and the most advantageous results on the whole country tributary to its route.

Mississippi and Atlantic Railroad.

We have received, and give below, a copy of an Act of the Legislature of Illinois, authorizing the construction of the above road. As the law of the State requires that all matters to be acted upon at an extraordinary session of the Legislature, shall be indicated in the Message of the Governor calling the same, we copy so much of the Message as provides for action upon the subject of railroads.

Extract from the proclamation of Governor Matteson, of Illinois, under date of 7th January, 1854:

"To pass laws recognizing the existence of and conferring additional powers upon Corporations formed, or which may be formed prior to the action of the Legislature thereon, under the act to provide for a General System of Railroads Incorporation, approved November 5, 1849. To declare the public utility of their works, sanction the routes; termini thereof, and authorizing the construction of the same."

The following is a copy of the Act referred to: AN ACT recognizing and authorizing the construction of the Mississippi and Atlantic Railroad.

SECTION 1. Be it enacted by the people of the State of Illinois, represented in the General Assembly, That the Mississippi and Atlantic Railroad Company, as formed under articles of association, filed in the office of the Secretary of State, is hereby declared to be a valid and subsisting corporation by that name, duly organized under and duly vested with all and singular the rights, privileges, and powers contained in an Act entitled "An Act to provide for a General System of Railroad Incorporations," approved Nov. 5, 1849; and said Company is hereby authorized to commence, contract, and maintain the said Mississippi and Atlantic Railroad, from a point on the eastern line of the State of Illinois in the direction of Terre Haute, Indiana, to a point on the Mississippi River, at or near Illinoisstown, as in their articles of association specified, in accordance with the provisions of the act hereinbefore recited; the acts amendatory thereof and of this act, and the acts and proceeding of said company hitherto in and about the prosecution and construction of said road, its crossing connections and running arrangements with other roads within this State are hereby declared valid and binding.

SECTION 2. The said Mississippi and Atlantic Railroad Company is hereby declared to be a work of sufficient public utility to justify the taking of private property for constructing and maintaining said road and the same may be appropriated whenever requisite under the provisions of the acts now in force for that purpose.

SECTION 3. Said company shall have power to borrow money for the construction, equipment, and maintaining of said road, and to issue its bonds therefor at such rates of interest as its Directors may prescribe, not exceeding seven per cent. per annum; and for security thereof to mortgage its road, property and franchise, and any sale of said bonds at less than par, shall be as valid and binding upon said company as if the same had been sold for the par value thereof.

SECTION 4. Said company shall have power to take and hold stock in, or loan its credit to, any railroad company within this State whose road

may connect directly, or by connecting lines with said Mississippi and Atlantic Railroad.

SECTION 5. Said Railroad Company is hereby empowered to construct so much of the line of road as lies between the eastern line of this State and Terre Haute under such provisions as may be made by the laws of Indiana, or to form a connection with any company that may be organized for that purpose to consolidate the stocks of said companies, or to lease, manage, or control the said connecting line of road on such terms as may be agreed upon between the parties.

SECTION 6. This act shall take effect and be in force from and after its passage.

JOHN REYNOLDS,

Speaker of the House of Representatives.

G. KOENER,

Speaker of the Senate.

Approved Feb. 24, 1854. T. A. MATTESON.

The above project is well known as the *Straight Line*, between Terre Haute and St. Louis. To the former point, the railroad system of Ohio and Indiana extends. The right to continue this system, West to St. Louis, in the most direct course, has been for a long time denied by the people of Illinois, in defence of what is termed the *State Policy*. This policy may now be regarded as thoroughly exploded by the passage of the above act.

Working surveys of the line of this road have been made, and the work of construction will be immediately commenced. For this purpose, we understand, a large amount of means have already been secured. The project has always been regarded with peculiar favor by the vast railway interest, lying to the East of Terre Haute, which is most anxious to push forward to its great Mississippi terminus, *St. Louis*.

New Channels of Trade.

We scarcely take up a paper that we do not see some notice of the commencement, progress or completion of some new avenue of trade and commerce, connecting the Western rivers with the sea coast. The multiplicity of these artificial communications should arouse us to the proper understanding, and appreciation of our own position, and stimulate us to make counter exertions that are continually being made by every city and town on the Atlantic coast, to attract trade, and divert it from its legitimate and natural channel by the Mississippi to New Orleans. The same natural obstructions to the free transportation of commerce have existed during the past winter generally through all parts of the country—in this one aspect of the case, we have not been singularly afflicted. At the North, navigation has been suspended by the impassable barriers of ice created by the unusual cold weather, while we have been cut off from all water communication with the interior by the unprecedented and protracted low stage of the rivers.—But during this period of non-intercourse how different have been our respective conditions! Our Northern rivals, by means of their artificial rivers have sustained an uninterrupted communication with their several markets. Free and independent of the restrictions and barriers created by a rigid and ungenial climate, they have found a sure and never failing friend and auxiliary in the iron horse, whose course has been onward and uninterrupted, careless and indifferent to all the elements, whose combined strength he laughs to scorn. What has been in comparison, our isolated condition, shut out from our best customers, and cut off from the sources of our most valuable supplies? The consequences of the embargo we have undergone for the past three months, our Western merchants have feelingly realized. We should like some fifty of our produce merchants whom we could name, to get together, and make a rough estimate of the loss they have sustained from the general derangement of their business, their disappointed expecta-

tations, to say nothing of the sums paid as extra interest, and the anxiety and solicitude of mind—all the results of suspended intercourse with their up country friends and customers. The amount reduced to cash would be sufficient to pay for the construction of a long link in either, or both of our Railroads. Had we had during the entire winter, daily communication with the Northwest parishes, with the Red River country, with St. Louis, and in the early part of the season, with Nashville, Louisville, Cincinnati, and all that contiguous region, we should have heard no complaints of hard times, of no business and a stringent money market. Nowhere on the face of the earth has experience spoken louder, or inculcated a severer and more urgent moral than in New Orleans. If Railroads have been tested, and found to be powerful helps and auxiliaries to promote and advance the trade and general prosperity of other cities—here with us they are indispensable agents not only to advance our commerce, but to enable us to retain what we already have, and place us in a position to contend with the hundred rivals, who are emulously striving to spoil and ruin us. There is not a town on the Atlantic coast from Portland, in Maine, to Savannah, Georgia, that has not in a greater or less degree, been sustained and nourished by the aliment which nature intended for our subsistence.

These reflections were suggested by reading a notice in a Georgia paper, communicating the intelligence that a large cargo of freight had been delivered in Macon, a flourishing town in the centre of that State, which had been shipped on the railroad, from Nashville, Tennessee. The paper in question informs us that the road from Chattanooga to Nashville is now completed—there is but one trans-shipment of freights between the latter point and this city, (Macon,) and the arrival on Saturday is but the beginning of an extensive business between the two points. The same paper gives us the comforting and consoling assurance, that Macon is the most important depot for the distribution of Tennessee produce in that State, and that the opening of the Nashville and Chattanooga Railroad, with proper energy and enterprise on the part of her business men, must increase its importance in this respect.

Nashville is now only forty-eight hours distant from Savannah, a few years since, we were going to say months, she had no more communication with the sea port of Georgia than she had with Liverpool. She was wholly tributary to New Orleans, as she still would be were we connected by railroads.

We have before us a yet stronger illustration of the efficacy or potency of railroads in transmuting villages into towns, and towns into populous and wealthy cities. Chicago is a hyperborean city, situated in the ice bound regions of Michigan, twelve degrees of latitude North of us. Let us see what progress she has made with all the disadvantages of position and climate against her.

Twelve years ago Chicago contained a population of 5,000. Now it has over 60,000!

Twelve years ago, eight to twelve days passage between New York and Chicago was considered quick time in the most favorable season. Now two days is the average.

Fifteen years ago, the people of Chicago bought a large part of their broadstuffs and provisions from the States of New York, Pennsylvania and Ohio. Now there is exported from that city, each year, 5,000,000 bushels of grain and 120,000 barrels of beef and pork!

By what magic has this wonderful chance been effected? The mystery is easily explained.

Six years ago, Chicago had not a single foot of railroad completed, and only one in contemplation. Now it has 482 miles completed in the limits of the State alone, and over 2000 in process of construction! On the 1st of May next there will be daily leaving and entering the city of Chicago forty-eight trains, making in all ninety-two trains per day over the roads, to accommodate travel and commerce.

Here is an example furnished by a city, which,

twenty years ago, was in the woods, and which our proud and boasted Crescent City may profitably emulate.—*N. O. Com. Bulletin.*

The Chilled Slip Tire.

During a recent visit at Baltimore, we had an opportunity of learning the success with which the cast iron tire has been in use during the past winter. We were the more anxious to do so, because reports had started that the Baltimore and Ohio Railroad Company were replacing their cast with wrought tires. This statement, which has been circulated by interested parties, is wholly untrue, as our own inquiries and observations have disclosed. Out of considerably more than 200 locomotives, owned by the road, but four have wrought tires, and these were so provided by the builders. The Master of machinery, states, that he shall replace these tires, when worn out, with the cast iron tires, a practice which has been adopted for several years with all engines coming on the road with wrought iron tires. Five engines built at Lawrence, Mass., have already been retired in this manner. With these, after the wrought tire had become badly worn, it was turned off to an uniform thickness and a cast iron tire put on over it. This was done to save the expense and delay of applying new wheels. The chilled tires were secured by set-screws, tapped through the rim of the wheel and pressing against the inner side of the tire. This method is very apt to strain the tire unequally, indeed, such a result is unavoidable. One tire, only, secured in this manner, broke, during the last winter, opposite one of the set-screws. No further damage was done. This failure, wholly due to an unusual and very improper mode of fastening, is the third one, only, during a use of over 2,000 of these tires. Can any other road show similarly favorable results from wrought tires? We are positive that they cannot.

No other road in the country, except the New York and Erie, has such heavy engines as those under which these tires are used. No other road has engines of such great power, for although the weight of the Erie engines may be greatest, that of the Baltimore engines is wholly "live weight," or productive weight. The tires are used alike under all engines—express, mail, freight, live stock, coal, and yard engines.

The officers of the company do not estimate their saving by this improvement at less than \$30,000 per annum.

One unfortunate feature is apparent in the manner in which this company have used cast iron whole wheels. They have allowed their contracting builders to fit many of their engines with whole chilled wheels, which, when once worn, are not only useless, except for old iron, but cause a great loss of time and expense, and particularly a great delay of the engines in renewing them. When the security and cheapness of Perkins and McMahon's improvement are known, and the facility with which tires are changed on their plan, it is wasteful and extravagant, to say the least, to employ any material of tires in such a manner. A wheel center, under no strain like that from shrinking a tire, ought to last many years. Crank pins, well case-hardened, or covered with steel, will outwear three sets of tires. The axles, if straight, (not cranked,) will last a very long time. By any other method than by renewing the wear-

ing surface, a great quantity of good, sound material, and of expensive and laborious fitting, is utterly thrown away. Again, whole wheels are not as likely to have a sound tread, they do not cool after casting without strain, and if the wheels be of the spoke form, the chilling opposite the ends of the spokes is softer than at other parts of the rim. Besides being wasteful, they are consequently unsafe, and the trouble given by such wheels, when used for engine drivers, has operated unfavorably against cast iron tires, as applied in the only proper manner.

Conscious of being in the right, we shall always maintain the merits and adaptation of this improvement, until every company has availed of it.

Ohio and Mississippi Railroad Company.

This company have made a new issue of 3,000,000 second mortgage bonds. This will make the capital account stand as follows:

Stock.....	\$6,500,000
First Mortgage Bonds.....	2,800,000
Second " ".....	3,600,000
Total.....	\$12,300,000

The original cost of the road was estimated at \$9,000,000. An increase of one-third upon this estimate is thus made, while the road is in *embryo*. By the terms of the original contract, the contractors were to be paid as follows:

In Stock.....	\$3,500,000
Cash.....	2,800,000
Bonds.....	2,500,000
	\$8,500,000

At the date of the contract, the stock subscriptions to the road were stated to be \$1,450,000, as follows:

Riply County, Indiana.....	\$50,000
Jennings " ".....	50,000
Knox " ".....	200,000
Daviess " ".....	30,000
City of St. Louis.....	500,000
Individuals.....	620,000
	\$1,450,000

In addition, the city of Cincinnati loaned its credit to the company to the amount of \$600,000, which constituted the *first* lien upon the road.

The contractors stock added to the above would make \$4,950,000 of stock.

The contractors stock may have been issued, but it by no means follows that anything has been paid in upon it. It may represent profits, instead of showing that anything has gone into the treasury of the company. Such would be the inference from the present estimated cost of the road, which appears to be very large for a new western road, and which is out of proportion to that of other roads in similar circumstances. A cost of \$12,300,000 gives an average cost of about \$37,000 per mile, or nearly double what western roads are usually opened for. The entire funded debt will average about \$19,000 to the mile, which is a much larger indebtedness than is usually created by western roads, especially before they are opened.

It would be interesting to know what amount in cash has been actually paid in on the stock of the company, and why the cost of the road so much exceeds that of the other western works. The statements put forth by this company are too indefinite to throw any satisfactory light upon the real state of their affairs.

The Railroad Record on the Cost and Productiveness of Western Railroads.

Were it allowable to indulge in a little humor in the discussion of such grave subjects as railroads, we should be tempted to tell the story of the dilemma in which a certain person found himself, when directed to take the census of a flock of pigs, as illustrative of a peculiarity of our friend of the *Railroad Record*. The aforesaid deputy represented that it was impossible to count the flock; that he could count all but *one*; a little speckled fellow that hopped about so briskly that he could not be counted; so he gave up in despair. The Record is equally frisky and uncertain in its essays to answer certain strictures of our own, upon a recent article in that paper, which stated, that, were eight parallel railroads, running north and south, between the Scioto and the Indiana State Line, constructed, they would each earn ten per cent. net, upon their cost; and secondly, that first class double track railroads, fully equipped, could be built in the West, at a cost not exceeding \$35,000 per mile. These statements, we thought, were very absurd, and pointed out their utter fallacy. We have no doubt, the Record, on a more mature reflection, agrees with us, as in its subsequent comments upon our strictures, it does not attempt to repeat its first statements, much less, to sustain them. It attempts, however, to divert the argument from the true issue by a mess of verbiage, which really means nothing, such as that we wish to dictate to the people of the West as to the extent to which they shall construct railroads, and as to the policy they shall pursue in granting charters, etc., etc. We do not wish to engage in a warfare of mere *loquacity*, and must decline to pursue the matter, till the Record shall answer categorically, whether it really believes, that were eight railroads constructed between the Scioto and Indiana State Line, they would each earn ten per cent. net, upon their cost; and also, whether it thinks that first class, double track railroads, fully equipped, can be built in the West, at a cost not exceeding \$35,000 per mile. This is the issue we make with the Record. We take the *negative*. When the Record makes, or attempts to make, out a case in the *affirmative*, we may add something. Till then, there is no controversy between us.

St. Louis and Iron Mountain Railroad.

The St. Louis and Iron Mountain Railroad is intended to make a direct railroad communication between the City of St. Louis and the Iron Mountain and Pilot Knob Mountain—the former being about 82 and the latter 87 miles from the city. Iron works are already established at both mountains, and there is a plank road 42 miles in length connecting the Iron Mountain with the Mississippi river at St. Genevieve, below St. Louis. The supply of ore at this point is literally inexhaustible.

It is easily obtained, and remarkably pure and rich. At various points ores of different character, valuable for various purposes occur. The thorough development of these was a primary object in the organization of the railroad company, though their ultimate design is to extend the road southward forming part of a direct line between St. Louis and New Orleans; and, in connection with other lines northward a route to Fond du Lac.

The Company is strong, having now a subscription of about two and a quarter millions—includ-

ing \$750,000 from the State of Missouri and \$1,000,000 from the City and County of St. Louis.

The first Division extending 45 miles from St. Louis is to be finished by July 1856 and the whole line by December of the same year. The route lies through a rolling and healthy region and includes considerable earth and rock cutting.

Testing of Steam Gauges.

S. J. Hayes, Esq., Master of Machinery of the Baltimore and Ohio road, has arranged a mercurial gauge at the Mount Clare Shop, at Baltimore, for the purpose of testing, and correcting, the Ashcroft Steam Gauges, with which the greatest part of the engines of the company are provided. It is a very long syphon, long enough, and containing enough mercury, to indicate a pressure (created by a force-pump) of 150 pounds to the square inch.

This tube, and the steam gauge under trial, being both connected to the chamber of the forcing apparatus, the action of both is readily compared.

The whole apparatus is simple and cheap, and of immense value in correcting those "barometers of power," upon the accuracy of which the safety of a train depends nearly as much as upon that of the standard time.

Valves of Locomotives.

On the 23d inst., a freight train on the Hudson River Railroad ran into another, because the engineer was unable to reverse his engine, by the great pressure on the slide valves. Balance valves are wanted for our locomotives. One man was killed, and another severely injured.—*Scientific American*.

In justice to the builders and operators of the engine referred to, it should be said that the above is no explanation at all. One move of the "throttle" would have removed all pressure upon the valves. Very few engineers reverse with steam on the valves. We should be much pleased to see a practicable balance valve, but at present we think the only means of reducing the friction is to use smaller valves with double openings.

Chilled Boxes and Steel Journals for Railroad Axles.

Our mechanical readers may not all be aware that the Baltimore and Ohio road use chilled cast iron boxes and steel plated journals on all of their freight and coal cars. Such has long been their practice, and it is now used on an equipment numbering nearly 4000 cars, while the officers in charge, state, that they give it a preference over any other pattern of box in use, on any road.

The chilled box is ground out to form a smooth bearing, when if well fitted to the pedestal block, it will run for a great length of time. If not fitted well to the pedestal, the box will be strained and will most likely break, doing no further harm than injury to the journal of the axle. But by careful fitting, it permits of a vast saving in the labor of replacing boxes and in the cost of the material, the latter being but one-tenth as much with iron as with brass.

The journals are cased with sheet steel of good thickness, whereby they are rendered as durable as the boxes.

Two young gentlemen in the employ of the company, have applied for a patent for casting chilled iron frogs. On one already made, eight months use in a crowded part of the line near Baltimore, has neither worn nor broken it. Its

adoption will doubtless save the company much money.

American Railroad Journal.

Saturday, March 18, 1854.

Back Numbers of the Journal.

Those who wish back numbers of the JOURNAL, for binding are requested to order them at once, as we shall be able to supply them but a few weeks longer.

We can furnish BOUND VOLUMES for any or all years complete since 1831—price \$5—per year.

Our RAILWAY MAP in sheets will be sent by mail to any address on the receipt of \$1.00—price on rollers \$2.00.

We have a few copies of MR. JOHNSON'S valuable work on the Northern route to the Pacific—price by mail \$1—with maps.

Stock and Money Market.

We are not able to report so favorably upon the condition of the share and money market as last week. For some days past there has been an increasing stringency in the latter, which exerted a depressing effect upon securities of all kinds. Nearly the whole list shows a marked decline. The bank statement, for the week ending March 11, is unfavorable. The receipts of gold from California have fallen off, (owing undoubtedly to temporary causes.) To these depressing causes, is to be added the foreign news, which indicate an European war to be inevitable. The times are evidently "out of joint," and the cure must be effected by curtailing expenditures to the means of our people. This healthy process is now going on to a considerable extent, and may have to be carried still further.

The following is the bank statement, for the week ending March 11:

	March 11.	March 4.
Loans.....	\$94,729,994	\$94,558,421
Specie.....	9,882,483	10,560,400
Deposits.....	60,226,582	61,975,675
Circulation.....	9,137,555	8,209,830

The Erie Railroad Company have declared a dividend, from 6 months earnings of the road, of 3½ per cent., payable April 1st. The Treasurer of this company has resigned and his place has been filled by Daniel Drew, Esq.

Memphis and Ohio Railroad.

This has been familiarly known as the Memphis and Louisville Railroad; or by the charter, as the Nashville and Memphis Railroad. The charter has been amended, and it is now called the "Memphis and Ohio Railroad." It has State aid to Paris, 125 miles from Memphis. Paris is the point of intersection for the Louisville Air Line Road, and for the roads leading from Big Sandy, Lexington, Bowlinggreen, Clarksville, etc.

The main line from Memphis to Paris, therefore may soon have two very important feeders, one from the eastern cities, of the shortest and most direct route; the other from the Ohio valley and the lakes, direct. Sixty miles will be let to planters this spring, as they are resolved to prepare the road for the iron, themselves.

The line from Memphis to Paris passes through a very rich agricultural region, and the taxable wealth in 1854 was \$40,000,000.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	83
Androscoggin and Kennebec..	55	809,878	1,016,500	2,064,458	140,561	80,053	none	30
Kennebec and Portland.....	72	952,621	291,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth..	51	1,355,500	123,884	1,459,384	208,669	.....	6	98½
York and Cumberland.....	20	285,747	341,100	713,605	28,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	82
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	110
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	36
Northern	82	3,016,684	.....	.....	328,782	163,075	5	59
Manchester and Lawrence....	24	717,543	.....	.....	.....	.....	6	91
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	109
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	21
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	26
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9½
Vermont Central.....	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	13
Vermont and Canada.....	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	92½
Western Vermont.....	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7	91
Boston and Maine.....	83	4,076,974	150,000	4,092,927	659,001	338,215	7	102½
Boston and Providence.....	53	3,160,390	390,000	3,546,214	469,656	227,434	6	84
Boston and Worcester.....	69	4,500,000	425,000	4,845,967	758,819	331,206	7	100½
Cape Cod branch.....	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River.....	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern.....	75	2,850,000	500,000	3,120,391	488,793	241,017	7	88
Fall River.....	42	1,050,000	none.	1,050,000	229,445	99,589	8	99
Fitchburg.....	66	3,540,000	112,305	3,623,073	574,574	232,787	6	90
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County.....	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony.....	45	1,964,070	282,300	2,293,534	374,897	122,816	none	99½
Taunton Branch.....	12	250,000	none.	307,136	137,406	24,399	8	.....
Vermont and Massachusetts.. "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	22½
Worcester and Nashua.....	45	1,134,000	171,210	1,321,945	162,109	66,900	4	59
Western	155	5,150,000	5,319,520	9,953,759	1,525,224	746,736	7	97
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	71
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	69
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	129
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	100½
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	58
Buffalo and New York City... N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	.....	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	none	130
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	79½
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	67½
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	55½
Long Island.....	95	1,875,148	516,246	2,446,391	205,068	44,070	none	34
New York Central.....	504	25,085,600	10,773,823	33,859,423	.....	.....	.....	106½
Ogdensburg (Northern).... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	26
Oswego and Syracuse..... "	35	350,000	201,500	607,803	90,616	48,609	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston.....	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,495	1,388,385	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey.....	81	2,197,340	476,000	3,245,720	603,942	316,259	10	181
New Jersey Central.....	68	938,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	38	830,100	713,227	1,703,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,486,626	1,251,987	7	79½
Philad., Wilmington and Balt. "	93	5,000,000	2,399,166	8,067,966	869,036	541,769	6	79

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton.... "	80	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102 1/2
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna.. "	57	.....	.....	.....	413,673	162,536	.....	....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.. "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	503,006	1,631,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,645,256	109,268	42,736	none	98
Winchester and Potomac.... "	32	180,000	120,000	416,532	89,776	.....	12	....
Wilmington and Raleigh... N. C.	161	1,338,378	1,134,698	2,965,574	510,038	153,898	6	....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.... "	140	1,004,231	300,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	115
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7 1/2	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia.. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga.. "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	91
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	99 1/2
Cleveland and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	121
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102 1/2
Cincinnati and Marietta.... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	109 1/2
Mansfield and Sandusky.... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77 1/2
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania.... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley.. "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Xenia and Columbus..... "	54	1,291,000	300,000	1,257,714	317,000	158,500	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77 1/2
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently opened.	.....	.....	87
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,982	Recently opened.	.....	.....	76
Lafayette and Indianapolis.. "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru "	138	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Peru and Indianapolis..... "	40	.....	.....	In prog.	.....	.....	.....	65
Terre Haute and Indianapolis "	72	632,387	663,100	1,853,019	105,944	71,446	4	108
Rock Island and Chicago.... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	1,932,361	500,000	In prog.	473,548	286,162	.....	118
Michigan Southern and Ind. N. Mich.	315	2,800,000	3,741,564	7,276,616	1,200,922	588,929	17	118
Michigan Central..... "	282	4,856,700	3,977,563	8,619,606	1,145,598	582,816	6	124 1/2
Pacific..... Mo.	49	1,000,000	none	In progress	Recently opened.	.....	.....	.....

Consolidation of the Cincinnati and Marietta and Cincinnati and Hillsboro Roads.

The contract of union between these roads has been entered into by both Boards of Directors, and ratified on the part of the stockholders of both companies by a nearly unanimous vote. It provides for the construction of two first class roads between Blanchester, in Clinton County, and some point, yet to be determined, between Athens, in Athens County, and Jackson, in Jackson County. The Marietta Company take \$250,000 of the stock of the Hillsboro Company, and guarantee the construction of the Eastern connection with the North Western Virginia road, upon such route as may be agreed by both Boards of Directors. Thus the construction of the entire line between Loveland, on the line of the Little Miami road, and the Ohio river at Parkersburg, is secured.

The two roads are to be run as one interest, the working expenses of both being paid out of the gross earnings of both companies; the construction accounts to be kept separate as before. Equal per cent. dividends on both stocks are to be declared out of the sum of the net earnings of both roads.

From February 1st, 1854, the stock of both companies will bear an interest of 8 per cent., payable in stock, until both companies shall decide to pay cash dividends.

All financial resources of each company, except those derived from working the road, are to be applied to the construction and completion of their respective lines.

The consolidation of the above companies, providing for one road through Southern Ohio, must have a most favorable effect upon the value of their securities.

Gauge question settled.

We learn that the contested question of change of gauge, of the Indianapolis and Bellefontaine Railroad, upon which the Columbus, Piqua, and Indiana Company had obtained an injunction in the Circuit Court of the United States for the district of Indiana, has been amicably arranged by the Companies interested, and the gauge of the Indianapolis and Bellefontaine road, is now being extended to Indianapolis on the 4 feet 10 inch, Ohio gauge. This completes the through line from Cleveland to Indianapolis 280 miles, on the same gauge, and as the Evansville, Indianapolis and Cleveland straight line, is to be built on the Ohio gauge, the line will, no doubt, be extended by an arrangement between the Companies to Evansville, making a continuous line of the same gauge, avoiding reshipments, of 430 miles, connecting Lake Erie at Cleveland, with the Ohio River at Evansville, through the Capital of the State of Indiana.

Toledo and Illinois, Lake Erie, Wabash and Toledo Railroad.

In another column will be found the late report of the above companies, (whose road will make one line,) which present in detail, their financial condition, the state of work upon their line, the relations and business prospects of the road, etc., etc. We have recently expressed a favorable opinion of the business capabilities of the route of the above road. We believe the result will fully justify the view contained in the report referred to.

Position and Progress of St. Louis.

Youth is ever progressive, but different constitutions attain to different developments upon their ultimate maturity. The growth of communities as well as of individuals, is limited by a natural and physical constitution. The west enjoys a rapid and unceasing growth, because its resources are comparatively untouched, and it possesses all the elements and attributes of youth. The east has attained an important growth from a similar cause but its present progress is more the inertia of motion than that which overcomes the inertia of rest. The East has not the expansive capacity of the west, and much of its present growth is the result of its position as the manufacturer, forwarder and commission merchant of the West. But for this fact the advance of the East would be more nearly with the natural increase of population.

The support of communities depending, chiefly on the abundance of natural production, and the cheapness of the labor necessary for its conversion, it is at once seen that the West contains the resources necessary to the support of a vast population. Its territory is great in extent and most productive in its character. It supplies food, fuel, all the materials for building, and many of those which are the basis of important manufactures. In minerals, the great elements of industry and wealth, the west is especially productive. The natural channels of communication are also in keeping with its character in other respects. In the East, where the country is broken, the rivers are short, and often obstructed by falls and rocks. The intervening ridges also interrupt communication, besides reducing the productive area. In the west, on the contrary, the rivers and lakes are of great extent and generally well adapted for navigation, while the intervening country is available throughout for productive purposes.

In few parts of the West are the elements of agricultural, animal, and mineral wealth better combined, and in no place better accommodated with natural channels of reception and distribution, than at St. Louis. Besides the resources abundant in its immediate vicinity, it commands by a cheap navigation, all those of the Upper Mississippi, Missouri, and Illinois rivers, near the common junction of which it is situated, while the Lower Mississippi forms a common outlet for all of its trade seeking a southern channel. These natural routes have established St. Louis and have already given it a population of over 100,000 inhabitants, and a valuation of real estate alone of over forty millions of dollars. They have employed a tonnage, belonging to St. Louis, which now amounts to 37,000 tons. The imports for the present year will amount to \$1,000,000, while the materials of the commerce of the city for the year just past, were valued at \$100,000,000.

It is not, however, the amount of the population and wealth of St. Louis, which engages our attention, but the rapidity of its increase. The history of the place is most recent. In 1840 the population was little more than 16,000, since which period it has increased to more than six times that amount. The population and valuation of the city have doubled since 1848.

The elements of the future growth of the trade of St. Louis, are the productive capacity of the tributary country, most of which is comparatively unopened and unsettled, and in the additional

means of communication to be afforded by Railroads. The productive capacity of the adjoining and tributary country could not be estimated with any reference to its results on the growth of St. Louis, but it may be said to exceed that of any other portion of the West in extent and variety. Most of the productions of this section of country also serve as the basis of the most important manufactures. Nearly half a million barrels of flour are already manufactured annually in St. Louis, while its lumber, sugar, starch, soap, beer, and wooden ware factories have established a business of great extent, and such as must increase beyond all calculation.

The principal manufactures of St. Louis must soon, however, be those of the minerals at her command. Her mineral resources are unsurpassed in the world, for extent and purity. Within eighty miles of the city, the Iron Mountain and Pilot Knob contain over 400 millions of tons of iron, above the general surface of the plain in which they are situated. For ductility and cohesion, this iron is of extraordinary quality, while its deposits are of singular purity. The coal, necessary for its conversion, is also near at hand, in unlimited quantities. The manufacture of iron has already commenced at St. Louis, one mill turning out about 6,000 tons of bar and sheet iron, chairs and spikes, per annum. In view of the demand for railroad iron, it is evident that this manufacture is destined to be increased to an extent surpassed by no other city in the Union. Engines and boilers, locomotives, mills, machinery of most kinds, stoves and hardware, are already manufactured at St. Louis in large quantities. One establishment alone, is expected to turn out 30,000 stoves during the present year.

Manufactures of lead, to which mineral St. Louis has extremely good access, have been commenced on a large scale, and large quantities, (nearly ten millions of pounds,) of bar and sheet lead, lead pipe, and shot are annually produced.

With all of these elements of wealth, and a position, the value of which is indicated in the growth of the city up to this time, what doubt can there be that long and numerous lines of railroads will sustain themselves in carrying and giving direction to the trade of St. Louis? Important lines are already opened, or in progress, to the East and North-East, while forty miles of the Pacific road are also in operation toward the Western boundary of the State. But none of these have been enabled, in so short a time, to influence the trade of the city to the extent that another year will show. The present wants of the city in the respect of railroad accommodations, are principally those projected within the State of Missouri. The great need of these is in the control they would give over the selection of the Pacific route and especially in the development of the resources of the State, the best part of which must remain, if without them, practically inaccessible. The ore from the Iron Mountain can be brought by railroad to St. Louis, as cheap as coal can be transported on the Reading Railroad, or at about one dollar per ton. Without the railroad, this mineral would not allow St. Louis to compete successfully with other points in the manufacture of iron, while with it, the door is open for her certain success in this important branch of business.

As St. Louis, by her position, commands all of

the trade of her own State, as well as of portions of adjoining States, she has every inducement to extend her railroads to make that position available. The safety of capital invested in such works, or of securities which their construction will create, will be based upon the general considerations which have been given of the business to be developed and carried to St. Louis.

Freight Tariff of the Baltimore and Ohio Railroad.

For comparison with the freight tariff of the Erie Railroad, published in our last number, we subjoin the freight charges upon the Baltimore and Ohio road, as adopted since October 1st, 1853.

Rates between Baltimore and the principal freight stations, per 100 lbs.:

First class. Second class. Third class. Fourth class.

Winter,	Summer,	Winter,	Summer,	Winter,	Summer,
6	6	4	4	3	3
24	20	19	15	15	12
31	25	23	18	19	16
37	28	28	21	22	19
50	35	35	25	32	30
55	40	40	29	36	33

(The 60 miles between this and Piedmont is mostly on 116 feet grades.)

77	62	62	49	53	43	44	34
81	66	66	52	56	46	46	36
90	75	75	60	65	50	50	40

Rates between Wheeling and the principal stations, per 100 lbs.:

First class. Second class. Third class. Fourth class.

Winter,	Summer,	Winter,	Summer,	Winter,	Summer,
36	28	27	21	23	18
39	30	30	22	26	19

(The 60 miles between this and Independence is mostly on 116 feet grades.)

51	42	42	34	35	29	28	23
56	47	47	37	39	31	31	25
90	75	75	60	65	50	50	40

In comparing these charges with those of the Erie road, it must be remembered that the general provisions of the tariff of the Baltimore road are more liberal than those of the Erie.

By the Erie tariff unenumerated articles are taken at first class rates. By the Baltimore tariff, they are taken at the rates of analogous, or like articles.

By the Erie tariff, articles taken at fourth class rates must be in lots of ten tons or more, and will then be carried only at the company's convenience. By the Baltimore tariff articles taken at fourth class rates need not exceed 500 lbs., and no reservation is made for the convenience of the corporation.

But in the classification of freight, particularly, there is a wide difference in the two tariffs, one which is generally in favor of the shipper by the Baltimore route. The classification of several articles is given below:

	Erie	Balt.
	class.	class.
Brooms and Broom corn.....	2	1
Beeswax, Books, through.....	1	2
Bagging in bales or rolls.....	2	3
Binders boards and butter.....	2	3
Beef salted, in casks, going west.....	2	4
" " " " east.....	3	4
Bones and Bone Dust.....	3	4
Brimstone.....	2	4
Cod fish.....	1	2
Cod fish in casks.....	1	4
Cordage, through.....	2	3
Coffee, through.....	2	4
Cider, in casks.....	3	4
Charcoal, (through on Erie Railroad,).....	3	4
Dry Goods, in bales.....	1	2
Dye Woods, chopped or ground.....	2	3
Dye Woods, in sticks.....	3	4
Eggs, owners' risk.....	2	1
Fish salted, in casks.....	2	4
Flax seed, through.....	2	4
Glass ware, in boxes, through.....	1	2
" window, over 12x20.....	1	3
" " under 12x20.....	2	3
Gunny Bags, way.....	2	3
" in bales, through.....	2	4
Hardware, way.....	2	1
" through.....	2	2
Hollow-ware castings.....	1	2
Honey.....	1	2
Hay, in bales.....	2	4
Hemp, in bales, through.....	2	4

Hides carried at uniform rates, throughout the year, on the Baltimore road.

Iron in heavy lots, on Erie road at 1.7 cts. summer, and 1.87 cts. winter, per ton per mile. Special rates on Baltimore and Ohio road to carry pigs and blooms 378 miles for \$5 00 per ton, and 177 miles for \$2 50 per ton, equal to 1 1/3 cts. per ton per mile, over 50 miles of 82 and 116 feet grades, against 15 miles of 68 feet grades on the Erie.

	Erie	Balt.
	class.	class.
Live stock, less than car load.....	1	2
Machinery, boxed, owners' risk.....	1	2
Manure.....	2	4
Molasses.....	3	4
Nails and spikes, less than car load.....	3	2
" " full carload.....	3	4
Oakum, in bales.....	2	3
Oil in casks, through.....	2	3
Oysters, in shell.....	2	4
Palm Leaf, in bales.....	1	2
Ploughs and Cultivators.....	1	2&3
Rags, through.....	2	4
Raisins, way.....	2	1
Shot, way.....	3	1
Shot, through.....	3	2
Salt and Saltpetre, way.....	3	2
" " through.....	3	4
Scales and Scale beams, boxed.....	1	2
Spices.....	1	2
Saddlery, through.....	1	3
Soap, except fancy.....	2	3
Sugar, unrefined.....	3	4
Teas, through.....	1	2
Tin plate.....	3	4
Turpentine, spirits.....	1	4
Varnish.....	1	2
Vinegar.....	3	4

In the case of articles carried by estimated weights, the estimation by the Baltimore tariff is generally more liberal towards the shipper. The following is the comparison of estimated weights where any difference exists.

	Erie.	Balt.
Beef and Pork, lbs. per bbl.....	320	300
Sheep lbs. each.....	125	100
Lambs ".....	100	75
Potatoes, lbs. per bushel.....	50	56
Rye and Corn " ".....	56	52
Barley lbs. ".....	48	45
Charcoal, lbs. per cubic foot.....	23	22 1/2
Dry firewood, posts and rails lbs. per cord.....	4,000	3,500
Seasoned Pine and Hemlock Boards, Planks and Scantlings; lbs. per M. ft. B. M.....	2,500	2,250
Unseasoned do.....	2,750	2,500
Pianos lbs. each.....	1,200	act'l wt.
Single horse or horned animal.....	2,000	act'l wt.
Two horses or horned animals.....	3,500	" "
Three " " ".....	5,000	" "

The through freights upon the Baltimore and Ohio road per ton of 2,000 lbs. per mile are as follows.

Winter rates.	First class.....	4.74
	Second ".....	3.95
	Third ".....	3.42
	Fourth ".....	2.64
Summer rates.	First ".....	3.95
	Second ".....	3.16
	Third ".....	2.64
	Fourth ".....	2.11

There is another fact of importance in comparing the tariffs of the two roads. In 1853 over 50,000,000 tons of coal were moved one mile on the Baltimore and Ohio road, most of which was carried 180 miles, from Cumberland to Baltimore, for \$2 25 per ton, or 1 1/4 cents per ton per mile, over 82 feet grades, the cars returning empty. The whole movement of tonnage for the year, including coal, was about 80,000,000 tons one mile.

Movement of Tonnage Trains West.

Baltimore.....	lea.	miles.	4.30 A.M.	Monday.
Martinsburg.....	arr.	101	6.15 P.M.	"
".....	lea.	6.00 A.M.	Tuesday.	
Piedmont.....	arr.	207	5.40 P.M.	"
".....	lea.	7.15	"	"
Wheeling.....	arr.	380	5.10	Wednesday.

Eastward.

Wheeling.....	lea.	miles.	5.00 A.M.	Monday.
Piedmont.....	arr.	3.25 A.M.	Tuesday.	
".....	lea.	178	5.00 A.M.	"
Martinsburg.....	arr.	279	5.10 P.M.	"
".....	lea.	5.00 A.M.	Wednesday.	
Baltimore.....	arr.	380	3.40 P.M.	"

The stock trains leave Baltimore at 4.30 A.M. (Monday) and arrive at Wheeling at 7.10 A.M. (Wednesday). Returning leave Wheeling 6.00 P.M. (Monday) and arrive at Baltimore at 1.00 P.M. (Wednesday).

Coal trains run between Baltimore and Piedmont, 207 miles, as follows. Run through, in going East, in 25 hours and 10 minutes, westward in 24 hours, 5 minutes; leaving Baltimore every week-day at 4.10 P.M., and Piedmont at 5 A.M.

A Request.

We shall take pleasure in receiving from any and all railroad companies, throughout the country, copies of their freight and passenger tariffs, special rates, time tables (the latter such as are printed for enginemen), profiles of their roads, and any general information touching their system of working, physical or local characteristics, etc. We intend that the *Journal* shall faithfully represent the progress of improvements in railroads; quite as well in their practical operation as in their financial management. Our course in these particulars, thus far, has received the approbation of the ablest and oldest managers and engineers in the country.

Journal of Railroad Law.

CITY RAILROADS.

By the late final decision of our Superior Court upon this subject, in the cases of *Davis and others* and of *Sharp and others* against the Mayor &c. of New York,—it is probable that the projectors of city railroads will hereafter be wholly deterred from seeking the sanction of the Common Council but will resort solely to the Legislature of the State, for the authority which their undertakings require.

The opinion of the Court was an able one, and was delivered by Judge Oakley.

The following are the principal points which it involves.

1st. The Common Council has no authority except such as is expressly given or such as is necessarily implied to enable it to discharge duties enjoined or to exercise powers expressly conferred. And this cannot be claimed for the authority exercised in the case under consideration.

2d. The Common Council have in regard to the proposed Broadway Railroad granted privileges which may be perpetual.

3d. The grant which has been made by the Common Council to the parties proposing to build the railroad in question, in effect, are contracts, and if valid, must not be violated. But if sustained, they will impair the legislative authority which has been conferred upon the Common Council in regard to streets.

4th. The grant in question confers an exclusive privilege which may be perpetual.

5th. It absolves from the obligation and frees from the penalty of the law in respect to turning towards the right side of the road.

6th. It confers peculiar rights and exempts from legal consequences in case of the death of either of the grantees.

7th. It authorizes the grantees to become incorporated under the general Railroad Law after their proposed road is constructed, whereas the said Law only provides for such incorporation before the construction of a road.

8th. It regulates the sweeping of Broadway, which is by the Charter otherwise provided for.

The injunction is therefore made perpetual.

CAUTION, HOW FAR REQUIRED OF RAILROAD COMPANIES.

The views of Mr. Justice Woodward upon this subject were stated in his late charge in the jury at Nisi Prius in Philadelphia in the case of *Scott vs. the Ohio and Pennsylvania Railroad Company*.

The judge said in substance that the contract between Railway Companies and passengers is to carry them safely to their several points of destination, as devoted by the passage tickets furnished. The Companies are bound to furnish all appliances, suitable roads, cars, and agents and other appointments. In case of an action for railroad injury sustained by a passenger it is only necessary, in the first instance for the injured party to show the damage he has sustained. When this is shown to the jury, the burthen of proof is thrown upon the Company complained of to show that they are entitled to be exonerated from blame. The Company must satisfy the jury that they have fully discharged their duty in every respect, so far as human foresight could avail. But in practically applying this rule, the Courts will take into consideration the peculiar nature of the mode of con-

veyance to which it relates. A railroad company is not bound to forego the customary degree of speed. They are bound to use all possible care at the customary rates of speed, for which their cars are suitable. The accident complained of must not be due to the negligence of the passenger, nor is the Company liable for inevitable accident.

In view of negligence on the part of the Company it is not material whether their negligence be slight or gross. And they are equally responsible whether they are complained of as having done what they ought not to do, or as having omitted to do what they ought to have done.

The defendants insisted that the accident in question was occasioned by the breaking of an axle of the truck of the middle car from some latent defect. The plaintiff contends that this breaking of the axle was a mere consequence of the accident, not the cause of it, and that it was in reality occasioned by the breaking of a flange of one of the wheels, or from the spreading of the rails of the road.

After an examination of the testimony upon this subject the Judge remarked that the Company are liable upon their own theory. For they failed to show that they had made any attempt to discover whether or not any latent defect existed in the axle.

In regard to damages, the Judge was of opinion that they would best discharge their duty to the public by discharging it faithfully towards the parties to the controversy. The damages should be compensatory not vindictive.

The Jury rendered a verdict for \$350 for plaintiff.

In connexion with the foregoing case we add that the suit of *Newell vs. the Boston and Maine Railroad Company* has resulted in favor of defendants, upon the ground that the accident complained of was one which human foresight was inadequate to prevent. The disaster in question was that which proved fatal to the son of President Pierce.

SUBSCRIPTION TO RAILROAD STOCK.

On the 7th instant Hoffman, Justice of the Superior Court of this city, rendered the following decision:

De Forest Manice agt. The Hudson River Railroad Co.—The correct interpretation of the contract and engagements defendants set out in the complaint, with the act of the legislature referred to, will determine nearly every question raised upon the pleading.

It is stated that, by the terms of subscription, it was agreed between the company and the subscribers to the stock, that application should be made to the legislature to authorize the issue of a limited number of shares of the capital stock of the said company, to be applied to the payment of interest on the instalment paid in by the subscribers on the capital stock subscribed by them respectively, until income should be realized from the road; that such interest should be at the rate of seven per cent., and be allowed on all payments from the day they were made.

The first payment was to begin on the 10th of November, 1847, and be made semi-annually thereafter.

If no such law should be procured, then the interest was to be paid from the first clear earnings of the road, and no dividend was to be made until all such interest was fully paid.

The act contemplated was passed on the 20th March, 1847, and empowered the company to issue as many shares of stock, of \$100 each, and not exceeding ten per cent. of the capital, as might be necessary to enable the company to provide for and pay interest on the instalments paid in for the

construction of the road, until it should be completed and put in operation.

The plaintiff subscribed \$7,500 and paid the last instalment prior to November 15, 1848. The last payment of interest to him was on the 20th November, 1848.

The company issued stock to the amount of four per cent. on the capital, to meet this interest, and continued for some time to sell the same at a loss, and pay such interest subsequently. But on the 20th of March, 1850, the directors resolved not to pay the interest any longer in cash, but in the stock of the company.

This raised the main question in the cause, viz: whether the interest should be payable in cash or stock. I think that the act of the legislature may be used to assist the interpretation of the agreement between the stockholders and the company, and these, together with the terms of the contract, in the event of failure to obtain an act, satisfy me, that the true construction rendered it obligatory on the defendants to pay the interest in cash. The legislature permitted the issue of stock to enable them to effect it, but it is not a just conclusion from any of the proceedings, that the subscribers were compellable to accept stock in payment.

It is not stated whether the stock was to be transferred at par, or at its current value; but even if the latter was the case, I consider that the contract obliged the company to bear the expense and trouble of turning into money.

The terms of the act were, that such interest should continue to be paid until the road should be completed and put in operation, and this is stated to have been on the 29th of October, 1851. The claim of the plaintiff is for interest down to and including that falling due the 15th May, 1852.

For the interest down to the 15th of November, 1851, the company would be responsible, on the view taken disregarding the seventeen days from October 29th.

But I apprehend, that when the road was in operation, the common or partnership rights arose, and the subscribers had to look to profits; whatsoever they might be, in lieu of interest; but as the complaint rests.

Street Railroads in New York.

We copy from the New York Times, the following communication, addressed to J. O. Blunt Esq., Chairman of the Committee on Railroads, in the Board of Aldermen, upon the subject of railroads in the streets of New York. The article was written by a gentleman who has given the subject particular attention, and who, of all others, is qualified to do it justice. His style shows that he wields no ordinary pen, nor does he presume to talk, without having something to say. An easy, cheap, and rapid mode of transit from one part of the city to another, both for persons and property, is now the most important problem before our people, both in reference to their social and pecuniary interests. New York has become the great city of the continent, for the reason that it is the easiest of access of all, from the interior. One step, only, is wanting to confirm her supremacy: greater facilities than all, for the accommodation of the business of the country, when it reaches tide water. To secure such, she has only to turn her natural advantages to account. The policy to be adopted as the basis of action, should be that which will reduce the cost of movement to the lowest figure. The standard should be that of absolute perfection. The expense of movement, and the cost of movement, should be made convertible terms. To depart from this, will inflict an absolute wrong, not only upon the public, but individuals. Every cent lost in transportation, is a direct tax upon society. We sincerely hope to see a wise, liberal, and correct policy, take the

place of the contracted and erroneous notions that have so long prevailed, and which have exerted such an unfavorable influence upon the prosperity of the city.

To J. Orison Blunt, Esq., Chairman of the Committee on Railroads in the Board of Aldermen.

SIR: Your zeal in the duties of your committee, and the sort of difficulties you have already encountered in ascertaining what ought to be done, and how to get it done, may incline you to consider some suggestions, which arose on reading that part of the Annual Message of his Honor, the Mayor, which refers to the topic pursued in this letter. The same suggestions, doubtless, were conveyed to other minds; and my only apology for repeating them is, that having taken pains to give them method and form, their importance seems greater than at first. If the publication of them shall serve to animate you in the arduous service of your office, or impress one citizen with a higher idea of the value of facilitated movement for persons and property, to and through our city, the end of this letter will be answered.

It is an established fact, that movement on rails can be made more cheaply, more rapidly, and more pleasantly, than on a pavement. This fact is a new development of the fundamental fact which caused our city to be the commercial center of this continent. Because experience proved that this island was the place to which there was the easiest and cheapest movement from every other place on earth, and for this reason alone, New York has become the center of American commerce. This fact being settled, there are some collateral circumstances which have favored us—a temperate and healthful climate, a large supply of pure water, and a natural facility for draining, have aided our growth; but those advantages would have availed us nothing without the one advantage of the easiest and cheapest movement to every other place on earth, by land and water. For this reason alone all great transactions for this continent, wherever originated, are developed here.

The magnitude of the subject before us, will become apparent when we observe carefully the extent and the cost of the daily movement of persons and property on this island. Four city railroads, none of which are complete in their length, or their power to serve the public, are receiving about one million dollars a year for fares. This is probably less than one-fifth of the actual cost in the entire movement of persons and property of the city. And, if so, then the cost of movement exceeds the whole tax of the city.

The movement by horse power on rails may be fairly estimated to cost about one-fifth of the price of movement in the ordinary way. But the additional economy of time and comfort have been most effectual in bringing the City cars into public favor. At all these points—the fare, the time, and the comfort—there is room for a large increase of economy. Small fares for short rides are already begun, and will soon become common. Cars of half the present weight would carry more passengers, if they had not to fight carts and omnibuses. And the speed would be raised twenty per cent., if the whole movement were by cars.

The field for economized movement of property on rails is even greater than for the movement of passengers. One proof is enough. It costs half as much to cart a barrel of flour from Thirty-first street to Barclay street as it does to bring it from Troy on rails. And it will soon be discovered that all the heavy movement of commerce may be made on tracks only two feet apart, on trucks elevated but a few inches, and the movement may run close to the curbstone, and may turn out into warehouses and wharves without unloading. But, up to this time, the movement of merchandise in our City is the most clumsy and costly of all our arrangements, and worse managed than in any other city north of the slave line. Thus far of the movement on rails within the City.

The movement on rails toward our City is another branch of the whole business to be considered

to a department of railroads in the City Government. This branch derives its importance, not only from the increased facility of general commercial movement, but also from its effect in enlarging the capacity of the City for greatness. It operates like the Croton water, which has doubled the capacity of a lot of ground for the transaction of business, beside all the advantages of safety and comfort.

The capacity of a city for greatness depends considerably on the extent of the area around its centre for the pleasant and economical residence of its people, and on the area from which its daily and perishable food can be cheaply brought at all times of the year. Six railroads, three of which bring persons and property into the heart of the City, have increased, tenfold, the habitable area of our City, and, fiftyfold the area for cheap supplies of winter food. These are large figures; but, let it be observed, "that while the total value of wheat is expended in a cartage of one hundred and sixty miles, twenty per cent. of its value will carry it, on rails, a thousand miles." Three quarters of our bread and meat have come from the far West during the last two months, on the Erie and the Hudson River Roads.

Now, Sir, I hadly need remind you, that these vast economies, in the conveyance of persons and property, are just as true and direct contributions to human life and leisure, as if the same value were added by fresh contrivances for labor saving, in the tillage of the field or in the working of the loom or the anvil. But this truth of social economy does authorize me to remind you that the magnitude of the public interest now entrusted to your Committee, is probably greater than your modesty and your unnumbered avocations will allow you to conceive. It is easy for us now to conceive what enlarged ideas of usefulness animated Clinton, Eddy, Allen, and the still living projectors and originators of our canals, waterworks and railroads; but the work of facilitating railroad movement into and through our City is scarcely a smaller public economy than any of these great works. For, while it is not yet manifest to what extent this improved movement will go, it is certain that it is but just begun; and that new inventions for aiding the movement occur in almost every monthly report of the Patent Office. The suppression of noise, the consumption of smoke, and the easy control of the motion in small locomotives are known possibilities, and are likely to be soon exhibited in practice. But whether the locomotive, with its fivefold economy, shall drive the horse from the streets, as it has driven him from the country thoroughfares, it cannot be longer doubted that our streets will become one connected gridiron of rail tracks, at least in all the streets of considerable width.

The whole subject of movement on rails into and through the City, lies in a crude, unorganized and annoying state. Powerful companies are laboring, each for itself, to accomplish its own advantage, and to place themselves as far as possible beyond the control of the City Government. A prejudice has been raised against these companies by the manner in which some of them got possession of the streets. And, whether the public now enjoys all the advantage it ought to receive from any of them, is gravely doubted by great numbers. Local and private interests are liable to be injured at some points by these roads; and the pretence of such injury is often set up by those who would be sorry to see the tracks removed.

How far the railroads shall finally enter into the City with locomotives, is a question of vital importance to our commerce. This question ought to be settled while the City is yet in a forming state; and while it is yet possible to provide for the trains of all these roads reaching the Battery in a way not to endanger human life or obstruct the ordinary course of business. A Committee on this subject was raised in the late Board of Aldermen; but the time had not come for its action. If this end could be attained in connection with the widening of West-street, its value to the City would be immense. And the City and the com-

panies could afford a very great expense to secure it.

Up to this time we have no railroad across the City at any point. When cross-roads begin to be made, then will arise the question of cooperation, transfer of passengers, and discrimination fares. But the new questions and the new interests which will arise are numberless; and in every one of them the City Government, in behalf of the public, is deeply concerned.

A department charged with the oversight of this whole business, would accomplish many practical and economical ends.

It would become a storehouse for all the accumulated and accumulating knowledge concerning the Railroad movement, which can be collected at home and abroad.

It would furnish important statistics and suggestions to enlighten City legislation on the whole subject.

It would insure the public against paying higher rates of fare than are required to give just remuneration to the owners of the roads.

It would put an effectual check on the abuse of the corporate powers of the companies.

And it would relieve the Common Council of the details with which its Committees are overwhelmed, while it would aid those Committees in reaching conclusions to guide their votes on all important questions.

The cost of this department would be a cheap economy to the treasury, and might, with great propriety, be charged to the several companies.

The man to be placed at the head of this department should be of the highest order of talents, acquisitions and railroad experience. And such a man can be found.

Ought not the recommendation of the Mayor on this subject, to be taken up and acted upon?

Yours, very respectfully, ECONOMUS.

Tennessee.

Amendment of the Internal Improvement Law.—

An important amendment has been made to this law at the late sitting of the legislature of Tennessee. The following are its more important provisions:

The appointment, by the Governor, of a Commissioner of Roads, at a salary of \$2,000 per annum, to watch and guard the interests of the State in the works of internal improvement in which the State has or may have an interest, as a stockholder, or on account a guarantee of their bonds.

The increase of the State loan to the companies mentioned in the act of 1852 to \$50,000 per mile, and also extends the benefits of the act and loan of \$1,000 per mile to—

The Edgefield and Kentucky Rail Road Company; The Central Southern Rail Road Company; The Knoxville and Charleston Rail Road Company; The Mississippi Central and Tennessee Rail Road Company; The Knoxville and Kentucky Rail Road Company; The Tennessee, Western, and Charleston Rail Road Company; The Cincinnati, Cumberland Gap, and Charleston Rail Road Company; and The Mississippi and Tennessee Rail Road Company.

The act also provides for bridges across the Clinch Holston, Big Hatchie Tennessee, and Cumberland rivers, where the roads named cross said rivers.

It also provides for a State guarantee of the bonds of the Nashville and Chattanooga Railroad Company to the amount of \$650,000.

It gives the South western Railroad Company, two years additional time to bring themselves within the provisions of the act of 1852.

The railroad companies embraced in the Act of 1852 are as follows:

Nashville and North Western; Nashville and Memphis; Chattanooga, Harrison, Georgetown and Charleston; Louisville and Nashville; South Western; McMinnville and Manchester; Memphis and Charleston; Nashville and Southern; Mobile and Ohio; Nashville and Cincinnati; East Tenna-

see and Virginia; Memphis, Clarksville and Louisville; and Winchester and Alabama Railroad.

Evansville, Indianapolis and Cleveland Straight Line Railroad.

As the construction of this important road is no longer doubtful, for the purpose of enabling those who would like to avail themselves of the opportunity offered of taking stock, to judge of the prospects of the work, we give the following extract from the exhibit made to the Board, at the late session, by the President.

"PROGRESS OF THE WORK."

The whole line has been located, and the first general division of 54 miles was put under contract on the 15th day of February last. For the purpose of making our road profitable to the stockholders as soon as possible, we have resolved to complete it in four continuous divisions. *First*: From Evansville to the crossing of the Ohio and Mississippi Railroad, about 54 miles, by which we shall be put in connection with Cincinnati and St. Louis direct, and indirectly with all the railroads of the State, the North and the East. *Second*: From said crossing to New Albany and Northern Railroad, about 50 miles, by which we shall be put directly in connection with New Albany, Lafayette, Michigan City, Chicago, and Detroit. *Third*: From said crossing to Indianapolis, by which we shall be put in connection with all the railroads radiating from the capital. And, *Fourth*: From Indianapolis to Union. The construction of this last section, will depend upon the contingency whether a through line of the same gauge, and through arrangements from Evansville to Cleveland, avoiding transshipments, can be obtained by the company without it, by the time the road from Evansville to Indianapolis shall be built. The means of the company will be first applied to the road between Evansville and Indianapolis, and the section from Indianapolis to Union will not be made, unless it should become necessary to build it, to secure the through line of the same gauge from the Lake to the Ohio River.

ALIGNMENT OF THE ROAD.

This road presents a remarkable alignment. The distance from Evansville to Indianapolis by air line is about 147 miles, and by railroad line about 150 miles, while the maximum grade is only 39 feet to the mile, and the curvature under one degree radius. The section from Indianapolis to Union is 75 miles by air line, and the same by railroad line, without a curve, on a thirty feet to the mile maximum grade. The cities of Evansville and Lamasco have granted the right of way for a double track to the Ohio river, upon any street of the cities, with the free use of the wharf for landing, and transfer of freight and passengers between the cars and the Ohio steamers.

BUSINESS OF THE ROAD.

This road is presented by the Company as one of the leading trunk lines demanded by the public; and an examination of its claims to that character, both as an East and West, and North and South line, is solicited. Its local business will be equal at least to that of any road in the West of its length. It passes through a country of unsurpassed fertility, being densely populated, and abundantly supplied with hydraulic power from White River. It is directly connected with the iron mines, and cannel coal fields of Southern Indiana. It connects six county seats with the flourishing capital of the State. It taps the Ohio river at Evansville, 213 miles below the falls, and will unquestionably carry the sugar, molasses and other products of the South coming up from New Orleans for Central Indiana and the North, at a saving of river transportation from Evansville to the terminal of lines of railway above, of from 213 to 263 miles. For the probable through travel and business of the road, we refer to its extensive railroad connections, North, South, East and West. —We are satisfied that this road combines all the elements of a paying road; through freight and passengers, combined with a heavy local business, and without competition in the business of at least

one-fourth of the State, connecting the Capital, through the White River Valley, with the Ohio River at the city of Evansville, and its commerce, with lines to be extended to Nashville, Paducah, Memphis, and New Orleans.

PRESENT MEANS OF THE COMPANY.

The subscriptions of the Company up to the date of this exhibit, less than ten months from organization are as follows:

Subscriptions of the City of Evansville	\$200,000
Subscriptions of the City of Lamasco	50,000
Subscriptions of lands in cash value	450,000
Individual cash subscriptions	360,000

\$1,060,000

which will be largely increased by stock to be taken by contractors, as well as stock being taken in the counties on the line by the solicitors.

The purpose of the Company is to press the work to completion in continuous sections, as soon as the means will permit.—*Indiana State Sentinel.*

St. Louis and Iron Mountain Railroad.

We have the satisfaction to announce this morning that, at a meeting of the Board of directors of this company, held yesterday, a contract was finally closed for the entire graduation, masonry, track laying, &c., of this road, from St. Louis to the Pilot Knob, about eighty-six miles. The contractors are Messrs. WILLIAM M. WATTS, CHARLES N. WATTS, and W. MILNOR ROBERTS, Esq., of Pennsylvania. The first named gentlemen are well known as business men, of ample means and great experience in railroad work. Mr. ROBERTS is an Engineer of high standing, now engaged on the Alleghany Valley Railroad. The energy and ability of the contractors give assurance that this work will be finished within the period fixed for its completion, viz: to Big River (about 45 miles,) by the first of July, 1856, and through to the Pilot Knob by the first day of December, 1856. The prices agreed on are liberal, but by no means exorbitant; and the State, city and county securities, held by the company, are to be received by the contractors, at par, in payment of the work, as it progresses. In addition, they are to receive a moderate bonus, on the completion of the work, in the stock of the company, if the contract is faithfully complied with. The rails, chairs and spikes are to be furnished by the Company, and are to be delivered to the contractors six months in advance of the time specified at which it is to be finished.—*St. Louis Republican.*

Locomotives for Steep Inclines.

John C. Trautwine, of Philadelphia, Chief Engineer of the "Coal Run Improvement Railroad Company," has made a report to the Directors, in which it is stated that the grading of five miles of the road will be 150 feet to the mile. This greatly exceeded the limits at which ordinary locomotives cease to be economically efficient, especially for heavy freight. He however confidently recommends it, in connection with the use of the locomotive of G. E. Sellers, of Cincinnati.—The report says:

"Mr. Sellers has for nearly twenty years been engaged in the planning and construction of locomotives, and is, at this moment, at the head of that department in one of the most extensive establishments in Cincinnati.

In his engine, adhesion is obtained, not by the weight of the engine alone, but by pressure produced by the load itself. This pressure is made to operate by means of two horizontal adhesion wheels or rollers, which act upon the opposite sides of a center rail. The force with which they press the rollers, is (by means of a most ingenious device) made to adjust itself instantaneously to the varying resistance to be overcome, whether that resistance be modified by an increase, or diminution of load, or by change of grade.

I have seen a small working engine on Mr. Sellers' principle, ascend and descend a grade of 276 feet per mile, with the same loads that it could

barely start on a level. On this grade the engine was under the most perfect control of the engineer. The experiments with this engine were witnessed, for some days in succession, not by myself only, but by several of the most eminent civil and mechanical engineers in the country."

The New Jersey Railroad Monopoly.

In answer to an inquiry made by a Committee of the Senate of New Jersey, as to the terms upon which the Joint Companies, (Camden and Amboy Railroad and Delaware and Raritan Canal,) will surrender to the State the works of the Companies, Commodore Stockton, on behalf of the Companies, replies in a long paper, in which he says that the Joint Companies will dispose of all their interest in the works to the State, by transferring to it all the stock of the Companies, at the rate at which the last thousand shares of stock have been sold in the market. The stock consists of 30,000 shares, of which the State now owns 2,000, leaving 28,000 to be bought, which, at \$145 per share, which is about the market rate, would amount to \$4,060,000; the debt due by the companies, which would naturally have to be assumed by the State, including subscriptions to the Belvidere, Delaware, Freehold and Jamesburg, and Flemington Railroad Companies, would amount to \$5,230,000, (bearing interest at six per cent, excepting 1,008,000, which is at five per cent.) This would make a total of \$9,290,000 for which the State would become possessed of all the works, appurtenances and franchises of the Railroad and Canal, and the interests of the Companies in the Belvidere, Delaware, the Freehold and Jamesburg, and Flemington Railroads.

Girard and Mobile Railroad.

Mr. John D. Gray, the well known railroad contractor and bridge builder, has offered to build the whole of the Mobile and Girard Railroad, yet unfinished, its culverts, bridges, depots, &c., for \$17,700 per mile, and to complete the work in three years from January last. He will require one-half to be paid in cash or its equivalent—the balance in the Bonds and Stocks of the company—the bonds payable in 10 or 20 years, at 7 per cent interest. Mr. G. estimates the cost of iron at \$70 per ton. If it cost less, the reduction will enure to the company, if more, the company must pay the advance. If this proposition accepted, Mr. Gray will ask Northern capitalists to help him do the work. There have been 169 miles Grading and 58 Superstructure of the road finished, and near 30 miles will be equipped on the eastern end, in the coming spring or summer.—*Georgia Citizen.*

Evansville, Indianapolis and Cleveland Straight Line Railroad.

We learn, says the Evansville Journal, that the letting of the first general section of this road, from that city to the crossing of the Cincinnati and St. Louis Railroad, took place on the 15th inst., agreeably to notice. The competition in bidding was heavy, and a number of contractors failed to get work, their figures being rather high. The length of the section by air line between the termini, is 64 miles, and only fifty-five miles by the line of the railroad. 51½ miles of which is straight line, 3½ miles of curvature, with an average radius of 7,885 feet; and a maximum grade of 39 1-100 feet to the mile. The work is to be commenced on the first of April. Contractors are subject to any alterations of the line. This great enterprise is fairly commenced and its construction certain.

Railroad Iron Via Quebec.

JOHN ANDERSON & CO.
COMMISSION MERCHANTS,
SHIPPING AGENTS AND BROKERS,
Quebec and Montreal.

PARTICULAR attention given to the Transhipment of Iron, &c., in Transit for the Western Lake Ports, and to the Shipments of Rails in Great Britain.
Quebec, Dec. 2, 1853.

SHANAHAN & LOEBER,

181 William-st,
(1st floor—Up Stairs.)
NEW-YORK.

MANUFACTURERS OF
THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
Chains, Scales, Levelling Rods, &c. 1y10

Notice to Contractors.

MEMPHIS & OHIO RAILROAD.

SEALED proposals will be received at the office of the Memphis and Ohio Railroad Company, at Memphis, Tenn., until the 15th day of April next, for the grubbing, clearing, gradation, and masonry of the first 65 miles, from Memphis to Cherryville.

Contractors must give the most undoubted security for the completion of the work at the time, and in the manner specified; and contracts will be let in sections, or for the entire work, as may be deemed best by the Directors.

The Directors reserve the right of rejecting all bids, should none prove satisfactory; and it is desirable that all propositions should be submitted, with the view of preparing the whole work for the iron as soon as possible. Bids of that character and otherwise equally favorable, will have preference.

Maps, plans and specifications may be seen at the office of the company, after the first of April.

E. PEABODY,
Engineer in charge.

To Contractors.



SEALED PROPOSALS will be received at the office of the undersigned, in the city of St. Louis, until Thursday, March 30th inst., for the Grading and Masonry on the ST. LOUIS & IRON MOUNTAIN RAILROAD, extending from St. Louis to the Pilot Knob Mountain, a distance of 87 miles, (except sections Nos. 1, 2, 3, 4 and 6.)

Plans and profiles will be ready for inspection one week previous to the letting.

This line is located through a remarkably healthy region of country. The work to be let embraces a tunnel through solid rock, heavy earth and rock cuttings, and various descriptions of masonry. Payments monthly in cash.

Further information may be obtained on application to either of the undersigned, or to the Engineers at the office of the St. Louis and Iron Mountain Railroad Company in St. Louis.

WM. M. WATTS,
Carlisle, Pennsylvania.
CHAS. N. WATTS,
St. Louis, Missouri.
W. MILNOR ROBERTS,
Pittsburgh, Pennsylv.

St. Louis, March 2, 1854.

Knox & Shain,

MANUFACTURERS OF
LEVELS, TRANSITS AND SURVEYING COMPASSES.
No 72 Dock st. first door south of Walnut, west side
PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

H. SAWYER

(of the late firm of SAWYER & HOBBS),
Manufacturer of Transits and Levels.

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.

WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their SYSTEM of LOCOMOTIVE ENGINES in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture *Five different kinds of Engines* and several classes or sizes of each kind.

Particular attention paid to the strength of the machine in the plan and workmanship of all the details. Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowling Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of

Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

**To Railroad and Canal Co.'s,
Contractors, &c.**

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics, &c. of any description, and also to inform them that they forward such men to whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.

No. 85 Greenwich street, New York.

New York and Erie R. R.

PASSENGER TRAINS
leave Pier 6th of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the B. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAY EXPRESS, at 12½ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAY PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.

These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

CHAS. MINOT, Sup't.

Railroad Iron.

2000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and "Crawshaw" manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by
P. CHOUTEAU, Jr., SANFORD & CO.,
December 4, 1852. No. 51 New street.

Duggan's Work on Bridges.

SPECIMENS OF THE

STONE, IRON AND WOOD BRIDGES, VIADUCTS, Tunnels, Culverts, etc., of the United States Railroads; illustrated by a series of drawings, from actual measurement of the works; including plans, sections, elevations, and details of each structure, and an appendix, illustrative of the art of bridge building, as at present practiced in Europe.

Illustrated With Numerous Accurately Engraved Drawings.

15 Numbers, 75 Cents, each.

*A few sets of the above work, may be had by applying to the subscriber.

JOHN WILEY, 167 Broadway.

OFFICE CINCINNATI, HAMILTON & DAYTON R. R. CO.

CINCINNATI, Feb. 14, 1854.

THE Directors have this day declared a dividend of Five per Cent. on the capital stock of this Company, payable at the office of the Company in Cincinnati on and after the 25th inst., till which time the Transfer Books will be closed; and at the Ohio Life Insurance and Trust Company's Office in New York, on and after the 15th Proximo. By order of the Board.

FRANK. S. BOND,
Sec'y.**Passenger Cars for Sale.**

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Railroad Letting.

PROPOSALS will be received by the undersigned at the Engineer's Office, Dover, Delaware, until March 14th, inclusive, for the Graduation, Masonry and Superstructure of the DELAWARE RAILROAD, extending from the New Castle and Frenchtown Railroad to Seaford, a distance of 70 miles, through a healthy region, and convenient to procure hands and supplies.

The work will be divided into sections of about 4 miles each.

Maps, profiles, and specifications will be ready for the examination of contractors, after the 1st of March.

Bidders personally unknown to the undersigned, will be expected to produce satisfactory evidence of their responsibility.

D. H. KENNEDY,
Resident Engineer.

feb. 18-tn 14

To Railroad Contractors.

OFFICE PITTSBURGH AND CONNELSVILLE

RAILROAD COMPANY.

SEALED proposals will be received at the office of this Company, at Neville Hall, in the City of Pittsburgh, until 5 o'clock p. m., of Wednesday, the 22d day of March next, for the Graduation and Masonry of that part of the Pittsburgh and Connelville Railroad extending from West Newton, in Westmoreland Co., to Connelville, in Fayette Co., this State, a distance of 25 miles. This work is generally of a very light character. It will be divided into sections of about 1 mile each. Proposals will be received for one or more sections.

Proposals will also be received until the same time for the making of the Tunnel at the Sand Patch Summit, on the Alleghany Mountains, about 25 miles from Cumberland.—This Tunnel is to be forty-one hundred feet in length, through rock. The work is worthy the attention of the best contractors. It is an excellent region to do work cheaply.

Maps, Profiles and Specifications will be ready for the examination of bidders on and after the 6th day of March next, and all proper information given on application to Oliver W. Barnes, Chief Engineer, or the Assistant Engineers on the line.

Satisfactory testimonials will be expected from Contractors not known to the Company. By order of the Board.

W. LARIMER, Jr., President,
Pittsburgh & Connelville R. R. Co.**To Civil Engineers and Surveyors.**

TRANSITS, Level and Surveying Compasses Manufactured on the most improved principle and of the Best Quality by THOMAS HUNT,

No. 63 Fulton Street,
New York.

1y10*

Notice to Contractors.EUROPEAN & NORTH AMERICAN RAILWAY
NEW BRUNSWICK.

PROPOSALS will be received by the undersigned at his office, Princess street, St. John, N. B., up to the 5th day of April 1854, for the entire construction of that portion of the Eastern Division of the above Railway extending from the crossing of the Road from Schediack to Dorchester to the Bend of the Petitcodiac River being a distance of about twelve miles, comprising the Grubbing, Grading, Masonry, Bridging, and the Ballasting and Laying of the permanent Road.

The work will be divided into two sections which being adjacent to others to be proceeded with on their completion, is well worthy the attention of Contractors.

Proposals may be made for one or both sections and with or without the permanent Road and Ballasting.

Plans and Specifications will be ready for the inspection of bidders on and after the 5th day of March at the above office where all other necessary information may be obtained.

W. E. ROSE.

St. John, N. B., 27th Feb'y 1854.

**Railroad Companies and
Contractors,**

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,
European, American Employment Office,
— 287 Broadway, corner Reade-st.
St Under the Irving House, New York.

THE

New Yorker Handels-Zeitung

A GERMAN Commercial Paper, containing Prices Current, Market Reports, Exchange and Stock Rates, Shipping List and Correspondences from all parts of the world, appears twice a week in two separate editions, viz: one for home circulation, published each Wednesday and Saturday morning; the other for circulation in Europe,—the only German Paper published in the United States admitted to the German States—appears before the departure of each mail steamer for Europe. Terms:—The paper, per annum, at New York, \$5, for Germany, full Postage included, \$11, and for all other parts of Europe, the U. S. Postage inclus.; \$3. Advertisements taken at liberal terms.

To Contractors.PACIFIC RAILROAD OF MISSOURI,
THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.
THOS. S. O'SULLIVAN, Chief Eng.
Pacific R. R. Office, St. Louis, Feb. 1854.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by
BOORMAN, JOHNSTON & CO.,
90 Broadway, New York.
June 9, 1853.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to
THOS. CHAMBERS, President,
September, 1850.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.
VOSE, PERKINS & CO.,
9 South William St.
New York, June 1, 1851.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Head Cars, also Baggage Barrows and Freight Trucks.
F. HUNGERFORD & CO.
Mayeville, Ky., Sept. 29, 1853.

Stuart, Serrell & Co.,**CIVIL ENGINEERS,**

Rooms 22, 24, 26 & 27,
157 Broadway, New York.

CHARLES B. STUART,
DANIEL MARSH,

HOWARD W. SERRELL,
SAMUEL MOELROY.

Railroad Iron.

3000 TONS superior quality, delivery from April forward, with 5 to 600 tons per month, for sale by
NAYLOR & CO.,
121½ 99 & 101 John street

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 66 lbs. per yard now in bond and for sale by
JOHN H. HICKS,
90 Beaver street.
2d Feb'y.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West,
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
Feb. 18. 1m.

**To Railroad Engineers and
Contractors.**

WANTED, a corps of efficient Engineers and Contractors, for the construction of a Railroad in one of the Southern States. Apply to
DUFF GREEN.

New York, Feb. 14th, 1854.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the **BELLEVILLE IRON WORKS**, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,

No. 61 Camp Street,

New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.
COOPER & HEWITT,
17 Burling Slip, New York.

February 15, 1850.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Norfolk, Va., Jan. 8, 1854.

SEALED PROPOSALS will be received by the undersigned at this Office, from the 1st until the 20th day of March next, at sundown, for the "clearing" and "Graduation" on the line of the "Norfolk and Petersburg Railroad," between that portion of said road now under contract, and its terminus at Petersburg—covering a distance of about eighteen miles; also, for the "Culvert" and "Bridge" Masonry of the last section of said work.

At the same time, sealed proposals are invited for the "Abutment" Masonry of "Bridges" over the Eastern and Southern branches of Elizabeth River.

The work will be divided into sections of about three miles, and bids may be made for one or more of said sections.

The line, plan, profiles and quantities of work will be ready for examination on and after the 1st of March.

Specifications with forms of contract and proposal may be had of the undersigned after date.

Payments will be made in current funds during the progress of the work, in proportion of four-fifths of the amount due.

Of bidders personally unknown to the undersigned, evidence of their responsibility will be necessary; and of those to whom work shall be allotted, will be required bond and approved security in an amount not exceeding one-fifth of the amount of their contract, for the timely and faithful execution of the same.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

The line is easy of access, the country through which it passes abundant in supplies and of a climate highly favorable for the prosecution of work at all seasons.

The work here offered for contract is of a character well worthy the consideration of the most responsible contractors.

W. MAHONE,
Chief Engineer.

January 19.

Norfolk, Feb'y 10th, 1854.

Sealed proposals will be received between the dates mentioned in the above notice, for the construction of two Iron Bridges with stone abutments and piers, one over the Eastern Branch of the Elizabeth River, 630 feet long, and containing about 3,800 cubic yards of masonry, and the other over the Southern Branch of the same stream, about 400 feet long, and containing some 1,700 cubic yards of masonry. Plans of bridges, with quantities of material and working drawings, will be ready for inspection after the 1st March.

From this date proposals will be entertained for the Clearing and graduation of several sections not included in the 18 miles mentioned in the above notice, and also for the bridges and culvert masonry upon said sections,—of the former about 3,560 cubic yards, and the latter 670.

W. MAHONE,
Chief Engineer N. & V. R. R.

Spikes, Spikes, Spikes.

ANY person wishing a simple and effective Spike Machine, or a number of them, may be supplied by addressing
J. W. FLACK, Troy, N. Y.
or, MOORE HARDAWAY, Richmond, Va.
March 8, 1850.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

Sept. 7.

BOORMAN, JOHNSTON & CO.,
90 Broadway, New York.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.


ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 12]

SATURDAY, MARCH 25, 1854.

[WHOLE No. 936, VOL. XXVII.]

 The Mechanical Engineering department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Report of the Secretary of the Treasury on the funded debt of the United States.....	177
New Jersey Locomotive Works.....	178
Memphis and Ohio Railroad.....	178
Interesting facts developed by the census of 1850.....	179
Senate Bill for the Construction of a Railroad to the Pacific.....	179
Notice to Bridge Builders.....	180
Excavator for Grading Railroads.....	181
Journal of Railroad Law.....	181
Mississippi and Atlantic Railroad.....	182
Night Cars upon Railroads.....	183
Stock and Money Market.....	184
Chicago and St. Louis Railroad.....	184
Indianapolis and Cincinnati Railroad.....	185
House Bill for the Construction of a Railroad to the Pacific.....	186
Annual Report of the State Engineer upon the Canals.....	187
East Tennessee and Georgia Railroad.....	189
Cost of Working of English Railroads.....	190
Naugatuc Railroad.....	190

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, March 25, 1854.

Report on Funded Debt of the Country.

We give below, (from the New York Times,) the report of Secretary of the Treasury, made in pursuance of a resolution, the object of which was to obtain information as to the amount of the *foreign* indebtedness of the United States. We give the *general* results arrived at, preferring to wait for the official copy of the report, before giving the tables referred to.

Assuming the correctness of the above tables, the result is a very satisfactory one. It shows a much greater proportion of the capital invested in our public works, to be owned by our own people, than we had supposed. Taking out Bank and United States stocks, and we have an aggregate of \$833,637,413, the greater part of which has been expended upon railroads and canals. Of this sum, \$150,495,708, or a little less than one quarter, is represented as held by foreigners.

The aggregate amount of stock and bonds of railroad companies, is stated to be \$478,009,524. Of this sum \$52,184,777, or only one *ninth*, are represented to be held abroad. The proportion of *capital* stock of railroads, held abroad, is \$8,244,025, or one *thirty-fifth* of the whole amount; while of bonds, the proportion is a little over *one-quarter*.

The above exhibit places the position of the foreign holders of our securities in a very favorable light. It shows that they take no *risks*, but confine their investments to *loans* to our enterprises, instead of involving themselves directly in the result of their success. The holders of the bonds of railroad companies have the whole investment in railroads, as represented by stocks and bonds or \$478,005,524, as security for \$177,111,557, the amount of such bonds, or about *three* dollars for *one*. But this does not correctly state the case, as a considerable portion of the indebtedness of several of the States, and a much larger amount of the indebtedness of municipal bodies, have been made a basis for the issue of bonds by railroad companies. The security for the funded debt of our railroad companies, is, therefore, in the *aggregate*, ample. There are only a very few cases, where it is not.

The report shows that our people are not building railroads entirely upon *credit*. The proportion of *stocks*, to *bonds*, is somewhat larger than we had supposed. The estimate of the amount of our securities, held abroad, is, we think, below the fact. We can point out several errors in the tables, to which we shall refer when we publish them.

TREASURY DEPARTMENT, March 2, 1854.

SIR: The following resolution was adopted by the Senate on the 4th of April, 1853:

Resolved, That the Secretary of the Treasury be requested to procure, as far as practicable, and furnish the same to the Senate at the commencement of the next session of Congress, the following information, namely:

"The aggregate amount of Federal, State, City, County, Railroad, Canal, and other Corporation Bonds, Stocks, or other evidences of debt, held in Europe or other foreign countries, on the 30th of June, 1853, specifying separately, so far as the same can be ascertained, the amount of each of the above descriptions of bonds and stocks."

In compliance with the above resolution, I have the honor to submit the accompanying documents.

A letter from the Register of the Treasury, dated February 27, 1854, giving the amount of Federal Stock outstanding the 30th of June, 1853, and the amount estimated as then held by foreigners, residing beyond the bounds of the United States.

A general statement of the amount of bonds of the several States, outstanding on the 30th of June, 1853, and of the amount thereof held by foreigners residing beyond the bounds of the United States, as well as could be ascertained, according to returns received at the Treasury Department, from the chief officers of the different States.

A table showing the amount of the State bonds outstanding June 30, 1853, the amount of the same then held by foreigners residing beyond the bounds of the United States, according to the estimates of Winslow, Lanier & Co., on the States marked with an asterisk, the amount of property held by various State Governments, exclusive of school funds according to the American Almanac for 1854, and the amount of real and personal estate subject to taxation in each State, according to the United States census returns for 1850.

A statement of the amount of bonds of cities, towns and counties, outstanding on the 30th of June, 1853, and of the amount thereof then held by foreigners residing beyond the limits of the United States, as far as could be ascertained according to returns made to the Treasury Department by the following cities, towns and counties, and including some reported by brokers.

A general statement of so many of the Banks as have made returns of the amount of capital paid in, and of the amount thereof held by foreigners on the 30th of June, 1853.

A general statement of so many Insurance Companies as have made returns to the Treasury Department.

A general statement of so many Railroad Companies as have made returns to the Treasury Department, and of the amount of capital authorized, the amount paid in, and the amount thereof held by foreigners, so well as could be ascertained on or near June 30, 1853.

A general statement of so many Canal and Navigation Companies as have made returns to the Treasury Department, of the amount of capital authorized, the amount paid in, and the amount thereof held by foreigners, and also of the amount of bonds outstanding, and the amount thereof held by foreigners June 30, 1853.

A general statement of so many miscellaneous Companies as have made returns to the Treasury Department of the amount of their capital authorized, the amount paid in, and the amount thereof held by foreigners on the 30th June, 1853.

A general summary (marked K) of the foregoing documents.

It will be seen by reference to K, taking Winslow, Lanier & Co.'s estimate as the criterion, that in June, 1853, the aggregate stocks and securities of the character set out in the table, abroad were \$222,225,815.

The application of capital to railroads commenced in 1829, and to canals prior to that date; but we have no data from which we can state the amount of foreign indebtedness on those accounts. In 1829, the outstanding United States debt was about \$58,400,000, a considerable part of which was then held abroad; and we know that a large amount of United States and other bank stocks was also held abroad; and it might be fair to estimate that the indebtedness of the same character, as in table K, was as great in 1829 as it was in 1853; and that the annual interest and dividends to foreign holders of stocks and bonds have reached for the last 24 years about \$13,000,000.

There is no data from which to make an aggregate statement of the capital that had been applied to canals, railroads, and the establishment of banks, insurance companies, &c., prior to 1829, and which, in connection with table K, would exhibit the amount applied to those objects since; nor is there any data from which to estimate the value which the application of capital to canals, railroads and banks, has given to the solid wealth of the country.

All of which is respectfully submitted.

Your obedient servant.

JAMES GUTHRIE, Secretary of the Treasury.

Hon. D. R. Atchison, President of the Senate.

GENERAL SUMMARY, JUNE 30, 1853—[Marked K.]

	Total.	Held by foreigners.
United States Stocks....	\$58,205,517	\$27,000,000
State Stocks.....	190,718,221	72,931,507
113 Cities' and Towns'		
Bonds.....	79,352,149	16,462,322
347 Counties' Bonds.....	13,928,369	5,000,000
985 Banks' Stocks.....	266,725,955	6,688,996
75 Insurance Companies'		
Stocks.....	12,829,730	378,172
244 Railroad Companies'		
Stocks.....	30,893,967	8,244,025
244 Railroad Companies'		
Bonds.....	170,111,552	43,888,752
16 Canal and Nav'n Co.s'		
Stocks.....	35,888,918	554,900
16 Canal and Nav'n Co.s'		
Bonds.....	22,130,569	1,967,547
15 Miscellaneous Co.s'		
Stocks.....	16,425,612	802,720
15 Miscellaneous Co.s'		
Bonds.....	2,358,323	265,773

Total.....\$1,178,567,882\$184,184,714

If the estimate of Winslow, Lanier & Co. be preferred as to the amount of State Stocks held by foreigners, \$110,972,108 must be substituted in the second line of the second column, and the total will then be:

Aggregate of Stocks and Bonds....\$1,178,567,882
Aggregate held by foreigners..... 222,225,815

SUMMARY OF RAILROADS.

From returns made, with a few exceptions, by their own officers:

222 Railroads, capital authorized....	\$380,201,100
Capital paid in.....	259,750,422
Capital held by foreigners.....	7,044,025
Bonds outstanding.....	143,958,868
Bonds held by foreigners.....	36,125,172
Total of Capital paid in and Bonds outstanding.....	400,709,290
Total of Capital and Bonds held by foreigners.....	43,160,777

APPENDIX.

Returns from 22 other Railroad Companies, part taken from the *American Railroad Journal*, and part obtained from Brokers:

Capital paid in.....	\$53,143,545
Bonds outstanding.....	26,151,684

Supposing the proportion of capital stocks and

bonds, held by foreigners in these companies, to be the same as in the companies from which returns have been directly received, we have the following results:

244 Companies, capital paid in.....	\$306,893,967
Capital held by foreigners.....	8,025,990
Bonds outstanding.....	190,111,552
Bonds held by foreigners.....	43,888,752
Total of Capital paid in and Bonds outstanding.....	480,005,519
Total of Capital and Bonds held by foreigners.....	51,914,742

NOTE.—Owing to the extent of country over which they are spread, the number of Superintendents to whom they are entrusted, and the character of the works, it is very difficult to ascertain the number in progress at any given period.

In the volume prepared by Mr. Andrews and communicated by the Secretary of Treasury to the Senate, on the 25th of August, 1852, the number of miles in operation is stated to be 12,808½, and in progress 12,612. Total, 25,402½ miles.

"At least \$80,000,000 are," it is said in the same volume, "now annually required to carry forward works in progress, and to meet the demand of new ones that may arise. Of this sum, \$50,000,000 are borrowed either of capitalists of this country or of Europe."

"Average cost of Roads from Maine to Maryland, \$40,000 per mile.

"Average cost of Roads in other States, \$20,000 per mile.

"Roads completed, 12,821½ miles, at \$30,000 per mile.....\$384,630,000

"Roads in progress, 12,811½ miles, at \$20,000 per mile..... 252,560,000

Total.....\$637,190,000

It is believed that an extent of line equal to the whole number of miles now in operation will be completed in 3 years from the present time, at which period the cost of our roads will equal the above sum.

According to the *American Almanac* for 1854, the railroads in operation in 1853 had an extent of 14,494½ miles, but in this total are included some roads which are but partially in operation.

New Jersey Locomotive and Machine Co.

We have received from the above company an admirable daguerreotype view of one of their magnificent engines, recently completed for the New York Central Railroad Company. The pattern of engine which it represents is one of superior durability, beauty and efficiency. It has 17 by 20 inch cylinders and 6 feet driving wheels, with a very liberal proportion of boiler room and communicating capacity. It combines every arrangement which can be claimed as an improvement in the plan of locomotives; while in the practical details of its construction it has more than ordinary merits of solidity and permanence of parts, and beauty and extent of finish. It is particularly in the qualities of strength and soundness of material that the productions of this company excel. We speak this from our own practical acquaintance with the details of their engines as well as of those by most other builders. The frames and their bracing to the boiler, the fastenings of the cylinders, the truck frames, valve motions, spring suspension and other parts of these engines bear out this remark. In these respects they have all the strength of the Baldwin engines, while they combine more beauty and a more general use of wrought in place of cast iron. The superintendent and engineer of these works, Mr. John Brandt, Senior, has had a longer experience in the management of engines than almost any other man in the country. For years he was at the head of the immense motive power department of

the Erie Railroad, designing and contracting for new engines, and conducting the operation and repair of the engines in use.

We have always endeavored to press upon railroad companies the importance of securing *good work* in their running equipment. Most railroad companies assume the *diameter of cylinder* to be the standard of efficiency and of value of their engines. But it must be remembered that if one builder gives a larger allowance of boiler and a greater strength of parts than another, for any given size of cylinder, he is building in reality a larger, more powerful and better engine, and should reasonably receive a larger price. Most of the Paterson built engines have from 33 to 50 per cent. more boiler room, and much less dead weight, for a given size of cylinder than others built in those localities which have attracted a large business by the inducement of low prices. In truth, the builder of a "cheap engine," as such work usually goes, gives *less* evaporative power, strength, finish, and soundness of material, *in proportion to his price*, than another who furnishes a work like the one which has formed the subject of these remarks.

OFFICE MEMPHIS & OHIO R. R. Co.)
Memphis, Tenn., March 8th, 1854. }

Edt. R. R. Journal,

Dear Sir,

I hand you for publication the following statement in reference to the Memphis and Ohio Railroad Company.

1st. Memphis is at the head of uninterrupted navigation on the Missouri. The River has lately been blocked up with ice above us; and has been frozen over several times as low down as Randolph, 60 miles above. It is the point at which all steamers, but those of the smallest class, stop running, in the fall, and early winter, on account of low water.

Boats are often run aground on sandbars, and are detained a week, or two days, between Memphis and Louisville.

Almost the only interruption to travel between this and the Eastern cities, occurs between Memphis and Louisville.

2d. The Register kept at our steamboat landings shows that there were upwards of 3,200 landings made at Memphis, in 1853, by the steamers passing on this way to, and from, New Orleans.

This gives a tolerably good idea of the amount of travel on these boats, annually going to, and from, this city.

The same register shows, that nearly one-half of these landings were made by boats coming from, and going to, the Ohio River; and of course, it also shows that nearly one-half of the travel annually passing by us to and from New Orleans, is from the Ohio valley.

3d. It is estimated by competent persons, that each boat will average 100 passengers on each trip. Allowing that there are 1,400 trips, this would give 140,000 people going, and coming, by Memphis, from the Ohio valley every year.

At \$10 each, the passage money would amount to \$1,400,000.

But, suppose the number of passengers to be 100,000 persons, the travel would yield \$1,000,000, at \$10 each.

4th. The Memphis and Ohio Railroad is intended to do away with all the delay, danger,

vexation, and heavy charges incident to this uncertain river navigation and to place passengers from Memphis to Louisville 15 hours instead of five or ten days.

5th. It will not cost \$8,000,000, at \$25,000 per mile; but suppose it to cost \$10,000,000, it is a sum upon which the revenue from *through* travel alone will pay 10 per cent. Surely the *way* travel, (generally, twice as great as the *through*), and *freight* will pay expenses.

6th. Our road will run from Memphis to Paris, in Henry County, Tenn., about 125 miles. The counties which it penetrates, had a taxable wealth, last year, of nearly 50,000,000, and that was upwards of 100 per cent. increase over the wealth of 1840.

The population of those 10 counties has increased 60 per cent. during the past ten years; while that of the most favored part of Tennessee, around Nashville, has increased by about 10 or 12 per cent., during the same time.

7th. The route of the road has been pretty well canvassed as far as Chugville, about 65 miles; and about \$650,000, or \$10,000 per mile, have been subscribed.

The subscription has been mostly of the leading planters of the country, who have adopted the plan of giving their notes falling due in November 1854, January, April and November 1855, January, April, November 1856, and January 1857.

They prefer doing this, to paying tolls when it may be inconvenient.

We have advertised for proposals for grubbing, cleaning, grading &c., and we have our means in hand, and the best notes of the South.

8. Memphis, five or six years ago, shipped 100,000 lbs. cotton. She shipped 203,000 last year. Her *Western* trade is rapidly growing, and it will soon be worth more to her than all other trade. Two great lines connect, or will connect, her with the East and Northeast. One is her Charleston Road. The other is her Memphis and Ohio Road. Paris is on the air line to Louisville, about 35 miles from the Kentucky line. Kentucky has just chartered the Louisville and Memphis Railroad, leading down to this road. This gives us a direct air line connection with the Ohio Valley and the lake country, and our commerce will reach Louisville and Cincinnati, on this line, sooner than over any other.

9. At Paris the Clarksville and East Kentucky Road come in, via Bowling Green, Danville, Lexington, etc., and that is the great line North.

I inclose an article for your examination, and you will find the tables of distances named, as follows:

From Boston to St. Louis, via Cincinnati, about.....	1,300
From Boston to Memphis, via Lexington, Bowling Green.....	1,330
From New York to St. Louis, via Dunkirk, Cincinnati.....	1,194
From New York to Memphis, via Baltimore, Lexington and Bowling Green.....	1,110
From Philadelphia to St. Louis, via Pittsburgh and Cincinnati.....	996
From Philadelphia to Memphis, via Baltimore, Lexington and Bowling Green.....	1,020
From Baltimore to St. Louis, via Cincinnati.....	913
From Baltimore to Memphis, via Lexington and Bowling Green.....	925

It is thus seen that Memphis is not more than thirty or forty miles farther from the Eastern

cities than St. Louis is; while it is at least one hundred and fifty miles nearer Fulton than St. Louis is.

10. Our State loans this Memphis and Ohio Road \$10,000 per mile, besides bridging the important streams.

11. The planters on the entire line are waiting to take contracts, $\frac{1}{2}$ stock and $\frac{1}{2}$ cash; and we shall have a heavy force on it by the 1st of May.

The engines are pushing on the location, and it is supposed the preparing the road for the iron will not exceed \$7,000 per mile.

J. T. TREZVANT.

Interesting facts developed by the Census of 1850.

The whole number of inhabitants in the United States, on the 1st of June, 1850, was 23,263,488 which may be classified in this wise. Whites, 19,630,738; free-colored, 428,661; slaves 3,204,089. Of the free inhabitants, 17,787,505 are natives, and 2,210,828 were born abroad, viz: 961,719 in Ireland, 573,225 in Germany, 278,675 in England, 147,700 in British America, 70,550 in Scotland, 54,069 in France, 29,868 in Wales, and 95,022 in all other countries. Of our 17,786,792 free inhabitants, 4,112,433 are settled in States in which they were not born. About 26 per cent. of the whole population of Virginia has migrated; South Carolina has sent forth 36 per cent., and North Carolina 31 per cent., yet the New Englanders, particularly of Vermont and Connecticut, are the most discursive. They are, in fact, everywhere—at the South, the West, in the territories, on the Pacific—wherever there is space for a blade of grass to grow, or a spindle to turn, or a shop to be opened, or a railroad to be built—in short, wherever an honest penny is to be picked up, by any kind of industry or ingenuity. There are, for instance, 18,763 Massachusetts men in Ohio; 9,230 in Missouri, 55,773 in New York, 4,760 in California. There are 133,766 New Yorkers in Michigan, 67,180 in Illinois, 58,835 in Pennsylvania, and 101 in New Mexico. Virginia has sent 85,762 of her people to Ohio, 41,819 to Indiana, and 10,887 to Alabama. Thus, a perpetual interchange of inhabitants is maintained between the different States, which has a grand moral effect in fusing their separate prejudices, in producing a common sentiment, in interweaving bonds of affection and amity, and in rendering the improvements and advances of each locality a stimulus to the exertions of all the rest. A common language and common political institutions are incitements to unity; but the reciprocal influences of trade and intercourse are the life-blood of our nationality. The white inhabitants are growing nearly 10 per cent. faster than the slaves, and the free colored are dwindling out. The total increase in the United States is about three and a half per cent. per annum, while in the most favored countries of Europe it is only one and a half, and in the less favored, a fraction of one per cent. According to our past progress, it will only take forty years to enable us to surpass England, France, Spain, Portugal, Sweden, and Switzerland combined. The close of the existing century will swell our numbers to one hundred millions—not, however, of such miserable, degraded wretches as are crowded together in China, or as were packed down in some of the ancient cities, but, of free, educated, industrious and refined men.

The people of this country are variously occupied, although agriculture is thus far their chief employment. At the time the late census was taken 4,000,000 were engaged in cultivating the land, 1,050,000 in manufactures, 400,000 in commerce, 100,000 in mining, 60,000 in fisheries and 50,000 in the forests. We possess, 118,457,622 acres of improved farms, and 184,621,348 of unimproved, the cash value of which is \$3,270,733,029. We possess also over 100,000 manufacturing establishments, using a vested capital of \$530,000,000.

We have 1,390 steamboats measuring 417,226 tons, some 3,000 miles of canals, 13,315 miles of

railway completed, besides 12,681 miles in progress. Our total lake, river, coasting, canal, and railroad trade is valued for 1852 at \$5,588,539,372. Our whole inward and outward tonnage is 10,591,045 tons.

It might be inferred—as not a few foreign tourists in America indeed have inferred, from the exhibition of the immense industrial activity of our people, that they are wholly absorbed in the process of creating wealth, yet such an inference would do them considerable injustice. They are devoted to the dollar, it is true, but they are apt also to spend the dollar in a liberal manner. Their activity in the various spheres of intellectual and benevolent enterprise is not a whit less remarkable than their physical activity. They take care of their unfortunate brothers, of the insane, the idiotic, the mute, the criminal and the poor, (of the latter of whom they have, happily, fewer than any other nation,) with as sedulous a care, and as generous a provision, as the most advanced people in Christendom; they print and read an incredible number of books, and fifty-fold more journals and magazines than any other people; while in respect to education and religion, their efforts, because they are voluntary, put to shame those of other people.

A large proportion of the children of the United States, of a suitable age, are in attendance upon schools. The whole number is 4,089,607—of which 4,063,046 are whites—26,461 free colored—3,942,681 are natives—147,426 are foreigners. The number of males is 2,146,432, and of females 1,916,614. The total number of colleges in the United States is 234—of academies and seminaries, 6,032. Besides these there are 80,991 public schools which are attended by 3,354,173 scholars.

The whole number of periodicals in the world are distributed in this proportion. Asia 34, Africa 14, Europe 1094, America 3000, of which 2800 are printed in the United States, and have an annual circulation of 422,600,000 copies.

The number of churches is 36,221, exclusive of the territories and California.

A BILL for the Construction of a Railroad from the Valley of the Mississippi to the Pacific Ocean. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.* [Senate Bill.]

That a good and substantial first-class railroad, with two or more tracks, having iron rails weighing not less than 70 pounds to the yard, shall be constructed through the territories of the United States from some point in the western boundary of some one of the Atlantic States, west of the Mississippi, to some point in the eastern border of the State of California. The location of the initial points, and route of such railroad, shall be fixed by the individual or company who shall, in manner hereinafter mentioned, contract with the United States for the construction of the same. The public land necessary for the bed of such road, of a width to be determined by the Secretary of War not exceeding 200 feet, together with all sites for stations, turn-outs, watering-places, or other necessary incidents, shall be, and the same are hereby granted to the said individual or company, for the period they shall exist, and continue to work such road in conformity to this act, and thereafter shall be dedicated for said purpose, as long as it is used therefor: *Provided, however,* That no turn-out shall extend more than—hundred feet laterally from the line of the main trunk, and not more than—square acres shall be set apart for stations and watering places, nor shall such stations or watering places be nearer to each other than—miles. The said railroad shall be commenced within three years from the date of such contract, and be completed within seven years thereafter, and one-seventh part thereof, having relation to the estimated cost of the entire construction and equipment of the same, shall be completed within each of the said seven years. The road may be constructed by any individual, or by any company or association, or any corporation, which has been or may be chartered by the

Legislature of any one of the United States, with powers for that purpose, who shall obtain the contract with the United States, according to the terms hereinafter stipulated; and for the purpose of enabling the party to whom the contract may be awarded, under this act, to construct the said road, there is hereby appropriated every alternate odd numbered section within twenty miles of each side of the route of said road, with a right to make good any deficiency within that range, as near thereto as practicable; and there is hereby appropriated a sum not exceeding a maximum of \$600 per mile for carrying the United States mail daily on the said road for a period not longer than thirty years from the time of its completion, and there shall be granted to the said party a quantity not exceeding 1,000 sections within a continuous length of fifty miles of said road, when an officer of the United States engineer corps, to be designated by the Secretary of War for the purpose, shall certify to the Secretary of the Interior that any fifty continuous miles of said road is completed, and then and thereafter another like quantity of land for a like length of road shall be granted, and so on until the whole of said road shall be completed, and the contract shall be awarded to the party who shall bid the lowest sum per mile for carrying the mail within the maximum amount herein before specified, and who shall in all other respects conform to the stipulations of this act.

The Secretary of War shall, immediately after the passage of this act, issue and publish in such of the cities of the United States and Territories, not less than three in each State or Territory, if so many there be, as he may deem proper, for the term of twelve weeks, a notice inviting sealed proposals for the construction of the said railroad, according to the conditions and provisions of this act, and at the expiration of that time the proposals shall be opened and the said Secretary shall then award and make a contract of that date, provided the President shall approve the same, for the construction of the said railroad to and with the individual or company who shall have proposed to construct the same upon the terms most favorable to the United States, according to the provisions of this act, and shall comply with the said provisions in regard to the execution of the contract. The said contract shall bind the United States to grant to the said individual or company to whom the contract under this act shall be awarded, the alternate sections as herein before authorized, and also the amount of the lowest bid per mile under the maximum aforesaid for carrying the United States mail, and the party contracting to construct the road shall, when executing the contract, deposit with the Treasurer of the United States in money, or in the State Stocks worth par value, or Stocks of the United States at par value, \$2,000,000 as security for the performance of the contract.

The contractor shall receive to his own use the interest on such stock; *Provided*, The United States will pay no more interest thereon than the rate of interest which the said stocks bear, and which shall actually be received in case of State Stocks.

Whenever the individual or company shall fail to carry on the construction and equipment of said road as hereinbefore provided, he or they shall forfeit to the use of the United States \$100,000 of the moneys and stocks so deposited, for every month that such default shall continue. When the work shall have been completed within the period before mentioned, to the satisfaction of the Secretary of War, then the moneys or stocks so deposited, or the portion thereof remaining after such forfeitures, shall be repaid and delivered to said individual or company. The individual or company constructing said railroad shall, within the said period of seven years, fully and adequately equip the same for transportation and travel, and put it into operation. They shall enjoy to their own use, for forty years from the time of its completion, the profits and emoluments of the said road, but they shall, nevertheless, at all times keep the road and equipments in good order,

and transport the troops, the military and naval stores and munitions of war of the United States, at reasonable rates, to be determined by the department requiring such transportation; and Congress shall have the right at any time, to reduce the tolls and fares to be charged for passengers and freight, if they shall think necessary; so, however, as to allow always a profit of twelve per cent. per annum upon the actual investment of the individual or company; and the United States may, also, by an act of Congress, resume the said road, and all the franchises hereby granted, on paying to the said individual or company, the moneys which he or they shall have actually expended in making and equipping said road with a net profit of twelve per cent. interest per annum thereon, exclusive of the moneys and land to be estimated at \$1 25 per acre, received from the United States, and also with the deduction of such profits as may have accrued to such individual or company up to the period of such resumption.

Upon the expiration of the period of time specified in the contract for the construction of said road, when the same shall cease to be the property of said contractor, it shall be surrendered to the United States, with all equipments in good order, it being understood that any failure in this respect shall be made good by the Government at the cost of the contractor; and upon the surrender of the said road to the United States, at the expiration of the aforesaid period of forty years, or in the event of the resumption of it and the franchises thereof by the United States, as hereinbefore contemplated, the said road, or so much thereof as may be situated within the limits of any State, or States, which may be hereafter erected out of the territory, shall be ceded by the United States to such State or States, upon the condition that the mails, troops military and naval stores, munitions of war, all property of the United States, passengers and freight of every description shall be carried at such rates as Congress shall prescribe, and upon such further conditions as Congress may hereafter stipulate.

Sec. 2. *And be it further enacted*, That to aid in the extension of said road from its terminus on the eastern boundary of California to San Francisco, on such route as may be determined by the State of California, there is hereby granted to that State every alternate section of land designated by odd numbers, within twenty sections in width on each side of said extension; but in case it shall appear that the United States have, when the line or route of said branch road is definitely fixed by the authority aforesaid, disposed of any section or any part thereof, intended to be granted as aforesaid, or that the right of preemption has attached to the same, then it shall be lawful for any agent or agents, to be appointed by the Governor of said State, to select, subject to the approval of the Secretary of the Interior, from the lands of the United States nearest to the tier of sections above specified, so much land in alternate sections or parts of sections as shall be equal to such lands as the United States have disposed of, or appropriated, or to which the right of preemption has attached, as aforesaid, which lands, (thus selected, in lieu of those disposed of, or to which preemption has attached, as aforesaid, together with the sections and parts of sections designated by odd numbers, as aforesaid, and appropriated as aforesaid,) shall be held by the said State for the purpose aforesaid: *Provided*, That the lands to be so located in California, shall in no case, be further than thirty miles from the line of the said branch road; and the lands hereby granted shall be exclusively applied to the construction of the said branch road, and shall be disposed of only as the work progresses, and the same shall be applied to no other purpose whatever: *And provided further*, That any and all lands reserved to the United States by any act of Congress, for the purpose of aiding in any object of internal improvement, or in any manner for any other purpose whatsoever, be and the same are hereby reserved to the United States from the operation of this

act, except so far as may be found necessary to locate the route of said branch road through such reserve lands, in which case, the right of way only shall be granted, subject to the approval of the President of the United States.

Sec. 3. *And be it further enacted*, That the sections and parts of sections of lands, which, by such grant, shall remain to the United States, within twenty miles on each side of said branch road in California, shall not be sold for less than double the minimum price of the public lands when sold; nor shall any of said lands become subject to private entry until the same have been first offered at public sale at the increased price.

Sec. 4. *And be it further enacted*, That the said lands, hereby granted to the said State, shall be subject to the disposal of the Legislature thereof, for the purposes aforesaid and no other; and the said branch railroads shall be and remain public highways for the use of the Government of the United States, free from toll or other charge upon the transportation of any property or troops of the United States.

Sec. 5. *And be it further enacted*, That the lands hereby granted to said State, shall be disposed of by said State only in the manner following, that is to say: that a quantity of land not exceeding four hundred sections, and included within a contiguous length of twenty miles of said branch roads, may be sold; and when the Governor of said State shall certify to the Secretary of the Interior that any twenty continuous miles of said branch road is completed, then another like quantity of land hereby granted may be sold; and so on from time to time until said branch road is completed; and if said branch road is not completed within years, no further sales shall be made, and the land unsold shall revert to the United States.

Sec. 7. *And be it further enacted*, That the United States mail shall be transported over said branch road, under the direction of the Post Office Department, at such price as Congress may by law direct; but until such price is fixed by law, the Postmaster General shall have the power to determine the same.

Sec. 7. *And be it further enacted*, That this grant of land to the State of California, for the extension of the road as aforesaid, is made upon the further and express condition, that passengers, and also freight of every description, shall be carried upon the said road at reasonable rates, when compared with the average charges on other first-class railroads in the United States, and with the right hereby expressly reserved to Congress of regulating and diminishing, should they deem proper, such rates according to what they may consider just and reasonable.

Challenge to Bridge Builders.

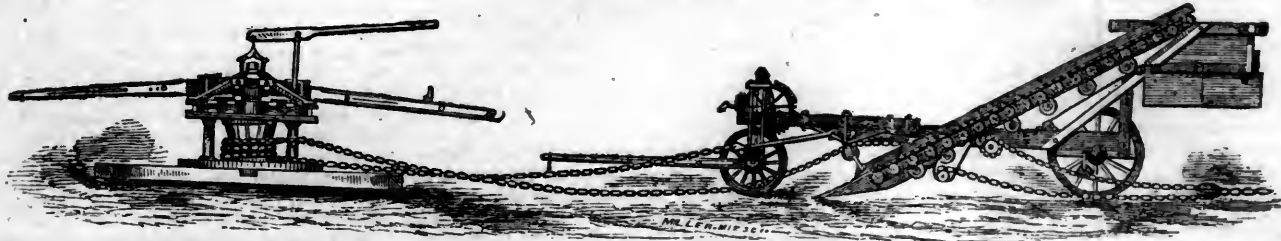
Believing myself to have discovered the strongest possible form of a support of a bridge, that is, the best possible arrangement of the materials in a bridge, so that no bridge of any other form can possess equal strength, and being aware that others believe the same thing with regard to their inventions and as it is a matter of some interest to the public and capable of being definitely and satisfactorily settled by actual experiment, I propose to test a model of my bridge against any that may offer, for the sum of one thousand dollars, to be put up by each competitor, the trial to take place in the city of New York as soon as possible, models to be made of wood or iron of equal length, height and weight. Particulars to be agreed upon: address

DUDLEY BLANCHARD,
Troy, N. Y.

New Excavator.

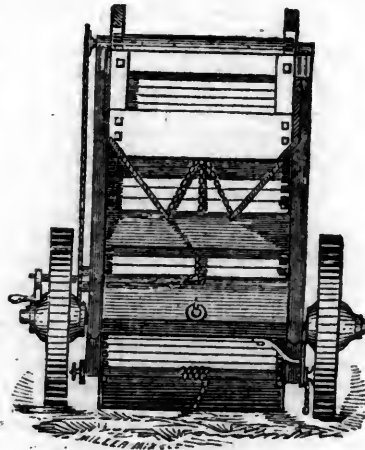
We invite attention to a notice in another column of a new excavator to be used on railroads and canals.

New Patent Excavator for Grading Railroads and Canals.



The annexed engravings represent a new Excavator and Capstan used for railroad and canal grading, recently invented and put into practical operation by Mess. Ellis and Gordon of Rochester, N. Y. Fig. 1 is a longitudinal vertical section of the two machines set up ready for operation. Fig. 2 is a front elevation of the back end of the excavating machine. The machine is built and used on carriage wheels, and is operated by being drawn over the ground, similar to a common plow or scraper. It is drawn by a powerful capstan, so constructed, that its motion can be reversed at pleasure by the teamster, drawing the machine either backwards or forwards. When the capstan is set up ready for operation, the excavator can be drawn over the surface of a cut, twenty rods in length, and of any required breadth, suitable for a railroad or canal, until the cut is of sufficient depth,—without moving it. The capstan chain with which the excavator is drawn, is formed into a kind of endless belt, which belt passes around the capstan barrel at one extremity, and around a pulley fastened to an anchor in the ground, and at a distance of some twenty rods from the capstan. The excavator is permanently attached to one side of said belt in such a manner as to form a part of it, and is thus drawn with it in the direction which it is moving. The other side of this belt takes a turn around a

pulley on the side of the excavator, and gives it a rotary motion for the purpose of driving the elevator. The excavating machine consists of a large plow or scraper permanently attached to the frame of the machine in such a manner that



it can be lowered down into the ground any desired depth when operating, or raised above the ground to a sufficient height to permit the machine to be drawn from place to place without inconvenience. The plow cuts a furrow four feet

wide and from six to twelve inches in depth, the earth passes over this plow and is discharged by it on to an endless revolving belt, or elevator, by which it is conveyed up into a dumping hopper of sufficient size to hold a yard of earth, which hopper is suspended at the back part of the machine and in rear of the wheels in such a position, that carts can be driven under it, and receive their load from the hopper instantaneously while the machine is in motion. Four to six horse power is sufficient to work the machine in the stiffest kinds of clay, or hard pan, at the rate of from four to six hundred yards per day. Three men are required to attend it while in operation. A saving of 26 to 50 per cent. is realized in the use of this machine over the ordinary mode of excavating earth. The principal advantages which this machine possesses over all others used for like purposes, is the simplicity and economy of its construction, rendering it much cheaper and far more durable; it is portable being removed from one job to another with as much facility as the carts, and set up at a trifling expense and is adapted to all kinds of work. A machine may be seen in operation at Rochester at any time. Orders for the excavator may be addressed to Ellis & Co., Rochester, N. Y. Patents have been applied for. Price \$1,200.

Journal of Railroad Law.

DAMAGES FROM LOSS OF BUSINESS.

In the case of *Phillips vs. the Great Northern Railway Company*, lately tried in the English Queen's Bench, the plaintiff was a horse dealer and brought his action to recover damages for negligence on the part of defendant, whereby an accident occurred to one of their trains, in which plaintiff was travelling. The plaintiff sustained an injury which prevented him from attending to business for 5 weeks. He showed that he was the agent of the French, Belgian, and Sardinian governments for the purchase of horses, especially stallions. The Belgian government was in the habit of paying him £25 for each horse which he purchased for them. The second half year of 1851 his profits were £3000; in 1852 his profits were £5000; in 1853, £4300. His injuries from the railroad accident had prevented him from attending races and horse fairs, and he claimed that damages should be allowed him, proportional to the anticipated profits which he was prevented from realizing. The defendant's paid £228 into Court, as a fair pecuniary compensation for the injury complained of.

It was strenuously contended by the Counsel for the Railroad Company, that the evidence offered in order to show the plaintiff's probable loss of business was altogether uncertain and irrelevant,

and in the course of his address to the jury, he propounded the following query: "If Baron Rothschild, or any great stockholder, should be prevented from attending change in consequence of an injury, caused without design, or gross negligence, and should lose the chance of gaining £100,000, for example, must the unfortunate, through whose act or omission the disaster was sustained, be held responsible for that amount?"

The Judge instructed the jury, that they must award to the plaintiff, what, upon a review of the evidence, seemed to them a fair pecuniary compensation for the injury in question.

They subsequently rendered a verdict for the additional sum of £150, making the plaintiff's full amount of recovery £378.

Prospective profits in business are, of course, always subject to contingencies, and it is the general rule, in actions like the one above mentioned, that the plaintiff must show that the damages which he claims to recover, are, in all human probability, the certain consequences of the wrongful act complained of. But there are cases in which Courts will admit evidence of losses somewhat remote, not upon the ground of its furnishing a measure of damages, but as furnishing grounds upon which an estimate can be formed of what would be a reasonable indemnity. Thus, in the case of an action for a libel, brought against

the Editor of the Times, who had said of the plaintiff's ship, that it was unseaworthy, and that it had been bought by the Jews for the purpose of transporting convicts to the colonial settlements, it was held that the plaintiff might show the general nature of his business as a shipping merchant, and the average of his profits; not as a measure of damages, but as a means of indicating to the jury the general nature of the injury he had sustained.

How can a jury ascertain what is a reasonable compensation for an injury, unless they know all the circumstances of the case in which it occurred?

See Sedgwick on damages, p. 92.

The 15th volume of Barbour's Reports of the Supreme Court of New York, which has just been published, contains the following decisions relative to railroads:

ASSESSMENT OF DAMAGES FOR LAND—A FINALITY. The Supreme Court has no jurisdiction to supervise or correct the doings of Commissioners, appointed to ascertain the damages sustained by the owners of land taken for railroad purposes, unless such authority be responsibly conferred by statute. And the statute has conferred no power on that Court to entertain a motion to set aside such proceedings. And if the Court makes an order setting aside and vacating the certificate of

assessment, and the rule is enacted thereon, such order is a nullity, and being wholly void, it may be impeached collaterally. *Visscher vs. the Hudson River Railroad Company.*

DOCKS—WHAT IS "CUTTING THEM OFF"?

The plaintiff owned a dock on the margin of a bay on the east side of the Hudson River, fronting his farm, under a patent from the State, issued November, 1849. The defendants, pursuant to their charter, constructed their railroad across the bay, running about 1900 feet west from the plaintiff's dock. The plaintiff called upon the company to extend his dock to, and in front of, their road, as a measure required by the defendant's charter, and necessary to restore the dock to its former usefulness. The defendant refused to do so, but constructed a drawbridge which was sufficient for the free passage of vessels into and from the bay. Held, that the defendant's were not bound to extend the plaintiff's dock, the same not being "cut off" within the meaning of the 15th section of their charter, providing, that "if any dock should be cut off by the railroad, it should be extended or improved so as to be restored to its former usefulness, so far as practicable."

The Legislature did not intend to go beyond what a literal construction of the Act would call for, nor did they require docks to be extended to the railroad into the stream or bay.

Tillotson vs. the Hudson River Railroad Company.

AGENTS INJURED BY FELLOW AGENTS.

An employer is not liable to an agent for the wrongful act of another agent engaged in the same general business with himself. Consequently, a railroad company was not bound to pay damages to the representatives of a brakeman, who, having fallen from a car, was killed by being thrown against a pile of wood which the servants of defendant had negligently left near the track.

Sherman vs. the Rochester and Syracuse Railroad Company.

INHABITANCY—IN REFERENCE TO RAILWAY COMPANIES.

Such companies are deemed to be included within the term of *inhabitants* of every county through which their road runs, so far as the service of legal process is concerned. The process must be served upon the proper officer of the company, but it may be issued by the magistrate of any town on the line of the road, subject to the provisions applicable to private persons who actually reside within their jurisdiction.

Sherwood vs. Saratoga and Washington Railroad Company.

THE LOCKPORT AND NIAGARA RAILROAD COMPANY.

The Act of 1850, providing for the relief of this company, is not unconstitutional as embracing more than one subject. The said Act does not conflict with the Constitutional provision, directing the incorporation of railroad companies by general laws, except for municipal purposes, or unless the purposes of the company can, in the judgment of the Legislature, be better attained by a special Act. *Morier vs. Hillon.*

The Act in question did not create the said company.

The Legislature may incorporate a railway company by special Act whenever, in their judgment, the purposes of the company require such a proceeding.

Mississippi and Atlantic Railroad.

We gave last week a copy of the charter of the Mississippi and Atlantic Railroad Company. As a question has been raised as to the sufficiency of this charter, we copy by request, the following opinion advanced to its validity. We also add the reply of Mr. Brough, President of the above company, to the same:

Springfield, Friday, Feb. 24, 1854.

GENTLEMEN: The Legislature of Illinois at its present extra session, has passed an act, recognizing a certain association called the "Atlantic and Mississippi Railroad Company," and having for its object the construction of a railroad from Terre Haute to Illinoistown. This company pretended to organize under the first section of the General Railroad law of Illinois, approved Nov. 5, 1849, as will appear from their articles of association, filed in the office of the Secretary of State. Subsequently to the filing of these articles, most of the subscriptions to the capital stock of the company were made.

It is said, however, that in some respects these articles so filed, are not in accordance with the requisites of the law, and that at the time of the recent action of the Legislature in the premises, there was not in existence a "corporation formed," within the meaning of the proclamation of the Governor, under which the Legislature was convened. It is said, moreover, that the 10 per cent. required by the law to be paid, previously to filing the said articles of association, was never actually paid in, and that this last allegation is susceptible of every proof. It is important to me and to others, that the precise legal position of this company should be understood; will you, therefore, examine the general railroad law above referred to; the articles of association, as filed at the office of the Secretary of State; the proclamation of the Governor, under which the present extra session is convened, and such other laws as may bear on the subject, and furnish me with your written opinion upon the following questions:

1st. Whether the corporation is legally formed?
2d. Have they such an organization as entitles them to come before the present Legislature, under the proclamation of the Governor?

3d. What effect will the passage of the bill at this session of the Legislature have upon the association, if not heretofore legally organized?

4th. Under the existing organization, is any subscription heretofore made binding upon any subscriber, and can the collection of such subscription be enforced?

5th. Can the company issue bonds and make a security that would be valid?

By giving to these inquiries an early and careful attention, you will much oblige,

Yours, very respectfully,
ROBERT SMITH.

MESSRS. John T. Stuart, Ab. Lincoln, and B. S. Edwards, Springfield, Ill.

Springfield, March 4, 1854.

DEAR SIR: We herewith send you our answer to the questions propounded to us in your letter of the 24th Feb., 1854.

Yours, respectfully,
JOHN T. STUART,
A. LINCOLN,
B. S. EDWARDS.

Hon. ROBT. SMITH, Alton, Illinois.

First—Is the corporation legally formed?

The articles of association filed in the office of the Secretary of State, establish the length of the road at one hundred and sixty miles, or thereabouts. They also show subscriptions to an amount in the aggregate less than forty thousand dollars. With the articles and affidavit of three persons named in said articles as Directors, stating that the "amount of stock necessary for the incorporation of said company has been subscribed, viz: One hundred and sixty thousand dollars, and that ten per cent. on the amount, viz: sixteen thousand dollars, has been actually paid in

"as required by law." The date of this certificate is August 7, 1850.

It is, we think, undoubted law, that such associations are confined to the provisions of the act authorizing them, and cannot be organized until all its substantial enactments on the subject are complied with. See the case of "Vale vs. Crandall and others"—1st Sanford's Ch. Rep. p. 179. The substantial provisions of the act of Nov. 5, 1849, preliminary to the incorporation of the company, are contained in the first and second sections of the act. The language is explicit, "That any number of persons not less than twenty-five, being subscribers to the stock of any contemplated railroad, may be formed into a corporation for the purpose of constructing, owning, and maintaining such railroad by complying with the following requirements." When stock to the amount of at least one thousand dollars for every mile of said road so intended to be built, shall be in good faith subscribed, and ten per cent. paid thereon as herein required, then the said subscribers may elect Directors for the said company; thereupon they shall severally subscribe articles of association, etc. "Each subscriber to such articles of association shall subscribe thereto his name, place of residence, and the number of shares of stock taken by him in such company. The said articles of association may on complying with the next section, be filed in the office of the Secretary of State, and thereupon the persons who have subscribed, and all persons, who shall from time to time become stockholders in such company, shall be a body incorporated by the names specified in such articles."

"Sec. 2. Such articles of association shall not be filed in the office of the Secretary of State, until ten per cent. on the amount of stock subscribed thereto, shall have been actually and in good faith paid in cash to the Directors named in such articles, nor until there is indorsed thereon or annexed thereto, an affidavit made by at least three of the Directors named in such articles; that the amount of stock required by the first section has been subscribed, and that ten per cent. of the amount has actually been paid in."

We cannot doubt that the obvious intention of the Legislature was to require that all the preliminary steps to the incorporation of the company must appear on the face of the papers filed in the Secretary's office. The manifest propriety of such a requisition as security to the public against the formation of fictitious and irresponsible corporations, would of itself constitute a sufficient reason for this construction. The minuteness of detail contained in these sections is inconsistent with any other. Why such precision in these requirements, and the further requisition that the articles should be filed in the office of the Secretary, if not for the very purpose of manifesting the compliance with the provisions of the act? We think that the subscription of the amount prescribed by the first section must be antecedent to the formation either of the company or the corporation. Until this amount has been subscribed and the ten per cent. aid, the articles of association cannot be legally entered into. The language is: "When stock to the amount required shall be in good faith subscribed and the ten per cent. paid, then the said subscribers may elect Directors for said Company; thereupon they shall severally subscribe articles of association." Now, who are to subscribe these articles? Clearly, those who have subscribed the amount previously ascertained by the act and have paid the per centage. These, and these only are the subscribers who may elect Directors; the names of whom are to appear in the articles. Until the amount required is subscribed, no election of Directors is authorized. Any persons elected Directors by any number of subscribers prior to that event, would be illegally elected and their certificate or affidavit would so far as compliance with this act is concerned, be of no more legal validity than the statement of persons nowise connected with the Company.

This view is corroborated by the 3d section of the act, which makes a certified copy of "any ar-

title of association filed in pursuance of this act with a copy of the affidavit aforesaid indorsed thereon, presumptive evidence of the incorporation of said Company." Being only *presumptive* evidence, even if everything required appeared on the face of the papers, the truthfulness of the statements contained in them might be controverted. Surely it was not intended that a copy of articles showing only a subscription of a part of the amount required, should be presumptive evidence of the subscription of the whole. And here we can see no reason for requiring an affidavit. The law requires the subscription to be made in *good faith*. The names of subscribers, if genuine, with the amount of their subscription, would show the liability of each, and afford the means of ascertaining the aggregate amount. The affidavit would make the *prima facie* evidence of the genuineness of the signatures, the *good faith* of the subscriptions, and the payment of the ten per cent.

Two essential guarantees are thus afforded for the construction or honestly attempted construction of the contemplated road, viz: The personal responsibility of the subscribers, as provided in the 14th section of the act and the affidavit of three directors to the good faith of the subscription and the payment of the installment; and these, the articles subscribed as required, and the affidavit, constitute the presumptive evidence of incorporation. The one was not intended as a substitute for the other. The company could no more be organized without the subscriptions appearing on the articles than without the affidavit, and *vice versa*.

We think that the only subscriptions which would in any event be obligatory, are those which appear on the articles, or are subscribed on the books opened by the Commissioners. Now by reference to the 5th section, it will be seen that the Commissioners are only authorized to open book "from time to time after the Company shall be incorporated." Such subscriptions cannot supply the place of those which by the terms of the law are required to be made anterior, and as condition precedent to the incorporation of the company. Without further extending the argument, we are clearly of opinion that the association called "The Atlantic and Mississippi Railroad Company" is not a corporation legally formed, "under the act to provide for a general system of railroad incorporations," approved Nov. 5, 1849.

Second: Have they such an organization as entitles them to come before the present session of the Legislature? We think not. By the tenth section of the fourth article of the Constitution, the Governor "may on extraordinary occasions convene the General Assembly by proclamation, and shall state in said proclamation the purpose for which they are to convene, and the General Assembly shall enter on no legislative business except that for which they were especially called together."

The proclamation which is thus made the exclusive grant of legislative power at this session—which cannot constitutionally be transcended—is, so far as relates to this subject, in these words: "To pass laws recognizing the existence of, and conferring additional powers upon corporations formed, or which may be formed prior to the action of the Legislature thereon, under the act to provide for a general system of railroad incorporation"—approved Nov. 5th, 1849 "declare the public utility of the works, sanction the routes and termini thereof, and authorize the construction of the same."—This language is plain and the meaning apparent. It is, not to recognize the existence of, and confer additional powers on associations, but corporations formed under the act—not companies whose organization had not been completed, but those who, by complying with the requirements of the general law have perfected their organization thereunder, so far as that could be done anterior to the legislation which is required by that law. It is apparent that the Governor had in contemplation the twenty-second section of the act containing pro-

visions for those acts of the Legislature necessary to clothe the corporation with all the powers conferred by the act; and particularly to the last clause of that section. "And the Legislature reserve (the right) to itself to indicate the route and termini of said roads, and the same shall not be constructed or commenced without the express sanction of the Legislature of this State by a law to be passed thereafter." It was intended that the Assembly might act under the law of '49, but not that they might legislate in direct conflict with its provisions.

The answers to the remaining questions, are, we think, necessarily involved in what we have already stated. If we are correct in these opinions, then it follows that the Atlantic and Mississippi Railroad Company has no legal existence as a corporation—that the law of this session being beyond the power of the Legislature at a called session to pass, is a nullity; that no bonds could be issued, nor collection of subscriptions be enforced by a so-called corporation which had no legal existence. As all subscriptions must be supposed to have been made with reference to an organization under the general law, they would only be payable to a corporation legally formed under that law—while all who subscribed the articles of association, may be presumed to have known that action of the Legislature according to the general law of November 5, 1849, would be applied, for they will not, we think, be presumed to have understood that such application would be made until all the prerequisites of that law had been complied with. All subscriptions, prior to the filing of the articles must, in our opinion, have been made with the implied or express understanding that the full amount required by the law would be bona fide subscribed, and the per centage paid, and until that event they would not be bound. We do not think that by the mere act of subscription they assented to the filing of the articles before the \$160,000 had been legally subscribed. Those who subscribed after the alleged formation of the Company by the filing of the articles, will be presumed to have so subscribed with the understanding, that all the requisitions of the act had been complied with, and the articles of association had been legally filed in the office of the Secretary, and if this has not been done they would not be bound to pay their subscriptions.

JOHN T. STUART,
A. LINCOLN,
B. S. EDWARDS.

The following is the reply of Mr. Brough addressed to one of the daily papers.

SIR: In a late number of your paper, I observed an opinion of persons who are styled "distinguished jurists" of Illinois, in relation to the validity of an Act of the legislature of that State, recognizing and authorizing the construction of the Mississippi and Atlantic Railroad, to which, happening to be in the City, I offer you a brief reply.

1. The objection taken rests wholly upon the supposed invalidity of the organization of the company, as formed under the general railroad law; and assuming that this has been satisfactorily proved, the "distinguished jurists" argue, that it was not embraced in the call of the Governor for the extra session, and therefore, not within the jurisdiction of the Legislature. A short answer to this, which strikes out its whole foundation is, that at the time this session was called, this Corporation had an *actual existence as such*, and had exercised the franchises belonging to such a Corporation for more than three years, and had been recognized as such, by the Courts of Illinois. It was a Corporation *de facto* if not *de jure*, and existed as well by right, as by the acquiescence of the sovereign power. It was "formed," and came into existence under the general law, mentioned in the Governor's proclamation; and the very object stated by the Governor of "recognizing" those Corporation so formed, evidenced his intention to authorize the Legislature to heal defects in their organization, if any there might be.

2. This question was fully discussed in both

branches of the Legislature, and after the objection had been argued, the bill passed the House of Representatives by a vote of 52 to 18, and the Senate by a vote of 15 to 8, and received the signature of the Governor, who issued the proclamation. Among the members of both Houses voting for the bill were not less than fifteen to twenty prominent and able lawyers of that State. The objection was also examined, and opinions have been given by a number of legal gentlemen, at least as "distinguished" as these "jurists," among whom I may name Judge Trumbull, late a Justice of the Supreme Court of Illinois, and Hon. O. H. Smith of Indiana. This shows the opinion of the legal profession in and out of the Legislature; and the sanction of the Governor proves the bill to have been within the intention of the proclamation issued by him.

3. By the terms of the law enact, the company, as formed, is declared to be a "valid and subsisting corporation," and as fully invested with all the requisite powers for the construction of its road.

4. The assumed defect in the organization does not exist. The powers exercised and claimed by this corporation have been repeatedly brought before the Courts of Illinois, fully presenting in each case the form of its organization, and its legality has not been questioned. No question can, with plausibility, raised against it. The requisite number of subscribers attest the articles of association, the amount required by law to be subscribed to the capital stock was obtained, the ten per cent, was paid in, the evidence of subscription of stock, and payment of the ten per cent. was furnished as required by the statute, the articles were duly filed, and the corporation thereupon organized. In form and in substance the statute was complied with, and it was a valid corporation without the aid the late enactment, which has remedied all defects, if any there were.

The object and origin of the publications in the City papers can be readily perceived. I do not design to follow the parties who, to subserve hostile ends of their own, are seeking to bring this matter into newspaper discussion in this City; but I repeat the challenge hitherto made to them to raise the question at once, upon an agreed case, and for immediate adjudication by the highest Court of Illinois, where, if there can be any question at all, the subject properly belongs.

Under the full and perfect authority conferred by the Legislature of Illinois, the construction of this road will be prosecuted with energy, and it will be completed as early as practicable. We are prepared for opposition in any and every form it may assume. Future events will show its actors and purposes more fully, and if it recoils upon themselves and their own projects they cannot attach blame to others. Of one thing they can be assured, they cannot arrest the progress of a work that the Legislature and people of Illinois have sanctioned in such an unmistakable manner.

Very respectfully,
JOHN BROUGH.

New-York, March 15, 1851.

Night Cars between Philadelphia and Baltimore.

The President, Mr. Felton, and the Superintendent, Mr. Spafford, of the Philadelphia, Wilmington and Baltimore Railroad, deserve great praise from the travelling public, for their liberality in having adopted the comfortable night seats of Mr. John T. Hammit, of Philadelphia, in two of their "ladies cars." We believe that no practical objections have yet arisen against the construction of these seats, while we can say, from trial, that nothing could give a better means of repose in a railroad car. The high-backed affairs called "night seats," and in use on some other of our roads, seem, in comparison, like barbarous expedients for torturing the weary traveller. When

will something like these seats be adopted on the Erie and Central lines?

American Railroad Journal.

Saturday, March 25, 1854.

Stock and Money Market.

We have little change to report in money matters. The market is unfavorable to speculative operations of all kinds. Shares and bonds are heavy with very few sales for investment.—Money continues in active demand.

It is reported that the New York and Erie have concluded a sale of the balance of the \$10,000,000 loan, or \$3,000,000, in London. As a considerable portion of this amount will probably go toward the payment of the floating debt of the above company, the tendency should be to relieve the present stringency a little. But the demand for money for the railroad interest, is now so much greater than the supply, that millions are speedily absorbed without affording much relief.

The earnings of railroads continue to be most satisfactory. The active demand abroad for all our great agricultural staples gives to our public works full and profitable employment. There was never a period in their history in which they were earning a better income on their cost.

The following are the earnings of railroads for March as far as received.

	1854.	1853.
New York and Erie.....	\$345,026	\$302,569
Hudson River.....	160,620	126,028
Michigan Central.....	90,348	40,045
Baltimore and Ohio, (main stem).....	279,856	99,017
Cleveland and Toledo.....	45,172	27,000
New York and New Haven.....	54,257	49,441
Ohio and Pennsylvania.....	59,105	29,955
Pennsylvania Central.....	301,765	284,461
Macon and Western.....	28,671	25,996
Norwich and Worcester.....	22,104	19,683
Michigan Southern.....	91,890	58,890
Harlem.....	97,750	74,000

Chicago and St. Louis Railroad.

This road, which is rapidly approaching its completion, may be ranked among the most prominent and most promising of western projects. Its line is indicated by its title. It connects the great city of the Lakes with the great city of the Mississippi valley, by a nearly straight course, passing through the capital of Illinois. This line is in the convenient direction of the general trade of the country, and that of the district traversed. For them both, it offers the shortest route, and one which can never be interfered with, but by a line upon the same route.

That section of Illinois, contiguous to the above road, is certainly inferior to no portion of the State in fertility of soil, and in general resources. From Bloomington to the Mississippi River, no portion of the State is more densely settled, nor better cultivated. From Bloomington, north, the country is equally fertile, though more recently settled. No road in the country, of equal length, traverses a greater extent of rich and productive territory.

The position of the Chicago and St. Louis Railroad secures to it a monopoly, based upon the possession of the best line. The termini of the road, St. Louis and Chicago, must always be the markets, to which the products of the region traversed, designed for a distant consumption, will al-

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	809,878	1,016,500	2,064,458	140,561	80,053	none	30
Kennebec and Portland..... "	72	952,621	297,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,600	123,884	1,459,384	208,669	.....	6	98½
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	30
Concord..... "	35	1,485,000	none.	1,485,000	305,805	141,836	8	108
Cheshire..... "	54	2,078,625	720,900	3,002,094	287,768	55,266	5	36
Northern..... "	82	3,016,634	.....	.....	328,782	163,075	5	59
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	85
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	109
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	none	12½
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	26
Rutland..... "	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9½
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	12½
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. Cent.	.....	.....	97½
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley..... "	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7	91
Boston and Maine..... "	83	4,076,974	150,000	4,092,927	659,001	338,215	7	102½
Boston and Providence..... "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	81½
Boston and Worcester..... "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	100½
Cape Cod branch..... "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River..... "	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern..... "	75	2,850,000	500,000	3,120,391	488,793	241,017	7	86½
Fall River..... "	42	1,050,000	none.	1,050,000	229,445	99,589	8	99
Fitchburg..... "	66	3,540,000	112,305	3,623,073	574,574	232,787	6	88½
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County..... "	26	847,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony..... "	45	1,964,070	282,300	2,293,534	374,897	122,816	none	100
Taunton Branch..... "	12	250,000	none.	307,136	137,406	24,399	8	....
Vermont and Massachusetts.. "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	22
Worcester and Nashua..... "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	61
Western..... "	155	5,150,000	5,319,202	9,953,759	1,525,224	746,736	7	97
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	71
Providence and Worcester.. "	40	1,467,500	300,000	1,791,999	291,417	120,892	6	99
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	130
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	100½
Naugatuck..... "	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	57
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	.....	.....	.....	.....	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,860	none	63
Cayuga and Susquehanna.... "	35	637,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	80
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	67
Harlem..... "	130	4,725,250	977,463	6,102,935	681,445	324,494	4	55
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	32
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	110
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	25½
Oswego and Syracuse..... "	35	350,000	201,500	607,803	90,616	43,609	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,498	1,888,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	80½
Philad., Wilmington and Balt. "	98	5,000,000	2,899,166	8,067,285	868,038	541,769	5	79

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,083,420	798,193	7	58
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna.. "	57	.....	.....	.....	413,673	152,536	.....	....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.. "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.... "	32	180,000	120,000	416,532	89,776	.....	12	....
Wilmington and Raleigh.... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	....
Greenville and Columbia.... "	140	1,004,231	300,000	In prog.	.....	.....	.....	....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	115
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscooke..... "	71	.....	.....	In prog.	59,590	21,731	.....	....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	....
Memphis and Charleston.... "	93	776,259	400,000	In prog.	.....	.....	.....	....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	....
Nashville and Chattanooga.. "	125	2,093,814	850,000	In prog.	.....	.....	.....	....
Covington and Lexington.... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.... "	65	.....	.....	.....	.....	.....	.....	....
Maysville and Lexington.... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	85
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	98½
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	....
Cleveland and Columbus.... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	120½
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta.... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	112
Mansfield and Sandusky.... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	....
Mad River and Lake Erie.... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	....
Ohio and Pennsylvania.... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	....
Scioto and Hocking Valley... "	44	750,000	300,000	.....	Recently opened.	.....	.....	....
Xenia and Columbus..... "	54	1,291,000	300,000	1,257,714	317,000	158,500	10	107
Evansville and Illinois.... Ind.	31	.....	.....	In prog.	237,506	.....	.....	77½
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	....
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	....
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently opened.	.....	.....	87
Indianapolis and Cincinnati.. "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis.... "	62	.....	.....	.....	.....	.....	.....	....
Madison, Indianapolis & Peru "	138	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Peru and Indianapolis..... "	40	.....	.....	In prog.	.....	.....	.....	65
Terre Haute and Indianapolis "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.... Ill.	.....	.....	.....	.....	.....	.....	.....	....
Chicago and Mississippi.... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	....
Galena and Chicago..... "	92	1,932,361	500,000	In prog.	473,548	286,152	.....	118
Michigan Southern and Ind. N. Mich.	315	2,800,000	3,741,564	7,276,616	1,200,922	588,929	17	118½
Michigan Central..... "	282	4,856,700	3,977,563	8,618,505	1,145,598	582,816	8	107½
Pacific..... Mo.	38	1,000,000	none.	In progress	Recently opened.	.....	.....	....

ways be sent. The merchandize imported, must come through the same channels. As the road occupies a *right* line between the above cities, all other roads must compete with it under circumstances disadvantageous to the latter. The route of the road, too, is too far removed from the navigable water courses, to suffer from the competition of such channels of trade.

We can see no reason, therefore, why the above road will not take rank among the *first-class* western projects. It has a greater belt of fertile country than most, and is less liable to have its traffic interfered with, by other roads, than any line we can name. Its general allignment is such that no rival can be built, except upon the identical route of the former. No mistakes in location have been committed, to be corrected by some future company, the fear of which deters so many persons from investing in railroad property.

The route of the road is favorable to cheap construction. Total cost is estimated at \$6,000,000 for 220 miles of road. Its affairs are in efficient hands. That portion of its line from Alton to Bloomington, 132 miles, has been in operation for some time past. The balance of the line to Joliet 88 miles, which is making rapid progress, will be completed early the coming summer.

At present the route of travel between Chicago and St. Louis is by way of the Rock Island Road to LaSalle, and thence by the Illinois Central to Bloomington; thence by the Chicago and St. Louis Railroad, to St. Louis. The completion of the last named road will save some thirty miles over the present travelled route.

The Chicago and St. Louis Railroad has one advantage not common to most new roads, that of an immense business already (by the existence of other routes,) developed between its termini; a business fully adequate to the support of a first class road.

Indianapolis and Cincinnati Railroad.

This road was opened for business in the latter part of November.

The receipts for December were.....\$25,661 58
For January..... 12,854 81

For February, and for the week ending March 4th, the receipts were as follows:

Week ending Feb. 4.....\$5,157 08
Week ending Feb. 11..... 5,193 08
Week ending Feb. 18..... 5,431 00
Week ending Feb. 25..... 4,863 01
Week ending March 4..... 5,381 60

Total for 3 months and 4 days.....\$62,542 12

During the month of January, the Ohio was closed by ice, which cut off the communication with Cincinnati, and which accounts for the low receipts for that month. On the first of April, it is expected that the Ohio and Mississippi Railroad will be in full operation to its point of junction with the above road. An uninterrupted rail will then be formed between Indianapolis and Cincinnati of 110 miles, and some 30 miles shorter than any other route, and a very large increase of business is then expected.

The road is 90 miles long. Its cost up to the present time is about \$1,900,000. For a new road, opened after the close of the fall business, and at the commencement of the dull season, its receipts are very satisfactory. It is believed that its receipts for the first year's operation will not fall short of \$300,000.

Railroads to the Pacific.

We give to day the bills reported to the Senate, and House, providing for the construction of one, or more, railroads to the Pacific. They constitute the first organized movements for this purpose. Of the two, we prefer Mr. McDougal's bill, as it imposes fewer conditions, and is more liberal in its character, and contemplates the construction of two roads, upon northern, and southern, routes. We presume that, provided the project is to be encouraged by the aid of the general government, two roads at least must be embraced in the same general plan. It is the only way in which the matter can be divested of a partisan and sectional character.

We have but little fault to find with the principles upon which both bills are framed, that of committing the work, as far as possible to private interests and private sagacity. Government is to become a party in the enterprises, only so far as its interposition is necessary to success, by furnishing the minimum amount of means required from it. We have for a long time expressed similar views, and, of course, are much gratified to find such a healthy sentiment upon the subject in Washington.

While our previous opinions upon the manner in which the general government shall assist the construction of a railroad to the Pacific remain unchanged, we confess that the more we have examined the subject, the less favorably are we impressed as to the value of the lands to be set apart for this great work. But as we propose to make this matter a subject of future discussion, we postpone the consideration of it at the present time.

The following is the *House* bill introduced by Mr. McDougal, of California,

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that for the purpose of aiding and securing the construction of a railroad and telegraphic line from the Mississippi River, at a point not north of the 37th parallel of north latitude, to the city of San Francisco, in the State of California, there shall be, and hereby is, appropriated and set apart a quantity of land, equal to the alternate sections to the width of 15 miles on each side of such road from the terminus thereof, on the Mississippi River, to the 106th degree of longitude west from Greenwich; and from thence westerly to the eastern line of the State of California, alternate sections to the width of 25 miles on each side of that road; and from thence, through the said State of California, to the western terminus of such road, alternate sections to the width of 15 miles on each side thereof; such lands to be selected from the sections which shall be designated in the public surveys of said land (when made) by odd numbers, and to be held and conveyed as herein provided. And in all cases when the United States may have disposed of any such lands, or shall, from any cause, be unable to convey a title thereto, the deficiency may be made up by the party or parties entitled thereto from any unoccupied and unappropriated lands belonging to the United States within the distance of 30 miles from the said road: *Provided, however,* that for such deficiency within the State of California, and also in lieu of all mineral lands in the said State, (which are expected from the appropriation herein made,) such selection may be made from any unoccupied and unappropriated land of the United States within the said State of California.

SEC. 2. *And be it further enacted,* that it shall be the duty of the Secretary of War of the United States, upon the passage of this act, to cause advertisements to be published in at least two newspapers in each State for a period not exceeding

six months, which advertisement shall invite sealed proposals for the construction of a railroad and telegraphic line of the quality herein provided, from the Mississippi River to the city of San Francisco. The advertisement shall be published with a copy of this act, and shall propose a cession of the said lands appropriated as aforesaid, and also the payment of a sum, not to exceed \$600 per mile per annum, to the contracting parties, for the use of such road and telegraphic line by the United States for postal, military, naval, and all other government purposes, as well in time of war as peace, for the period and upon the terms herein provided. The said advertisement shall require all proposals to be sealed, and that the proposals shall state: First. The time in which the party or parties propose to construct, complete, and finish the entire road ready for use; also, what extent thereof they propose to complete in each and every year from the time of the location of the road. Second. The time in which such party or parties will surrender and transfer, free of any cost to the United States, the said road with its appurtenances and furniture. Third. The sum—not greater than said sum of \$600 per mile per annum—which the said party or parties will receive and take for the use of the said road, for all the purposes aforesaid, for the period of 25 years from and after the location of such road. This proposal shall, however, be subject to the proviso, that, if the government transportation and business on said road within said period shall be so great as, according to the customary rates of charges on said road, to exceed in value 50 per cent. over and above the sum proposed per annum, then the government will pay for such extra service an additional, but reasonable, compensation, to be fixed by Congress. Fourth. The guarantees or securities to be furnished by such party or parties for the faithful performance of such work—the guarantees or securities to be specifically named. The proposals received shall be opened and examined at the time fixed and named in said advertisement, in the presence of the President of the United States, the heads of departments, and such other persons as may desire to attend, and with the party or parties making the most favorable proposals with satisfactory guarantees, to be determined by the President and heads of departments, the Secretary of War shall contract for the construction and keeping up said road and telegraphic line from the Mississippi River to the city of San Francisco.

SEC. 3. *And be it further enacted,* That the Secretary of War be, and he is hereby, authorized to contract with the person or persons, party or parties, whose proposals, as aforesaid, shall be accepted, for the full and complete construction and keeping up of said railroad and telegraph line; the said contract to provide for a road as herein described; also, for a telegraph line on the most approved plan. And, for the full and faithful performance of the contract made, satisfactory security shall be taken by the said Secretary of War, in the name of the United States; and all obligations, contracts, and securities, shall be perfectly binding and obligatory in law on the contracting parties, according to exact terms of their respective obligations, contracts, and undertakings; all questions of damages and forfeiture, by reasons of any breach of such contracts, being determined by the express terms of such obligations, contracts and undertakings: *And it is further provided,* That in all contracts made in pursuance of this act, the provisions of this act shall be taken and considered as part of such contracts.

SEC. 4. *And be it further enacted,* That in making such contract, the Secretary of War is authorized and empowered, on the part of the United States, to contract for the conveyance to such contracting party or parties of all lands hereby appropriated along the route of said road, in proportion to the extent of the line contract for, and corresponding therewith, the land to be conveyed to such contracting party or parties as the road progresses, and patents to be issued to such party or parties upon the completion of each twelve contin-

uous miles of the road, reserving the fourth of all said lands until the full and perfect completion of the said contract. And the Secretary of War is further authorized to contract, on the part of the United States, for the payment of a sum of not more than six hundred dollars per mile per annum, for the terms aforesaid, according to the accepted proposals as aforesaid: *Provided,* That such payment shall only be made to the contracting party or parties for so much of such road as is complete and being used for the purpose of transportation.

SEC. 5. *And be it further enacted,* That should any contracting party or parties substantially fail, neglect, or refuse to prosecute the work undertaken by said party or parties in a manner to secure completion thereof in the time stipulated, or should said party or parties violate the terms of the contracts made, then all rights of said party or parties to said road, right of way, and property, shall be and become forfeited to the United States, and the United States may and shall enter upon and possess the same. In the event of such forfeiture, to be determined by the Secretary of War, said Secretary of War shall proceed to re-let the work remaining under such forfeited contract, in such manner as, in the opinion of said Secretary, will secure its earliest completion; the said Secretary contracting, on the part of the United States, to pay nothing more than is hereinbefore appropriated and provided.

SEC. 6. *And be it further enacted,* That the party or parties with whom the contract aforesaid shall be made, shall proceed, as soon as practicable after the execution of such contract, to locate the general route of said road, fixing the eastern terminus thereof and its general route. And in case the said party or parties should adopt any route or line for which grants of alternate sections of land have heretofore been made by Congress, the amount of lands heretofore granted shall be deducted from the amount hereby appropriated for said road; and should any part of said route be located in the State of Texas, then for such part thereof no lands of the United States shall be conceded. As soon as such general route shall be determined, which shall not be more than from the date of such contract, a statement thereof shall be furnished by said party or parties to said Secretary of War; and as soon as practicable thereafter the President of the United States shall cause the public lands on each side of said route, and of the width of at least thirty miles, to be surveyed, and the Indian title thereto extinguished. And the provisions of the act of September, eighteen hundred and forty-one, granting pre-emption rights, and the acts amendatory thereof, shall be, and the same are hereby, extended to such lands, saving and excepting the lands hereinbefore set apart and appropriated as aforesaid: *Provided, however,* That the sections and parts of sections of land which by such grant shall remain to the United States, within the lines of such appropriation of fifteen and twenty-five miles on each side of such road, shall not be entered or sold for less than double the minimum price of the public lands when sold.

SEC. 7. *And be it further enacted,* That the party or parties receiving grants of alternate sections of land under the provisions of this act shall be required to sell and unconditionally convey one-half of the same within five years, and the remainder thereof within ten years, from and after the time when patents shall be issued therefor; and all lands so granted to such party or parties and remaining the property of such party or parties, or which may be held to the use of such party or parties, at the expiration of ten years from and after the completion of such contract, shall be and become forfeited to the United States.

SEC. 8. *And be it further enacted,* That the lands of the United States for _____ hundred feet in width along the entire line of said road shall be set apart and dedicated as a highway for railroad, common road, and telegraph purposes; and for the construction of any railroads, common roads, telegraph lines, or bridges, the parties en-

gaged therein in pursuance of this act may take the necessary materials of earth, gravel, stone, and timber, for the construction thereof, from any adjacent lands of the United States. All grants and contracts made in pursuance of this act for the construction and keeping up of a railroad and telegraph line shall provide for and require a railroad to be constructed in a substantial, thorough, and workmanlike manner, with all necessary drains, culverts, bridges, viaducts, crossings, turnouts, sidings, stations, watering places, and all other appurtenances, including the furniture of the road—equal in all respects to a road of the first class when prepared for business—with rails of the best quality, weighing not less than sixty-four pounds to the yard, and a uniform gauge; and shall also provide for and require a telegraph line of the most substantial and approved description.

Sec. 9. *And be it further enacted*, That the party or parties constructing or owning said road may at any time construct one or more additional tracks along said route; but nothing in this act contained shall restrict the government of the United States from granting the right to any other party or parties to construct parallel railroads or telegraph lines along the same line and over the same route: *Provided*, The road or roads and telegraph line or lines constructed, with their necessary appurtenances, buildings, and structures, are in no wise interfered with.

Sec. 10. *And be it further enacted*, That all connections with said road in any of the States shall be made under the direction of said States respectively, and those in the Territories under the direction of Congress, upon such terms and conditions as may be agreed upon by the parties interested.

Sec. 11. *And be it further enacted*, That whenever the said road shall be surrendered to the United States, according to the provisions or contracts so to be made, thereupon so much of the line of said road as lies within any of the States of the said United States shall vest in and become the property of the State or States within which the same is located, subject to the use of the United States for postal, military, and all other government service, and subject also to such regulations as Congress may impose restricting the charge for transportation thereon. And all other States organized thereafter upon the line of said road shall acquire the same rights, subject to the like provisions and restrictions.

Sec. 12. *And be it further enacted*, That there shall be established through the territories of the United States on said route a line of military posts, not less than six in number, at convenient and suitable points on said route, garrisoned by a sufficient force; and, in addition to said military posts, there shall be established station-houses, not more than twenty miles apart, each to be guarded by a sufficient force; said posts and station-houses to be of a cheap and temporary character, yet sufficient for the purposes of defence, and to be erected by the troops of the United States, from materials to be obtained in the vicinity of the route; said posts or stations to be increased, diminished or changed, whenever convenient or necessary, in the opinion of the President, for the execution of the required service, and the posts and stations so erected may be used for telegraph stations until Congress shall otherwise direct.

Sec. 13. *And be it further enacted*, That it shall be the duty of the military officers in command of the troops along said route to cause a common road to be opened by said troops along the entire line thereof through the territories of the United States, and to keep such road in good travelling condition, with safe bridges and ferries across the streams, to sink wells at convenient distances where required, and to protect all said roads and telegraph lines, and persons employed thereon, and all emigrants, travellers, settlers, and traders along the line and in its vicinity, from all hostilities and depredations by the Indians, so far as the same may be practicable.

Sec. 14. *And be it further enacted*, that, for the

purpose of aiding the construction of a railroad and telegraph line from some point on the westerly shore of Lake Superior or the Mississippi River, in the territory of Minnesota, to the waters of the Pacific ocean, there shall be and hereby is, appropriated and set apart a quantity of land equal to the alternate sections, to the width of 20 miles, on each side of such road, along the entire line thereof. The alternate sections so appropriated and set apart to be selected from the sections which shall be designated on the public surveys (when made) by odd numbers, and to be held and conveyed as herein provided.

Sec. 15. *And be it further enacted*, that all and singular the provisions of this act in relation to the construction, maintenance, and protection, of a railroad and telegraph line from the Mississippi River to the city of San Francisco, are hereby declared to be, and are hereby made applicable to the railroad and telegraph line herein last provided for, the same as if herein again specifically set forth.

Sec. 16. *And be it further enacted*, that, should the Secretary of War contract, according to the provisions of this act, for neither of said railroad and telegraph lines within the period of years from and after the passage of this act, then this act shall be and become void; and should the said Secretary contract for the construction of one of the said lines, and fail to contract for the other, within said period, then the provisions of this act in relation to the line not contracted for shall be and become inoperative and void.

Annual Report of the State Engineer upon the State Canals.

To the Legislature of the State of New York:

The submission to the people, for their final decision, of the question of an alteration of the fundamental law of the State, so as to permit of a speedy completion of the unfinished Canals, and the duty imposed upon the present Legislature of carrying into effect this decision, if affirmative, have suggested the propriety of presenting the chief subjects relating to the public works in a more extended form than has been customary in the reports from this department.

The citizens of this State, as well as those of a large portion of the Union, have so great an interest in our public works that it is considered necessary to furnish a brief retrospect of their past history, their present condition, and the effect of their completion, under the following general heads:

- I. The progress of the Public Works of the State.
- II. The Canals and Railroads of the State, as a dependent system.
- III. The extension of the channels of trade and travel beyond the State.
- IV. The cost and charges for transport on these channels.
- V. The comparative cost, capacity and revenue of the Erie Canal and the parallel Railroads, and the cost and charges for transportation thereon.
- VI. An analysis of the present business of the Canals.
- VII. A comparison of their present business, with that of former years.
- VIII. A comparison of the business of the New York Canals with that of other lines.
- IX. The organization of the Department for the construction and maintenance of the Canals.

I.—THE PROGRESS OF THE PUBLIC WORKS IN THIS STATE.

The Canals of this State have mostly been constructed at the expense of the State Government, and the Railroads by private capital, aided in some instances by loans and donations from the Government.

These works are more remarkable for their extent than for the natural obstacles overcome, and required in their execution more ability from their financial than from their engineering managers.

The latter have in most cases, been restrained by the former from expenditures for any purpose not demanded by the most rigid utility, and hence no opportunity has been afforded for those exhibitions of engineering talent, which have distinguished the profession in other countries.

The State works, especially, have been constructed with an economy of expenditure, that is hardly credited by the engineers of Europe. In some instances this economy has been carried to such extent, as to require the works to be rebuilt in a more permanent manner. Yet this has seldom been injudicious, as the construction of the first works lessened the cost of those subsequently built, by facilitating the transportation of the materials used, and by developing the resources of the country and demonstrating the value of the improvement.

The State Works exhibit the best specimens of the construction of earthen banks for the retention of water, and of well arranged and durable masonry, which are to be found in the world.

In these respects, the enlarged Erie Canal and the Croton Aqueduct (built by the city of New York) surpass any similar undertaking, in the judicious permanency of their various works.

The works of the Delaware and Hudson Canal, built by an incorporate company, and those of the Chenango Canal, built by the State, furnish the most favorable specimens of a rigidly economical application of expenditure suited to the circumstances of the respective cases.

The Railroads of this State show every variety of construction, from that which involved the largest expenditure to that which was executed with the most rigid economy. The former has been chiefly caused by the progressive improvements which have been made in the construction of this species of internal improvement.

The engineers of this country began the construction of Railroads by following the plans laid down by their European brethren. As the latter had unlimited command of capital, so long as their plans were followed in this country, the progress of the railroad system was comparatively slow, because capital could not be obtained, and roads thus constructed were not remunerative.

The Albany and Schenectady Railroad in this State, and the Baltimore and Ohio in Maryland, were commenced on these expensive plans, copied mainly from those of the Liverpool and Manchester road in England.

The substitution of a gravel road bed and wooden cross-ties for the expensive foundation of Adamized stone, timber and cross-ties of the English roads, is due to an engineer of this State. This substitution has caused a radical change in the system of railroad construction, not only in this country but in Europe.

The Railroads of this State now furnish the best specimens of large wooden bridges, locomotive engines and cars; and we hope soon to be able also to record the successful application of wire suspension bridges to railroad purposes, which has been pronounced impracticable by European engineers.

The project of improving the navigation of the Mohawk, and extending a water line across the portage to Lake Ontario, attracted the attention of the public men of this State at an early day.

The cost of the transportation of the furs and Indian supplies between the interior lakes and the Hudson, was alluded to by the Surveyor General in 1724, and the improvement by means of a canal to the rapids of the Mohawk, by the Governor in 1768.

Immediately after the Revolution, this subject was again brought forward. In 1784 a plan for improving the Mohawk was proposed to the Legislature, and in 1791, they directed surveys and estimates to be made for building canals across the portage, from the Mohawk to Lake Ontario, and from the Hudson to Lake Champlain. The following year they chartered a company, who built canals and locks at the Little Falls, the Ger-

man Flatts, and at Wood Creek, at a cost of four hundred thousand dollars.

In 1808 the Surveyor General was directed to survey a route for a canal from the Hudson to Lake Erie. He employed James Geddes, who reported that canals could be made from Oneida Lake to Lake Ontario, around the Falls of Niagara, and on a direct route from Seneca river to Lake Erie.

Three years later, a commission reported that a continuous canal on an inclined plane, from Lake Erie to the Hudson was practicable, and would cost five millions of dollars.

The Legislature of that year (1811) directed the construction of the Erie Canal, but the War prevented any further action until 1816, when a new commission was formed, who employed Messrs. Broadhead, Wright and Geddes to commence the construction of the Erie, and Mr. Garvin of the Champlain Canal. The following year, the dimensions of these canals were fixed at forty feet surface and four feet depth, with locks ninety feet long and fifteen feet wide. The estimated cost of both canals was stated at seven and three-quarter millions. (The actual cost was about eight and a half millions.)

The work was commenced on the Erie Canal by the ceremony of breaking ground, July 4th, 1817.

In 1819, the Canal Commissioners appointed Benjamin Wright principal, and Canvass White and Nathan S. Roberts, chief engineers.

To Mr. White is due the arrangement of some of the most important plans and details of the works of the Erie Canal, and also the discovery of the hydraulic cement rocks of Onondaga, which have continued to furnish the supply of that article for the State works.

A portion of the middle section of the Erie canal and also of the Champlain canal was opened for navigation in the fall of 1819, and the Erie canal was completed in the fall of 1826.

In 1825, the Legislature directed the construction of the Cayuga and Seneca, and the Oswego canals, and surveys for fifteen other canals, amounting to seven hundred and fifteen miles in length. The Oswego canal was completed in 1828, and the Cayuga and Seneca in 1829.

In 1829, the construction of the Chemung and Crooked Lake canals was authorized. The former was completed in 1833, and the latter in 1836, under the direction of Holmes Hutchinson as Chief Engineer.

The construction of the Chenango canal was commenced in 1833 and completed in 1839, under the charge of John B. Jervis as Chief Engineer. The Black River and Genesee Valley canals were commenced in 1836. Both of these works are yet unfinished.

In 1825, the Canal Commissioners stated "that the great press of business on the eastern end before long will exclude packet (passenger) boats from this section of the canal." * * * "And it is presumed that the experience of two or three years more would satisfy the public that it would be proper to commence the construction of another parallel canal on the eastern section."

The Legislature of 1834, passed an act directing double locks to be constructed east of Syracuse, and in the following year directed the enlargement of the Erie canal for its whole extent.

Messrs. Jervis, Hutchinson and Roberts, were appointed Chief Engineers of this work.

The Canal Board determined the dimensions of the enlarged canal at seventy feet surface and seven feet depth, with locks one hundred and eighteen feet long and eighteen feet wide.

The work was commenced in 1836, and prosecuted until 1842, when the embarrassed condition of the treasury, and the financial difficulties of the country, induced the Legislature to direct a suspension of the work.

A small amount of work has been performed annually since that date, chiefly for the purpose of bringing into use structures and portions of the canals which had been nearly completed previous to 1842, and those which were necessary to re-

place the decayed structures, and those portions of the canal the navigation of which was most embarrassed.

The Delaware and Hudson Canal Company was incorporated in 1823, and the work was commenced in 1825 and completed in 1830. This canal is one hundred and eight miles long, and as originally constructed had a surface width of forty feet and a depth of three feet, with locks seventy-six feet long and eight and a half feet wide. Its dimensions were enlarged in 1848, so as to allow the use of boats of nearly three times the tonnage of those first built.*

In 1827, the Legislature loaned the company five hundred thousand dollars, and in 1829, three hundred thousand to aid the completion of the work.

Mr. Wright was at first Chief Engineer, and was succeeded by Mr. Jervis.

The legislature in 1825 directed Wm. Campbell, who was afterwards Surveyor General, to locate and survey a good road from Lake Erie to the Hudson through the southern tier of counties.†

In 1829, De Witt Clinton, Jr., published a pamphlet, giving a sketch of the route for a railway to connect the navigable waters of New York, Pennsylvania, Ohio, Indiana, Illinois and Michigan with those of the Valley of the Mississippi. This route started from Piermont on the Hudson river, followed nearly on the line on which the New York and Erie Railroad has been built, to the Alleghany river, and thence through Northern Ohio, Indiana, and Illinois, to the junction of Rock River, and the Mississippi, and thence to Council Bluffs on the Missouri. Connected lines of railroads are now completed or in rapid progress on the whole length of the route and nearly on the line described by Mr. Clinton.

The New York and Erie Railroad Company was chartered in 1832, and a survey of the road made by Mr. Clinton, at the expense of the general government. Another survey was made in 1834, by Mr. Wright, at the expense of the State government. In 1836, the Legislature loaned the company three millions of dollars, which sum was subsequently (in 1845) donated to them.

The work on the road was commenced in 1835, but was soon suspended. In 1838 it was resumed; very little was however accomplished until 1845, when new parties took hold of it and opened one-half of it in 1849, and completed it to Lake Erie early in 1851.

Horatio Allen was prominently connected with this work as consulting Engineer, and Major Brown as Chief Engineer during its construction.

The first link in the central line of railroads was completed in 1830, but it was not until 1843 that the whole line between the Hudson and Lake Erie was finished.

The continuation of this line from Albany to New York was commenced in 1817, and completed in 1851.

The line through the northern part of the State was completed in 1850.

The other railroads of the State are generally tributaries of these main trunk lines.

In 1838, the Legislature made loans to the Ithaca and Owego, the Canajoharie and Catskill, and the Auburn and Syracuse railroad companies to the amount of \$637,700, and in 1840, to the Auburn and Rochester, the Hudson and Berkshire, the Tioga, the Tonawanda, the Schenectady and Troy and the Long Island railroad companies to the amount of six hundred and forty-eight thousand dollars.

By the last return made to this office of the several railroad corporations, there has been ex-

*This was effected at a cost of two and a half millions of dollars, and a saving of one-half the expense of transportation.—Ass. Doc. 28, 1853, p. 124.

†In 1826; the Legislature gave the first charter for a road from Albany to Schenectady, seventeen miles long, which was completed in 1830, by John B. Jervis, Chief Engineer.

pended on them the sum of \$—; and the number of miles in operation is

II.—THE CANALS AND RAILROADS OF THE STATE AS A DEPENDENT SYSTEM.

The canals and railroads of this State are arranged to penetrate the different sections of the interior, so as to form a system of improvements, the support of which renders them mutually dependent.

The freighting business is chiefly performed by the former while the travel is confined to the latter.

The common highways of the country perform the local traffic of the interior, and carry the surplus to the railroads and minor water lines which convey it to the districts of aggregated population and the main water lines, by means of which they can be carried to the seaboard, and thence distributed to foreign marts.

The natural water lines of the State are the Atlantic, on the southeast, and the Western Lakes and the St. Lawrence along the northern and western borders. The Hudson river extends the navigation from the ocean along the eastern border to the centre of the State, while Lake Champlain furnishes a navigation for more than one-third of its eastern length. The Cayuga, Seneca and several smaller lakes lying in the interior of the State are also navigable channels. The upper waters of the Hudson and the Mohawk penetrate the eastern part of the State; the Black River, the Oswego, and Genesee rivers penetrate the northern sections; the Delaware and Susquehanna, the southern; and the Alleghany the southwestern sections of the State, and each furnish an imperfect navigation during a portion of the year.

These natural water lines formed the first arteries of trade, and were subsequently connected by artificial lines, the completion of which constituted the present system of our canals.

The main trunk of this system is the Erie Canal, occupying the valley of the Mohawk and the southern slopes of Lake Ontario, running east and west nearly through the centre of the State, and connecting the chains of Western Lakes with the navigable waters of the Hudson.

The Chenango Canal, occupying the valley of the river of that name, running from the southern border of the State northward, connects the waters of the Susquehanna with the Erie Canal, near the middle of the State.

The Black River Canal (nearly completed,) extends from the navigable waters of that river, and connects with the Erie Canal near the outlet of the Chenango.

The Oswego Canal connects the most easterly port on the chain of great lakes with the Erie Canal, at the centre of the State, and forms the shortest line between the most easterly of those lakes and tide water.

The Cayuga and Seneca Canal connects the Erie with the lakes of those names, and by means of the Chemung Canal, extends the navigation to the Susquehanna.

The Crooked Lake Canal completes the navigation between the lake of that name and the Seneca.

The Genesee Valley Canal (nearly completed,) occupying the valley of that river, running south nearly to the southern borders of the State, connects the Alleghany river with the Erie Canal about one hundred miles east of Lake Erie.

The Champlain Canal constitutes an independent route, extending the navigation of the Hudson to Lake Champlain, and thence by the improvement of its outlet, to the St. Lawrence, in the Province of Canada.

All of these canals have been constructed by the State. The Delaware and Hudson Canal, extending from the Hudson, at the mouth of the Rondout, to the Lackawaxen, a branch of the Delaware, was constructed by an incorporated company for the purpose of conveying the anthracite coal of Pennsylvania to the New York market.

The system of railroads consist of three trunk lines running East and West through the Northern Central and Southern sections of the State,

The Northern Railroad extends from the upper end of the St. Lawrence to the foot of Lake Champlain, from which continue several lines southerly to the City of New York and easterly through the New England States.

The Central with the Hudson River Railroad extends from Lake Erie to New York, running through the Central and Eastern portions of the State, occupying the Southern slopes of Lake Ontario and the valleys of the Mohawk and Hudson.

Three branch lines extend from the Western division southeasterly, and connect with the New York and Erie Railroad.

A tributary road is extended from Lake Ontario South through the valley of the Oswego River, and connects with the main line near the centre of the State.

Another tributary extends from the head of the St. Lawrence River, southerly along the Eastern slopes of Lake Ontario to the main line, at the sources of the Mohawk.

A third tributary extends up the Hudson River valley to Lake Champlain, by two lines and thence through Vermont to Upper Canada, connecting with the Northern line at the North end of Lake Champlain.

The New York and Erie Railroad extends from Lake Erie to the city of New York, through the Southern tier of Counties, occupying so much of the valleys of the Alleghany, Susquehanna and Delaware as run East and West.

Three tributary roads extend from the Niagara River through the Central and Western portions of the State, and enter the main line on its Western section.

Two of the tributary roads from the Bituminous and Anthracite coal fields of Pennsylvania enter it on the South.

It will be observed that every portion of the State is penetrated by these railroads and navigable water lines, except a section lying at the sources of the Delaware, Susquehanna and Mohawk, and another section at the sources of several small streams emptying into the St. Lawrence, Hudson and Mohawk.

The lengths of these lines are as follows:—
Of coast navigation on the Atlantic
and great lakes is..... 800 miles.
Of navigable rivers and minor lakes... 450 "
Of canals and improved water channels, including those in progress... 1,000 "
Of railroads completed 2,600 "
Of railroads in progress 1,000 "

Making a total length of..... 5,850 miles.
This gives an average of less than three square miles for each mile in length of railroad and water lines within the State.

III.—THE EXTENSION OF THE CHANNELS OF TRADE AND TRAVEL BEYOND THE STATE.

Immediately west of the State of New York lies the great basin of the lakes, and contiguous to it on the south and west lie the Ohio and Upper Mississippi basins of equal magnitude.

These basins are enclosed from the Atlantic by the Alleghany mountains, except where they fall off to the level plains extending through the centre of New York.

An inspection of the map embracing these basins, shows on the one side the chain of great lakes from the further extremity of Superior tending south easterly to the lower end of Lake Erie; and on the other side the Ohio river, from its junction with the Mississippi, tending north-easterly to its source in western New York, and all of the intermediate natural water lines tending towards the same point.

This general direction of the natural water lines of these basins has given the same course to the artificial water and railroad lines constructed through them, and concentrates in the narrow gorge lying between the northern slope of the Alleghany mountains and the eastern end of Lake Erie, a drift of trade and travel which is not to be found elsewhere on this continent.

This concentrated traffic, collected by these fan spreading lines, must be conveyed between the

lakes and the Atlantic, through the Erie canal and the central and southern lines of railroads of this State to its commercial emporium, from whence it can be distributed by the ocean lines of steamers and sail vessels to every port on the globe.

From the western terminus of the Erie Canal and the central and southern railroads extends the chain of western lakes, commencing with Lake Erie, which extends south-easterly between the Peninsula of Canada on the North, and the States of New York, Pennsylvania and Ohio on the South to Michigan, a distance of 270 miles; thence north through the Detroit River, Lake and River St. Clair to Lake Huron, between Canada and Michigan, a distance of 45 miles.

Lake Huron extends in the same direction for a distance of 270 miles, and connects with Lake Michigan, which runs south for 340 miles between the States of Michigan and Wisconsin to Illinois and Indiana.

From Lake Huron the River St. Mary, extending north-west for 46 miles, connects with Lake Superior, which extends westward for 420 miles, with Michigan and Wisconsin on the South, Canada on the North, and Minnesota on the West.

There are no rivers emptying into any of these lakes which are navigable for any considerable distance.

From the south-western part of New York, the Alleghany River running south through Pennsylvania, and uniting with the Monongahela near the western line of that State, forms the Ohio River, which extends thence nearly south between Pennsylvania and Virginia on the one side, and Ohio on the other. The Ohio extends thence nearly west between Kentucky and Ohio, and thence south-west between Indiana and Illinois on the north, and Kentucky on the south, to its confluence with the Mississippi, having an extent of navigation of nearly one thousand miles.

The Alleghany and Monongahela Rivers enter the Ohio in Pennsylvania; the Kanawha from Virginia; the Muskingum, Hocking, Scioto and Miami from Ohio. The Licking, Kentucky Cumberland and Tennessee from Kentucky, and the White and Wabash from Indiana.

The navigation of the Upper Mississippi commences at St. Pauls in Minnesota, where the St. Croix and St. Peters enter it, and thence runs south to its confluence with the Ohio for one thousand miles, between Wisconsin and Illinois on the east, and Minnesota, Iowa and Missouri on the west.

The Chippewa, Black and Wisconsin Rivers enter the Mississippi from Wisconsin; the Rock and Illinois Rivers from Illinois; the Iowa and Des Moines from Iowa; and the Missouri River from Missouri.

The annexed table B. shows the length of the steamboat navigation on the Ohio and Mississippi above their confluence, and of the tributaries before mentioned. Those of the Ohio, with its tributaries, make aggregate length of more than three thousand miles, and those of the Mississippi of more than four thousand miles.

The lakes and the Ohio and Mississippi Rivers are connected by four great lines of canals. The first extends from Erie, on Lake Erie, south to Beaver, on the Ohio River, a distance of 136 miles.

The second line extends from Cleveland, on Lake Erie, south-west to Portsmouth on the Ohio, a distance of 324 miles, with two branches connecting with the first line above mentioned; another branch connecting with the Ohio through the Muskingum River, and another through the Hocking.

The third line extends from Toledo, on Lake Erie, to Cincinnati, and also to Evansville, on the Ohio. The distance from Toledo to Cincinnati is 251 miles, and to Evansville is 467 miles.

The fourth line, extends from Chicago on the southern extremity of Lake Michigan to the head of navigation on the Illinois, a distance of 100 miles.

Another canal is in progress connecting the northern extremity of Lake Michigan with the

Mississippi, through the Fox and Wisconsin, Rivers.

The New York Central and the New York and Erie Rail Road, through its branches, extend to the Falls of Niagara, and there connect with a road across the Peninsula of Canada to Detroit, and thence across Michigan to Chicago, and also by a line in progress to Grand Haven on Lake Michigan opposite Milwaukee, in Wisconsin.

From the western termini of the Central and New York and Erie Rail Roads, a line of road extends along the south shore of Lake Erie, through Cleveland and Sandusky to Toledo, and thence across Michigan and Indiana to Chicago.

From both Cleveland and Sandusky roads extend to Cincinnati on the Ohio.

From Cleveland a line of roads is in operation through Indianapolis to Terra Haute on the western line of Indiana.

From Toledo, Terra Haute and Cincinnati lines of roads are in rapid progress to St. Louis, Alton and Quincy, on the Mississippi; and from Quincy and St. Louis other lines are in progress to the Missouri.

From Chicago roads are completed to Rock Island and Alton on the Mississippi, and in progress to Milwaukee and Madison, in Wisconsin and Galena, Fulton, Quincy, and Cairo on the Mississippi.

From Fulton and Rock Island roads are in progress west of the Mississippi to Iowa city.

From Milwaukee a road is completed to Janesville, and in progress to Mississippi.

Table B furnishes a list of all the roads in operation in this territory, and includes a number of roads not embraced in the general lines above mentioned.

The extension of the water and rail road lines beyond the State of New York form connected lines of navigation of 1600 miles by Lake, 7000 miles by rivers, and 1600 miles by canals, besides upwards of 3500 miles of connected rail road lines completed, and as much more in progress.

To be continued.

East Tennessee and Georgia Railroad.

The report of the directors of this Company shows the earnings for the year, ending with November, 1853, to be \$93,975 13, and the expenses for the same time to be \$42,321 91, leaving, the sum of \$54,653 22 as profits. The cost of the road, 82 miles in length, upon which this sum has been earned, is in round numbers \$1,500,000.

The report says:

The marked improvement in the agricultural interests of the country through which the road passes, is perceptible to the most casual observer, whilst in the transportation of its varied and increased products the Company have ample assurance that the time is not distant when a compensating remuneration will be forthcoming for their efforts and outlays in building the road.

The following description of the road is extracted from the report of the engineer, M. B. Prichard, Esqr.

As the road is now rapidly approaching completion, a brief statement of its leading characteristics may be of interest. The length of the finished portion of the road from Dalton, Georgia, to London, Tennessee, is 82 miles—London to Knoxville, including Bridge and approaches, 29 miles—total 111 miles—of this 15 miles is in Georgia and 96 in Tennessee—60 miles graded for a double track—the remainder is 18 to 20 feet wide in cuts and 13 to 16 in embankments. The maximum grade is 36 feet per mile, used in no instance continuously over two miles. The curves are of radii, varying from 2,865 feet to 10,000; in a few instances 3 and 4 degree curves, or of 1910 and 1,432 feet radii have been used upon light grades—there is no reversed curve upon the entire road—the proportion of straight line to curve is about as 8 to 1.

The total length of Bridging is 2494—the gauge of the track is 5 feet—the weight of rail a

fraction over 100 net tons per mile—the ties are 8 inches thick and 8 to 25 inches wide, 2½ feet apart, centre to centre—they are laid upon the surface of the road bed without embedding, earth is then filled in to the level of the top of the rail in the centre and sloping to the bottom of the tie at the ends; by this method the tendency of water, to settle under the ties is obviated.

The following table, also from the report of the engineer, is worthy of record, at it embraces points which may yet be availed of for other purposes of railroad construction.

TABLE OF THE ELEVATION

Of prominent points on the East Tennessee and Georgia, and other connecting roads, above the level of the sea.

Augusta, Georgia,.....	147
Atlanta, ".....	1050
Summit W. & A. Railroad, near Marietta,.....	1156
Dalton,.....	771
Tennessee and Georgia line,.....	837
Cleveland,.....	878
Low water Hiwassee River,.....	684
Athens,.....	993
Sweetwater Summit,.....	1023
Loudon,.....	814
Low water Tennessee, at Loudon,.....	737
McClellan's Summit, Knox county,.....	972
Knoxville,.....	898
Summit Copper Ridge.....	1186
Water Clinch River,.....	814
Gap of Waldens' Ridge,.....	1200
Grave Gap, cross Mountain,.....	1285
Summit Elk Gap Cumberland Mountain,.....	1701
Elk Fork of Cumberland River,.....	1150
Clear Fork of " Ky.,.....	962
Cumberland River, at Williamsburg, Ky.,.....	931
Summit between Cumberland and Laurel Rivers,.....	1218
Laurel River,.....	918
Summit between Laurel and Rockcastle River, Ky.,.....	1289
Water Rockcastle River, Ky.,.....	866
Head of Line Creek, Ky.,.....	1188
Summit Brush Creek, Ky.,.....	1190
Collier's Gap in knobs near Crab Orchard, Ky.,.....	1325
Blue Grass country, Ky.,.....	1010
Stanford, Ky.,.....	980
Dicks' River, Ky.,.....	907
Danville, Ky.,.....	997
Low water in Ohio River at Cincinnati,.....	434

Naugatuc Railroad.

The following is a statement of the receipts and expenses of the Naugatuc Railroad for the past year. The receipts show a large increase, and the York and Erie roads, with suggestions for improvement of the locomotive, in its plan, proportions, manufacture and management. Believing the subject to be of especial importance to the interests of many of our railroads, we thus wish to bespeak the attention of their managers on its appearance.

Cost of Working of English Railroads.

Herapath's Journal of February 25th contains reports of the operation of some of the largest English companies for the six months ending Dec. 31st, 1853.

The receipts of the Eastern Counties line, comprising 434¼ miles of roads, were for the half year £491,875, 3s. 9d. of which the expenditures for working were £208,761, 12s. 5d.

The following are the expenses per mile run, reduced to federal currency.

Passenger business.

Locomotive expenses.....	18.3078 cts.
Maintenance of way and works.....	6.3530 "
Miscellaneous working expenses.....	27.2796 "
Rates and Taxes.....	3.5558 "
Government duty.....	4.5770 "

Cost in cents per mile run..... 60,0722 "

Freight business.

Locomotive expenses.....	21.1798 cts.
Maintenance of way and works.....	6.3530 "
Miscellaneous working expenses.....	27.2796 "
Rates and taxes.....	3.5558 "

Cost in cents per mile run..... 58.3682 "

The Report of the Locomotive Superintendent gives some very valuable information touching the cost of locomotive power on English railways, and we therefore publish it entire.

Report of the Locomotive Superintendent.

To the Directors of the Eastern Counties Railway Company.

Gentlemen.—In laying before you the accounts of this department for the past half-year, together with the accompanying comparison with other corresponding half-years, I beg to draw your attention to the greatly increased duty which has been performed by this department, and also to

Comparative Statement of Miles run by Trains, and Cost per Mile.

	Half-year ending 4th Jan. 1850.	Half-year ending 4th Jan. 1851.	Half-year ending 4th Jan. 1852.	Half-year ending 4th Jan. 1853.	Half-year ending 31st Dec. 1853.
Miles run by passenger trains.....	762,104	800,656	920,388	1,087,983	1,064,424
Do. by goods trains.....	386,161	407,548	432,986	529,247	680,928
Total miles run by trains.....	1,148,265	1,208,204	1,353,374	1,567,230	1,745,352
Total amounts expended.....	£85,387 9	82,587 13 4	64,592 6 11	63,108 12 0	74,587 8 11
Number of miles of railway worked.....	327¾	344¾	344¾	434¾	434¾

Cost of Locomotive Department.

	Pence.	Pence.	Pence.	Pence.	Pence.
Working engines—					
Engine-men and firemen's wages.....	1-8873	1-9388	1-4682	1-4991	1-5204
Oil, tallow, waste, firewood, &c.....	4594	5379	2778	2992	4525
Labourers and cleaners.....	6794	7112	6308	6245	6370
Water.....	2867	2065	1455	1090	1627
Coke.....	5-1285	4-6684	3-0463	2-8329	3-0346
Engine power for shunting.....		4187	4202	2698	1756
Repairs and renewals of engines and tenders—	8-4413	8-4815	5-9888	5-1345	5-9877
Wages and materials.....	5-5111	4-8770	3-1382	2-5611	2-5656
Salaries to Superintendents.....	1385	1487	1560	1329	1202
Total for locomotive department.....	14-0909	13-5072	9-2830	7-8285	8-6735

Cost of Carriage and Wagon Department.

Repairs and renewals of carriages and wagons—					
Wages and materials.....	3-7099	2-8486	2-1194	1-7914	1-5428
Salaries to Superintendents.....	0461	0496	0520	0443	0400
Total for carriage and wagon department.....	3-7560	2-8992	2-1714	1-8357	1-5828
Total cost per mile for locomotive department.....	14-0909	13.5072	9.2830	7.8285	8.6735
Total cost per mile for carriage and wagon department.....	3-7560	2-8982	2-1714	1-8357	1-5828
Total.....	17-8469	16-4054	11-4544	9-6642	10-2563

The returns sent herewith will show you that the efficiency of the rolling stock has been fully maintained, and this I shall continue to do at the least possible expenditure.

Showing that, during the past half-year, there has been an increase in the number of miles run with trains over the half-year ending January 4th, 1853, of 178,122, and an increase of expenditure of £11,478 16s. 11d.; and over the half-year ending January 4th, 1850, there has been an increase in the number of miles run with trains of 597,087, and 106½ miles of railway worked with an actual decrease of expenditure of £10,800 0s. 1d., or at the rate per mile per train of 7.5906 pence, on the average of that half-year. The increase of mileage of the trains is due to the in-

crease in the mileage rate, which has been caused by the very large advance that has taken place in the price of all descriptions of materials, as well as of labor, to an extent even beyond what I anticipated at the date of my last report to you.

The cost per train mile for coke has also increased, not only from the advanced price but also from the difficulty in obtaining the required quantity, which has compelled the use of an inferior quality, as well as of a considerable proportion of coals, and consequently has increased the consumption per mile run by trains.

The large additional duty that has been performed during the half-year, in consequence of the greatly increased traffic, by and with the same amount of rolling stock, has also added to the cost of working, and renders it desirable that those engines which are now standing as "surplus engines," but which require considerable repairs to be done to them, should be repaired and taken into the working stock of the Company from time to time as they may be required.

Return of rolling stock, 31st December, 1853.

Locomotive engines—working engines—126	passengers, 56	goods, 18
Surplus engines—12	passengers, 18	goods, 3
Coaching—3	saloons, 193	1st class and composite, 6
Mails, 172	2nd class, 10	mixed class with breaks, 185
3d class and open excursions, 97	horse boxes, 82	carriage trucks, 63
passenger luggage vans, 6	Merchandise—6	milk, bread stores, and gunpowder vans, 2,585
goods, 718	sheep and cattle, 873	timber, coke, coal, and ballast, 22
lime, 68	breaks, 22	

1,064,424	680,928	1,745,352	1,567,230	1,353,374	1,208,204	1,148,265
-----------	---------	-----------	-----------	-----------	-----------	-----------

Average Cost per Train Mile.

Pence.	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.
1-5204	1-4682	1-9388	1-8873			
4525	2992	2778	5379			
6370	6245	6308	7112			
1627	1090	1455	2065			
3-0346	2-8329	3-0463	4-6684			
1756	2698	4202	4187			
5-9877	5-1345	5-9888	8-4815			
2-5656	2-5611	3-1382	4-8770			
1202	1329	1560	1487			
8-6735	7-8285	9-2830	13-5072			

1,5428	1,7914	2,1194	2,8486	3,7099		
--------	--------	--------	--------	--------	--	--

Cost of Carriage and Wagon Department.

1-5828	1-8357	2-1714	2-8992	3-7560		
--------	--------	--------	--------	--------	--	--

8-6735	7-8285	9-2830	13.5072	14-0909		
--------	--------	--------	---------	---------	--	--

creased length of railway worked, and to the increased quantity of traffic.

I am, gentlemen, your obedient Servant.

JOHN V. GOOCH.

Return of rolling stock, 31st December, 1853.—Locomotive engines—working engines—126 passengers, 56 goods, 18 surplus engines—12 passengers, 18 goods, 3 coaching—3 saloons, 193 1st class and composite, 6 mails, 172 2nd class, 10 mixed class with breaks, 185 3d class and open excursions, 97 horse boxes, 82 carriage trucks, 63 passenger luggage vans. Merchandise—6 milk, bread stores, and gunpowder vans, 2,585 goods, 718 sheep and cattle, 873 timber, coke, coal, and ballast, 22 lime, 68 breaks.

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.
WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their **SYSTEM OF LOCOMOTIVE ENGINES** in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture **Five different kinds of Engines** and several classes or sizes of each kind.

Particular attention paid to the strength of the machine in the plan and workmanship of all the details. Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowling Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

C. Floyd-Jones,

Division Engineer 3d and 12th Divisions.
 ILLINOIS CENTRAL RAILROAD.
 Vandalia, Ill.

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of

Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
 64 Courtland st., N. Y.

**To Railroad and Canal Co.'s,
Contractors, &c.**

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics, &c. of any description, and also to inform them that they forward such men to whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.
 No. 85 Greenwich street, New York.

New York and Erie R. R.**PASSENGER TRAINS**

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the B. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAT EXPRESS, at 12¼ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAT PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.

These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

CHAS. MINOT, Supt.

Railroad Iron.

2000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and "Crawshaw" manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by **P. CHOUTEAU, Jr., SANFORD & CO.,**
 December 4, 1852. No. 51 New street.

Duggan's Work on Bridges.

SPECIMENS OF THE

STONE, IRON AND WOOD BRIDGES, VIADUCTS, Tunnels, Culverts, etc., of the United States Railroads; illustrated by a series of drawings, from actual measurement of the works; including plans, sections, elevations, and details of each structure, and an appendix, illustrative of the art of bridge building, as at present practiced in Europe.

Illustrated With Numerous Accurately Engraved Drawings.

15 Numbers, 75 Cents, each.

*A few sets of the above work, may be had by applying to the subscriber.

JOHN WILEY, 167 Broadway.**Passenger Cars for Sale.**

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Railroad Letting.

PROPOSALS will be received by the undersigned at the Engineer's Office, Dover, Delaware, until March 14th, inclusive, for the Graduation, Masonry and Superstructure of the **DELAWARE RAILROAD**, extending from the New Castle and Frenchtown Railroad to Seaford, a distance of 70 miles, through a healthy region, and convenient to procure hands and supplies.

The work will be divided into sections of about 4 miles each.

Maps, profiles, and specifications will be ready for the examination of contractors, after the 1st of March.

Bidders personally unknown to the undersigned, will be expected to produce satisfactory evidence of their responsibility.

feb.18-tm14

D. H. KENNEDY,
 Resident Engineer.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

Sept. 7.

BOORMAN, JOHNSTON & CO.,
 90 Broadway, New York.

Notice to Contractors.

Office of the Milwaukee and Horicon R. R. Co. }
 Milwaukee, Wis., March 15th, 1854. }

PROPOSALS will be received at this office till the first day of May next for the construction of the second division of the Milwaukee and Horicon Railroad, from Horicon to Berlin a distance of forty-two miles or sections thereof.

Maps, profiles and specifications will be ready for the examination of bidders on and after the tenth day of April next.

JOHN B. SMITH,
 Pres't M. & H. R. R. Co.

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors' Compasses Manufactured on the most improved principle and of the Best Quality by **THOMAS HUNT,**
 No. 53 Fulton Street,
 New York.

1y10*

OFFICE OF THE CLEVELAND AND TOLEDO RAILROAD CO.—No. 18 William Street—New York, 15th March, 1854.—**DIVIDEND.**—

A semi-annual Dividend of 5 per cent. on the capital stock of this company, has this day been declared, payable in cash, at the office of the company, on and after the 5th April next. Certificates of stock in either of the late companies, (Junction, or Toledo, Norwalk and Cleveland,) will be required to be exchanged for certificates of this company, before dividends are paid. The transfer books will be closed from the 25th inst., to the 5th April.

By order of the Board of Directors,

E. B. LITCHFIELD,
 mh.17 1m. Treasurer.

Railroad Iron Via Quebec.

JOHN ANDERSON & CO.
 COMMISSION MERCHANTS,
 SHIPPING AGENTS AND BROKERS,
Quebec and Montreal.

PARTICULAR attention given to the Transhipment of Iron, &c., in Transit for the Western Lake Ports, and to the Shipment of Rails in Great Britain.
 Quebec, Dec. 2, 1853.

Notice to Contractors.

EUROPEAN & NORTH AMERICAN RAILWAY
 NEW BRUNSWICK.

PROPOSALS will be received by the undersigned at his office, Princess street, St. John, N. B., up to the 5th day of April 1854, for the entire construction of that portion of the Eastern Division of the above Railway extending from the crossing of the Road from Schediack to Dorchester to the Bend of the Petitcodiac River being a distance of about twelve miles, comprising the Grubbing, Grading, Masonry, Bridging, and the Ballasting and Laying of the permanent Road.

The work will be divided into two sections which, being adjacent to others to be proceeded with on their completion, is well worthy the attention of Contractors.

Proposals may be made for one or both sections and with or without the permanent Road and Ballasting.

Plans and Specifications will be ready for the inspection of bidders on and after the 5th day of March at the above office where all other necessary information may be obtained.

W. E. ROSE.

St. John, N. B., 27th Feb'y 1854.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,
 European, American Employment Office,
 287 Broadway, corner Reade-st.
 3t Under the Irving House, New York.

**THE
New Yorker Handels-Zeitung**

A GERMAN Commercial Paper, containing Prices Current, Market Reports, Exchange and Stock Rates, Shipping List and Correspondence from all parts of the world, appears twice a week in two separate editions, viz: one for home circulation, published each Wednesday and Saturday morning; the other for circulation in Europe,—the only German Paper published in the United States admitted to the German States—appears before the departure of each mail steamer for Europe. Terms:—The paper, per annum, at New York, \$5, for Germany, full Postage included, \$11, and for all other parts of Europe, the U. S. Postage inclus., \$8. Advertisements taken at liberal terms.

To Contractors.**PACIFIC RAILROAD OF MISSOURI,**

THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.

THOS. S. O'SULLIVAN, Chief Eng.

Pacific R.R. Office, St. Louis, Feb. 1854.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by
BOORMAN, JOHNSTON & CO.,
 90 Broadway, New York.
 June 9, 1853.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to
THOS. CHAMBERS, President,
 September, 1850.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.
VOSE, PERKINS & CO.,
 9 South William St.
 New York, June 1, 1851.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.
F. HUNGERFORD & CO.
 Mayeville, Ky., Sept. 29, 1853.

Stuart, Serrell & Co.,**CIVIL ENGINEERS,**

Rooms 22, 24, 26 & 27,
 157 Broadway, New York.

CHARLES B. STUART,
DANIEL MARSH,

EDWARD W. SERRELL,
SAMUEL MCLEROY.

Railroad Iron.

3000 TONS superior quality, delivery from April forward, with 5 to 600 tons per month, for sale by
NAYLOR & CO.,
 99 & 101 John street
 12th

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by
JOHN H. HICKS,
 90 Beaver street.
 2d Feb'y.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars. Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West.
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. **WINSLOW, LANIER & Co.**
 feb. 18. 1m.

To Railroad Engineers and Contractors.

WANTED, a corps of efficient Engineers and Contractors, for the construction of a Railroad in one of the Southern States. Apply to
DUFF GREEN.

New York, Feb. 14th, 1854.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
 Superintendent.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the **BELLEVILLE IRON WORKS**, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 800 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work; generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,

No. 61 Camp Street,
 New Orleans;

and further information may be had by applying to Messrs. **BARSTOW & POPE**, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
 17 Burling Slip, New York.

February 16, 1850.

SHANAHAN & LOEBER,

181 William-st,

(1st floor—Up Stairs.)

NEW-YORK.

MANUFACTURERS OF

THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
 Chains, Scales, Levelling Rods, &c. 1y10

Notice to Contractors.

MEMPHIS & OHIO RAILROAD.

SEALED proposals will be received at the office of the Memphis & Ohio Railroad Company, at Memphis, Tenn., until the 15th day of April next, for the grubbing, clearing, gradation, and masonry of the first 65 miles, from Memphis to Cherryville.

Contractors must give the most undoubted security for the completion of the work at the time, and in the manner specified; and contracts will be let in sections, or for the entire work, as may be deemed best by the Directors.

The Directors reserve the right of rejecting all bids, should none prove satisfactory; and it is desirable that all propositions should be submitted, with the view of preparing the whole work for the iron as soon as possible. Bids of that character and otherwise equally favorable, will have preference.

Maps, plans and specifications may be seen at the office of the company, after the first of April.
E. PEABODY,
 Engineer in charge.

To Contractors.

SEALED PROPOSALS will be received at the office of the undersigned, in the city of St. Louis, until Thursday, March 30th inst., for the Grading and Masonry on the **ST. LOUIS & IRON MOUNTAIN RAILROAD**, extending from St. Louis to the Pilot Knob Mountain, a distance of 87 miles, (except sections Nos. 1, 2, 3, 4 and 6.)

Plans and profiles will be ready for inspection one week previous to the letting.

This line is located through a remarkably healthy region of country. The work to be let embraces a tunnel through solid rock, heavy earth and rock cuttings, and various descriptions of masonry. Payments monthly in cash.

Further information may be obtained on application to either of the undersigned, or to the Engineers at the office of the St. Louis and Iron Mountain Railroad Company in St. Louis.

WM. M. WATTS,

Carlisle, Pennsylvania.

CHAS. N. WATTS,

St. Louis, Missouri,

W. MILNOR ROBERTS,

Pittsburgh, Pennsylv.

St. Louis, March 2, 1854.

Knox & Shain,

MANUFACTURERS OF

LEVELS, TRANSITS AND SURVEYING COMPASSES.

No 72 Dock st. first door south of Walnut, west side
PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

H. SAWYER

(of the late firm of SAWYER & HOBBS),

Manufacturer of Transits and Levels

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X, No. 13]

SATURDAY, APRIL 1, 1854.

[WHOLE No. 937, VOL. XXVII.

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Blue Ridge Railroad.....	193
The Economy of Railroads, as affected by the Adaptation of Locomotive Power.....	193
Syracuse and Binghamton Railroad.....	198
Journal of Railroad Law.....	199
Stock and Money Market.....	200
Cleveland and Toledo Railroad.....	200
Delaware and Hudson Canal.....	200
Terre Haute and Alton Railroad.....	201
Breakage of Railroad Axles.....	202
New Locomotives on the New Jersey Railroad.....	202
Buffalo, Corning and New York City Railroad.....	203
New Orleans and Mobile Railroad.....	203
Railroads of Maine.....	203
Mobile and Ohio Railroad.....	204
Indiana and Fremont Railroad.....	204
Crystal Palace.....	205
Chicago and Mississippi Railroad.....	205

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, April 1, 1854.

Blue Ridge Railroad.

Pendleton, S. C., March 21st, 1824.

Editor R. R. Journal.

It may be interesting to your readers to know something in reference to the Blue Ridge Railroad of South Carolina. It commences at Anderson, S. C., where it intersects the Columbia and Greenville Railroad (leading to Charleston) and terminates at Knoxville, Tenn. The line of road leads through a country unsurpassed for agricultural and mineral wealth, and opens to the ocean an outlet for a rich though land-locked country. It opens a new outlet for the mighty West, and develops a section of country of great fertility and richness. The following table of distances indicate, in a measure, the relative importance of this road to the West, in affording it an Atlantic outlet for its produce.

From Cincinnati to New York	800 miles.
" " " Philadelphia	766 "
" " " Baltimore	740 "
" " " Richmond and Norfolk	735 "
" " " Charleston	644 "

Cincinnati is a starting point at the North, least favorable to Charleston. The distances above enumerated are to the sea at each of these ports.

	To Cairo.	To St. Louis.
From New York.....	1,150	1,180
" Philadelphia.....	1,005	1,035
" Baltimore.....	930	960
" Norfolk.....	1,050	1,080
" Charleston.....	797	897

It will be seen by the above tables, that Charleston may become the great entrepot for western produce moving seaward by virtue of having the shortest and cheapest line.

The Blue Ridge Railroad Company have ample cash means to construct their road. The following subscriptions have been secured, although the citizens of Charleston, who are so deeply interested in the success of the road have not yet been called upon to subscribe.

Tennessee, State, County and private subscription \$1,500,000. City of Charleston \$1,049,000. State of South Carolina \$1,250,000. Private subscription in the State \$200,000. Total \$3,999,000. This road will ultimately be continued to Aiken, S. C., where it will intersect with the South Carolina Railroad forming nearly a direct line from Cincinnati, O., Louisville, Ky., and Knoxville, Tenn., to Charleston. From Clayton Geo, a point on the Blue Ridge Road, a line is projected to Atlanta, where it will intersect with the Montgomery and La Grange Railroad, forming nearly a direct line from Cincinnati, and Louisville, to Mobile, New Orleans and the Gulf Ports. New York will be vastly benefitted by this connection as it will afford it the most direct line to Mobile, New Orleans and Southern Cities, via Richmond, Va., Salisbury, N. C., Chesterville, Newberry, Anderson, S. C., Clayton and Atlantic Geo.

The vast importance of the Blue Ridge Railroad, as a connecting link, and as a means of development of the immense wealth of the southern and western country, may be readily inferred by consulting its locality. Every branch of southern and western trade will be augmented, internal improvements will receive a great impetus, and Charleston, now deprived of the commerce to which her locality entitles her, will become the great depot for southern and western trade.

The *Economy of Railroads, as Affected by the Adaptation of Locomotive Power—Addressed to the Railroad Interests of New England.*

BY ZERAH COLBURN,
Mechanical Engineer.

Introduction.

As a mechanical expedient, railroads were adopted to reduce the power required for locomotion. If they could be worked without any power, the cost of transportation would be no more than would pay the interest on the permanent investment, and the cost of attendance. The permanent investment, or first cost of a railroad, is often made very great to enable it to be operated with a moderate expenditure of power, and this policy of construction is sometimes adopted where prior investments have been made with less reference to the economy of power.

Had the original roads been built, both in alignment and in grade, on air lines, there could be no excuse for competing roads. As the case stands, however, many important roads, built at great cost, are threatened with competition. The pretext for competition, is, that the original road does not accommodate the business; being incapacitated either by sinuous route, and consequently, increased distance; or by severe undulations, involving an unproductive expenditure of power.

Before such considerations should operate against a road already built, such road should possess the best application of power, such as would overcome its natural obstacles in the cheapest manner.

The object of the present essay is to make a comparison between the different systems of motive power, in use on New England and on other railroads; to exhibit the principles which govern the economical application of power, and to suggest means, which, without change of route or hazard of income, will enable the leading New England roads to reduce, very much, the cost of the principal branch of their transportation.

The author is well aware that the strongest prejudices exist against any important change in the working machinery of New England roads; but while he will endeavor to disarm prejudice by argument, he will feel bound to accord proper respect to the experience of New England Mana-

A. B.

gers. Massachusetts, especially, has been foremost in the introduction and extension of railroads, and at the present moment, by participation or example, controls a large share of railroad operations throughout the country. But while this experience will receive due respect, its character will be analysed, and a proper distinction made between that of a mercantile and other of an engineering nature. In the mechanical engineering of railroads, especially the admissions of those, who, by position, should control that department, exhibit a singular disregard of its importance. They have practically assumed that the railroad system was *perfected*, and nearly cotemporary with its introduction.

This assumption has necessarily prevented development, while, in the meantime, other channels, offering better facilities, have drawn away the immense foreign business, for whose control many of the New England roads have been built.

The object of New England capitalists, to participate in the western trade, is indicated in the active competition which has prevailed in the construction and management of the works already built, and in the appearance of a new project, involving great cost, and an engineering undertaking of doubtful character, to accomplish the end set forth.

To develop the capacity of existing roads is a very interesting problem, and its achievement will reduce the cost of movement, thereby leaving the door open for low fares, the surest preventative of competition. Beyond the direct advantages thus secured to railroads, new facilities and encouragements would be given to trade, perhaps sufficient to engage the attention of the commercial interests, for whose advancement the railroad system of New England has assumed so complicated and expensive a character.

OBJECTS AND RESULTS OF RAILROADS.

There is often more difficulty in showing the *need* of an improvement than in effecting it. In cases where the means of improvement rest upon a known basis of action this is indeed very generally the case. Men who have perseveringly cherished brilliant schemes of usefulness have often failed to execute them, not from any inherent difficulty in the proposed means, but that they were not appreciated. The reason is simply that the popular mind can easier appreciate results than processes. This is so universally the case that but few of the great inventions which have marked the present age would have probably been in use had not the inventors themselves worked out and realized their own ideas.

In a case, therefore, where a person without professional reputation or monied influence, having never been known in connection with the construction, management or ownership of railroads, comes forward with a system for working them with greater economy than at present, it will require a strong argument on his part to "make out a case" of the necessity, even, of improvement.

I shall endeavor, nevertheless, to show that the railroad interests of New England sustain large and constant losses owing to an imperfect adaptation of locomotive power. I shall endeavor to account, from this fact, for the want of success of some of those roads, in doing any other than a local business; and shall notice the unsettled state of the public mind in Massachusetts with reference

to her railroad connections with the West,—a feeling which is only that of dissatisfaction with the results afforded under the present system.

The object of an investment is a return. This may be either direct or indirect; direct in the form of a dividend, and indirect when the result is the improvement of real estate, or access to market for such commodities as would not otherwise pay a profit after transportation. The parties making the investment, however, are not the only ones in interest. All who furnish or receive the increased trade, or who participate in any way in any of the benefits conferred; or those who by their position feel entitled to receive benefit therefrom, are also interested in the result. The interest of the proprietors of a railway is high dividends, while of most others it is low fares. To harmonize these interests is a problem both in the construction and management of roads, requiring probably more skill in the latter respect than in the former. Where the proprietor's interests are made paramount to those of the public, the latter have a resource in the construction of competing works.

The early history of railroads has been generally prosperous. This fact has tended to avert reflection on the hazards of railway investments, and to supply capital faster than it could attract business. The results of overdoing are competition, division of profits, increase of tolls, and eventually a loss of capital. Many roads in New England, by their present position, are immediate illustrations of these results.

Railroads may be unprofitable from two causes. First, from a disproportion between the movement to be accommodated, and the permanent investment made for its accommodation; and second, a disproportion between the *cost* and the *charge* of movement.

If a railroad under prudent management fails to pay a fair profit after any considerable period of operation, the cost has clearly been too great, and if no part of it could have been saved it must, as an independent investment, have been premature and perhaps unwarranted altogether.

In cases, where the first named disproportion exists the second is almost sure to follow. If the annual gross earnings fall short of an ascertained per centage on the original cost of the work, then the operating expenses will be disproportionate to the whole receipts, thereby subjecting the capital expended to a double loss. This result follows by reason of the constant expenditure for taxes; for repairing the natural decay of certain portions of the work and of the equipment; for a considerable portion of repairs of track and machinery due to running the engines and a portion of each train; for salaries; for a considerable portion of train expenses, and for other unavoidable charges which are independent, or nearly so, of the amount of business done.

The disproportion between movement and investment may come from too small a movement compared with the road, or from too many roads compared with the movement.

The second disproportion named, that existing between the cost and the charge of transportation, may come from doing the business at less than fair prices, either to sustain competition or to encourage the movement over the road. Or, it may come, with fair charges, from an *extravagant ap-*

plication of power, or from any other wasteful system of expenditure.

It is from these reasons that railroads built where not needed are worked under a double disadvantage; as their expenses per ton or per passenger are greater from the causes named, while an inducement exists to put the charges below ordinary paying rates in order to attract a business.

Railroads are often projected, and frequently built, where no business exists proportionate to the investment; a prospective business being relied on. But such business, beyond a certain extent, involves an increased investment. The principal Massachusetts railroads have increased their cost largely by outlays for increased business. Where the increase of business has exceeded that of the construction account, the equilibrium of profit has been maintained by reduced charges, a result often made necessary through competition.

The tendency of railroad operations is to place these works on a level with other kinds of property. As the conditions involved in their construction and operation become known, money will not often be *hazarded* upon them, and such roads only as are needed will be built. Beyond a certain point, railroads, like other investments carried to a similar extent, cease to confer real benefits. The best and surest roads are those in new countries, where all existing business can be controlled, and where the roads become instrumental in developing new business. The poorest investments of this kind are in occupied districts, where competition has already reduced the profits, and a new work becomes a new competitor.

Admitting these conditions as sound, a *par* railroad investment in New England should earn from 12 to 15 per cent. gross, annually; about one-half of which should go to expenses. Experience furnishes aid in establishing fares and tariffs so as at the same time to attract business and to make it productive, while good management keeps down the expenses to a standard of about one-half. This standard of operating expenses, however, so often appealed to as necessary, depends upon the circumstance of the cost of operating, and the interest on the whole cost of a road being about the same. Any amount of gross earnings, which will more than pay the expense of operating and the common rate of interest on the property, can only be regularly maintained by the aid of adventitious circumstances, or by legislative protection. To preserve this result under ordinary circumstances, is, however, a delicate test of good management; and, if for long periods, of a general healthy sentiment in regard to railroads.

THE ABOVE GENERAL CONSIDERATIONS AS APPLIED TO MASSACHUSETTS RAILROADS.

In designating the situation of railroads, those which owe their projection and construction principally to Massachusetts capital and influence, and those whose objects are based upon the commercial and manufacturing movements within that State, will be included in the general title of Massachusetts railroads.

This State presents the most elaborate and complicated railroad system to be found in this country, and by capital and connection, has organized and controlled the railroad interest in several other States.

These roads have been principally made to se-

cure two objects, viz: the development and accommodation of local traffic, and the participation in a foreign trade. The first was the primary object of the earlier roads. The coincidence of a portion of these lines with the direction of movement of the foreign business, caused their ultimate extension by other lines, having both of the above objects.

Many of these roads, the earlier ones especially, have passed through three different and distinctive periods of existence. The first was when, in their early operation, they had not yet secured a profitable business; when doubts of their value as investments, or of their capacity as channels of communication, were entertained. The Lowell road was built, principally, upon the encouragement of proprietors of land and water power, requiring for their productions, an access to market. The net income of this road was once estimated, upon the best means of information, at about one-sixth of what it has actually amounted to in later years.

The Concord Railroad, a link in the northern extension of the Boston and Lowell, was not for a long time commenced, even with the offer of a liberal bonus from proprietors of land and water power, lying upon its line.

The Boston and Worcester road, in its early history, was proposed to be leased at an annual rent of \$15,000. The interest on its present cost would be nearly twenty times this sum.

The Western, Nashua and Lowell, and New Bedford roads, were only finished upon the strength derived from State aid.

The second period of existence was one of signal success. Many of the roads, having created a large business, and enjoying a temporary monopoly thereof, paid dividends beyond all previous expectation. Where Boston and Worcester stock had been at 65 per cent., by the commencement of the year 1846, it stood at 114. Boston and Maine, once at 50, sold at the same time at 111. Boston and Lowell, once at 82, had risen, in 1844, to 128. So of other roads; Boston and Providence sold, in 1846, at 111; Fitchburg, at 120; Concord, at 134½, and other railroad stocks at liberal premiums.

At the same time, while established roads were enjoying an enviable prosperity, other works of the same kind, then incompleting but promising to be of equal importance, were struggling against doubt and difficulty. The Western Railroad stock, once at 40 per cent., had risen, in 1846, to but 85 per cent., although since that time, while other railway property has depreciated, it has risen to above par, at but little below which standard it now remains.

The third, and present, stage of railway property in Massachusetts, is generally less profitable than it was in the intermediate stage of general success. Competition, both within and without the State, has divided the former business; while the natural increase of local business arising on each line, has required generally a proportionate increase of the permanent investment for its accommodation. The increase of business, so rapid for a considerable length of time, did not, at once, involve its corresponding expense. This fact was the result of the use of all of the original structures and equipments of these roads, and of the operation of the roads with a number of trains

less, in proportion to the business, than formerly. As time showed the original establishment to be insufficient, increased cost, both for construction and operation, was incurred.

From the first, the projectors of these roads aimed at a return, direct in its nature and as substantial as would be expected from any legitimate business, not involved in unusual hazard. The public, generally, expected extraordinary returns. This expectation, after a certain period in the operation of railroads, became realized, and the certainty of similar and continuous results, became a popular sentiment; entertained as well by those who had only a general interest, as by others, who by investment, had a particular concern in its correctness. There were many men who took railroad stock to secure the construction of works likely to benefit their property; there were others, of ample resources, and of prominent public influence, who became identified with the system to aid in a public benefit, and especially to promote the prosperity of Boston, with which much of the general welfare of New England is connected. There were those, also, who, looked upon as *leading* men, took stock to inspire the confidence of others.

The new facilities afforded for the exchange of natural products, brought land, before unoccupied, into market, and attracted labor to make it productive. Investments followed in general business operations, in farming, lumbering, quarrying, brick making, tanning, and in other channels of industry. Manufactures, induced by the cheapness of transit of their raw material and finished productions, sought water power, cheap food, fuel and labor, in places comparatively remote. There was a wide and deep seated interest in railroads, extending, as must all the results of public conveniences, far beyond their immediate ownership.

To harmonize the interests of those who supplied and those who used the railroad facilities, was the problem which presented itself to the managers of the New England, as well as to any other, system of roads. "Extraordinary dividends" were to harmonize with "extraordinary facilities," and the result, of course, had to be a compromise between the two. It was the belief that both could be greatly increased that led to the great expansion of the system.

The results of the operations of this system have generally fell short of the early expectations. The roads within Massachusetts are earning, upon an average, hardly the interest upon their cost. And the extension of the system into New Hampshire and Vermont has been generally unprofitable, up to the present time.

The principal reason why railroads in the agricultural districts of New England have proved unproductive, when not sustained by ample business from connecting roads, is the great disproportion between the permanent investment and the movement of persons and property who avail of its accommodations. This disproportion has been the more strongly defined from the greater cost of many of the items of the construction of these roads, as compared with others nearer Boston, and built upon easier ground. In the item of graduation, masonry and bridging, this disproportion is enhanced against the interior roads. The following statement, comprising roads of each class, exhibits this fact:

Cost, per mile, of Graduation, Masonry and Bridging.

Boston & Lowell, 28 miles, double track,	\$15,186
Boston & Maine, 83 " "	16,000
Boston & Worest. 69 " "	14,517
Western, 156 " "	29,434
Fitchburg, 66 " "	13,658
Cheshire, 54 " single	28,225
Vermont & Mass, 77 " "	21,565

The two single track roads, costing more per mile than any of the other roads named, excepting the Western, are the most unproductive of the whole.

The disproportion referred to must always fall heaviest on interior roads. First, because the population and surplus products upon their routes are comparatively sparse; and second, because of their increased distance from the common market, they cannot so well afford the charge for transportation. The average of individual wealth is lower than in the neighborhood of cities, and so is also the average value of the tonnage of surplus products. From the fact, too, that by the comparatively greater cost and diminished business of these roads, their passenger fares and freight tolls are also at a higher rate per mile, the movement is retarded in an increased proportion.

If efficient railroads could be built and operated at a cost corresponding with the business which they are destined to accommodate, the system could be widely extended. Were this principle developed to an extreme, remaining exact in such an application, a railroad could be built to *every man's door*. As it is, however, a large proportion of the expenses of the construction and operation of railroads, are in a measure independent of the business to be accommodated.

It seems to be well settled that no railroad can be built and put in working condition, in New England, for less than \$25,000 per mile, while the average is much higher, probably above \$45,000. To support this cost, with that of operating, every mile must furnish a business yielding a gross fare of at least \$6,000 per annum. The movement, through a town six miles wide, must pay \$36,000 a year; or, upon a general average, the road must become unprofitable.

Railroads, therefore, require a concentration of population and business for their support, and if a business, paying double the interest on the cost of the road, does not exist, nor cannot exist, upon the line of any road, such road must be worked at a loss.

These general considerations are given merely to account for the results developed in the operation of railroads in New England, and to show how entirely independent is the movement from the management. The exigency of a railroad must depend upon the amount of business to be done; the profit depends upon this issue and also upon the cost of doing the work.

The question of the exigency of a road is of more importance in its results than that of the cost of working, since the amount of business done affects the cost of operation.

The following table exhibits the cost of some of the leading roads in Massachusetts, together with the movement thereon during the official year of each, ending (with the different companies) at different times in the year 1853.

(P designates passengers and F tons of freight moved.)

Name of Road.	Length without branches.	Total Length.	Cost.	Cost per Mile.	Movement one mile for year 1853.	Movement for each mile of total length.	Movement each mile from other roads.	Movement each mile from own road. (Local.)	Movement per \$1,000 of cost, per mile.
	Miles.	Miles.							
Western.....	156	156	\$9,953,259	\$63,803	P. 27,488,944 F. 28,153,554	P. 176,211 F. 180,471	106,708 134,190	69,508 46,281	P. 2,762 F. 2,829
					55,642,498	356,682	240,898	115,784	5,591
Boston and Worcester.....	45	69	4,850,755	70,301	P. 24,700,512 F. 11,577,498	P. 357,978 F. 167,790	186,094 186,968	divided on 45 miles.	P. 5,092 F. 2,386
					36,278,010	525,768	373,052		7,478
Boston and Lowell.....	26	26	2,044,536	73,019	P. 9,576,208 F. 7,542,574	P. 342,007 F. 269,377	71,180 150,797	270,827 118,580	P. 4,685 F. 3,690
					17,118,782	611,384	221,977	389,407	8,375
Boston and Maine.....	74	83	4,111,346	49,534	P. 27,426,685 F. 8,066,170	P. 330,442 F. 97,183	129,851 34,415	200,591 62,768	P. 6,675 F. 1,963
					35,492,855	427,625	164,266	263,359	8,638
Boston and Providence.....	44	56	3,576,041	63,858	P. 11,150,038 F. 4,712,754	P. 200,000 F. 84,156	90,000 23,938	110,000 60,218	P. 3,135 F. 1,319
					15,862,792	284,156	113,938	170,218	4,454
Fitchburg.....	51	68	3,716,870	54,660	P. 17,314,206 F. 12,180,140	P. 254,621 F. 179,120	98,704 119,477	155,917 59,643	P. 4,663 F. 3,281
					29,494,346	433,741	218,181	215,560	7,944
Eastern.....	38	58	3,120,392	53,800	P. 14,710,581 F. 2,774,307	P. 253,631 F. 47,833	35,588 16,650	218,043 31,183	P. 4,714 F. 889
					17,484,888	301,464	52,238	249,226	5,602
Cheshire.....	54	54	3,075,195	56,948	P. 4,492,813 F. 8,748,987	P. 83,200 F. 162,018	68,434 141,595	14,766 20,423	P. 1,462 F. 2,848
					13,241,800	245,218	210,029	35,189	4,310
Vermont and Massachusetts.....	69	77	3,456,314	44,897	P. 2,801,939 F. 2,138,869	P. 36,388 F. 27,777	21,570 24,050	14,818 3,727	P. 810 F. 619
					4,940,808	64,165	45,620	18,545	1,429
Connecticut River.....	50	52 lease 23 75	1,802,245	34,659	P. 4,361,426 F. 2,368,864	P. 58,152 F. 31,585	divided upon 75 miles.	The whole movement probably 125,000 for each mile of main road.	P. 1,676 F. 911
					6,730,290	89,737			2,587
Fall River.....	42	42	1,050,000	25,000	P. 7,453,708 F. 2,818,595	P. 117,470 F. 67,109	164,537 58,110	12,933 8,999	P. 4,698 F. 2,684
					10,272,303	244,579	222,647	21,932	7,382

The following roads may be taken in comparison with the foregoing.

Name of Road.	Total length in miles.	Cost up to the end of 1853.	Cost per mile.	Total movement one mile for year 1853.	Movement for each mile of total length.	Movement per \$1000 of cost per mile.
New York and Erie.....	469	\$31,222,834	\$66,570	Pass. 98,432,361 Frt. 101,626,522	Pass. 209,877 Frt. 216,687	Pass. 3,151 Frt. 3,254
				200,058,883	426,564	6,406
Baltimore and Ohio.....	330	20,708,028	54,495	Pass. 17,338,572 Frt. 29,791,463 Coal. 51,724,761	Pass. 45,623 Frt. 78,399 Coal. 136,118	Pass. 837 Frt. 1,438 Coal. 2,497
(Main stem only) opened throughout during the year.				98,852,796	250,140	4,772
All New York Railroads.....	2,432	117,707,621	48,400	Pass. 531,572,298 Frt. 246,554,492	Pass. 218,574 Frt. 101,380	Pass. 4,516 Frt. 2,095
				778,126,790	319,954	6,611

The Reading Railroad had 242 $\frac{1}{2}$ miles of single track at the close of 1852. Its nominal length is 95 miles. Cost \$17,141,987 or \$180,442 per mile. During the year 1853, 370,525,798 tons of passengers, general freight and coal, including cars, were carried one mile. Allowing one-half of this amount for weight of cars, (probably a little more than one-half) we have 185,262,899 tons and passengers one mile, or 1,950,136 for each mile of the road. The "movement per \$1000 of cost per mile," is the real test of the productiveness of railroad stocks. Yet this depends upon the nature of the movement, whether it be of property or persons; whether it be that of suburban residents, through

travellers, valuable freights, agricultural products, coal, or other assessable material. It is evident that these different sources of income are profitable in different degrees. Some travel, as well as some freight, will not bear high charges, so that the character of the movement upon a railroad must always be regarded in any estimation of revenue.

It may be said that the kind of freights carried on New England roads pays higher per ton than the single passenger for the same distance. While of the passenger business, those roads which enter the city of Boston generally have a large proportion of commutation travel at low rates.

Taking, however, the tonnage and travel upon the New England roads mentioned in the table, and averaging an indiscriminate charge equal to 12 per cent. on the cost of road, (6 per cent. being for operating and an equal per cent. for dividends,) we shall have the following result.

Name of Road.	Movement per \$1000 of cost per mile.	Rate in cents per mile to pay \$120 on \$1000.
Western.....	5,591	2-14
Boston and Worcester..	7,478	1-60
Boston and Lowell....	8,375	1-43
Boston and Maine.....	8,638	1-39
Boston and Providence.	4,454	2-69
Fitchburg.....	7,944	1-51
Eastern.....	5,603	2-14
Cheshire.....	4,310	2-78
Vermont and Mass.....	1,429	8-39
Connecticut River.....	2,587	4-62
Fall River.....	7,382	1-62

By this scale of prices per ton and per passenger per mile, all of these roads, with good management, would pay 6 per cent. dividends, if all of them could retain their present movement. As it is, the paying roads get more than their rates, corresponding with their movement in the above table; the others get less.

It will be seen that the Boston and Maine should charge the lowest fares; the Boston and Lowell next; Fitchburg next; and Worcester and Fall River roads afterwards. The Cheshire requires fares just twice those of Boston and Maine; the Vermont and Massachusetts six times as much.

It will be seen, however, on looking in the table of cost and movement for the several roads, that the larger part of the movement upon the Western, Cheshire, Vermont and Massachusetts and Fitchburg roads is received from, or given to other roads. So that although the whole movement on a portion of these roads is large, but a small part is local. For all other business, originating on the western side of the Green Mountain range, these roads have sharp competitors in the New York railroad and water lines. The retention of the full amount of their present foreign movement will therefore depend upon the extent of their competition in reducing charges.

In New York, railroads must earn 13 per cent. gross, to pay an interest dividend, with the same operating expenses as in New England. Their ability to operate for six per cent. of cost of road will be discussed hereafter. With the present movement of the Erie road the charge per mile would be 2-03 cents, earning 13 per cent. on cost.

The Baltimore and Ohio road cannot be properly included in a comparison of the results of trans-

portation with New England roads, as it was only opened throughout during its last official year; its departments not having had the necessary time to become fully organized; its expenses increased by items for which discrimination could hardly be made between operating and construction accounts; and it being even at the present time deficient in connections for its growing through business. Besides being without its proper connections, it has none of the commutation travel of which Boston roads can do so much on so little capital, and its heavy freights are such as must be transported for long distances, and as will bear at the best but low charges. Yet as I shall refer in frequent cases to the operating system of this road, I will not shrink to put its last year's business in comparison with that of eastern roads. This road, upon its last year's business, would have earned 12 per cent. gross, at charges of 1½ cents per ton per mile on coal, and 3-6 cents per ton of general freight and per passenger for the same distance.

The Reading Road to have earned 12 per cent. gross in 1852, would have charged 1-11 cts. per ton and per passenger per mile.

The relation between investment and movement is so directly involved in the subject of competing roads that a few words will be devoted in their consideration.

The movement upon a number of roads, all of which have been for several years in operation, has been shown. On many of these lines the movement is insufficient to pay interest and cost. Those lines which have been built to participate in foreign business, the western business especially, have failed of that object, while but few have been enabled to sustain themselves on local traffic. The Western Railroad has had the advantage of several years of operation. In its earlier history it was an unprofitable enterprise, but soon after, being in advance of any similar work built to carry trade to New York city, it received a heavy accession of business and afforded satisfactory returns. In the mean time, it had opportunities to increase its local trade; upon which, with its share of the through travel over the railroad line between the cities of New York and Boston, it now principally relies. Its western business, assailed by competition from without the State of Massachusetts, has fallen off to a very great extent.

Year.	1st Class. Pass.	2d Class. Pass.	Total. Pass.	Tons Freight going eastward.	Barrels of flour included in Tonnage.
1842.....	15,890	2,680½	18,570½	85,986	129,366
1843.....	19,987	6,608	26,595	129,366	154,413
1844.....	17,016½	7,314	24,330½	129,366	181,796½
1845.....	18,401½	6,791	25,192½	129,366	181,796½
1846.....	21,088	8,799½	29,887½	129,366	181,796½
1847.....	28,678	10,621½	39,299½	129,366	181,796½
1848.....	21,647	12,084	33,731	129,366	181,796½
1849.....	20,440	13,311	33,751	129,366	181,796½
1850.....	28,678	11,744½	40,422½	129,366	181,796½
1851.....	28,074	10,897	38,971	129,366	181,796½
1852.....	29,946	6,487	36,433	129,366	181,796½
1853.....	31,804	6,363	38,167	129,366	181,796½

* For 11 months.

The through business of passengers, both ways, and of freight going eastward for each year since 1842 is given in the company's reports as above.

It will be seen that more than one-half of the through tonnage eastward has been of flour; a species of freight which has avowedly been always carried, by an established policy of the company, without profit. Addison Gilmore's doctrine was to carry flour at rates that would starve off the coasters, and to make the deficiency good on other freight, generally local.

Had not the best portion of the Western Railroad been in use since 1849 for the through travel over the "land route," its earnings would probably now show a loss, when compared with those of former years. Giving it the most favorable view it cannot be said to have accomplished the great object for which it was built.

Hence, if outside competition has defeated the purpose of such an enterprise, what would internal rivalry accomplish in addition? Suppose a road to have an annual movement of persons and tons numbering 5,000 per \$1000 of its cost, what would be gained by a competing line, of equal cost, if the whole movement were increased to 9000, or even if it were doubled. The local support of such a line, for instance, not being greater than that of the Vermont and Massachusetts road, which taxing the through business at the same rate, must receive six times what its facilities are worth to enable it, in the language of its President, "to earn a living."

I know very well what will be said of the "grades and curves" of the Western railroad, and it will be my purpose to examine the effect of grades and curves generally, and to show in what manner they are surmounted, in their worst aspects, on other roads which receive but one half the toll per mile for heavy freight now paid to the Western road. This examination will be continued in nearly every subsequent section of this essay.

There are always temptations to competition. Local feelings, sensitive to neglect; whole townships of unopened land, having perhaps but little to give when canvassed; commercial disappointment at "insufficient facilities," or perhaps a other times the jealousy of neighbor capitalists,—all tend to supply capital for railroads faster than they can attract business.

The Boston and Lowell Railroad even, with its capital of nearly two millions, raised up a rival in giving a single cause of individual dissatisfaction. The people of Lowell, by the result, have the command of two routes to Boston, with nearly double their former number of trains, and the introduction besides of the new feature of package tickets.

Of all railroad competition experience has shown that carried on in thinly settled or unproductive districts to be the most ruinous. The causes are obvious;

Fewer patrons for the use of the road;
Lower average of individual wealth;
Lower average value of surplus tonnage;
Increased distance to the common market;
Necessarily higher rates of fares and tolls per mile;

Absence of commutation travel.
Comparative absence of commercial inducements to travel, and often increased cost for construction.

The difficulty of attracting a large through business away from a short, safe and commodious water route, flanked also by railroads of easy grades and alignment, is another obstacle, sufficient to employ the energies of one road, now worked, as will be shown, far below its capacity; without employing a large additional investment to divide a lean business.

New Railroads in occupied districts, labor, to an extent, under greater disadvantages, apart from competition, than did the earlier roads. The original roads were opened, many of them, at a low cost, and could then command business at high rates of fare. With the increase of business their construction accounts have increased also, but not in equal ratio, the earnings, which at former rates would have overpaid the interest on the investment, having been regulated by lower fares. The cost and annual income of the Boston and Worcester road have both been trebled since 1840, while the movement of passengers and tonnage has increase nearly ten fold. The freight carried over this route in 1840 was 32,000 tons. In 1853 it had reached 309,715 tons. Hence, although the money-value of the investment is no greater now than in earlier times, its usefulness has been greatly increased—that is, it affords accommodation, in proportion to its amount, to three times its former business.

The disadvantage sustained by a new road is that this proportion of usefulness is expected from it, before it has had time to create its business. In cost, it must approach that of first class works which have become first class only through the greatly increased support they have received. In compensation it must be affected by the example of older roads which have been enabled to do a great business at a comparatively low cost.

To be continued.

Syracuse and Binghamton Railroad.

Below we give a report prepared by Wm. H. Swift, Esq., Pres't of the Western Railroad of Massachusetts, formerly Pres. of the Philadelphia, Wilmington and Baltimore Railroad, in reference to the business capabilities of the Syracuse and Binghamton Railroad (addressed to a person interested in the same.) In all such matters, the opinion of no person in this country is entitled to greater consultation, nor will command more attention than that of Mr. Swift.

Report of William H. Swift, Esq., of Boston, upon the route, connections, resources and prospective income, of the Syracuse and Binghamton Railroad.

Dear Sir:—At your request, I have examined the Report made by W. B. Gilbert, Esq., the Chief Engineer of the Syracuse and Binghamton Railroad Company, (May 31, 1853,) and a communication of the President and Directors of said road to the stockholders, (Nov. 1, 1853.) I have seen also the Map and Profile of the line as located, and have conversed with Mr. Gilbert, the Engineer, and received from him such information and explanations in regard to said line as would enable me to understand, generally, the more important characteristics of it, as well as some of the details of the project.

A glance at the map of the United States will be sufficient to show, strikingly, the importance of this line of communication lying in a direction nearly North and South, it connects immediately, the three great avenues of the State of New York, running from East to West, viz.: the Erie Canal, the New York and Central Railroad, and New York and Erie Railroad, all extending from Lake Erie to the Hudson river. From Syracuse, by means of the Syracuse and Oswego Railway and

the Syracuse and Oswego Canal, 36 miles, the line of the Syracuse and Binghamton Railway is extended to Lake Ontario at the important town and harbor of Oswego, and at last named place, opening to the navigation of all the great Lakes in the West, to the Canadas, and to the River St. Lawrence.

At the southern extremity, Binghamton on the Susquehanna river, and the New York and Erie Railroad, the line forms a connection by means of the Delaware, Lackawanna and Western Railroad, (now opened to the coal fields,) with the great Lackawanna coal fields of Pennsylvania, near Scranton, some 60 miles from Binghamton, and thence either to New York, 125 miles, through the Delaware Water-gap and by the Central Railway of New Jersey, or to Philadelphia 146 miles via the Water Gaps, Easton and Philadelphia Railway, thus, according to the Report of the Directors, effecting a saving of distance, as between Syracuse and New York, of 30 miles, and to Philadelphia of about 100 miles.

Another important feature in the position of the Syracuse and Binghamton Railway should not be overlooked. It forms the first communication, North and South, in passing westwardly the Hudson, to be found between the New York Central Railway and the New York and Erie, and by rather a striking coincidence, it intersects the former line about midway between Albany and Buffalo or Niagara Falls, and about midway also between the city of New York and Dunkirk on Lake Erie it strikes the Erie Railroad.

It will thus be seen that the line in question is remarkably well situated, geographically.

The Syracuse and Binghamton Rail Road is 80 miles in length, and in passing the summit which divides the waters flowing into Lake Ontario from those which fall into the Susquehanna River, it attains an elevation of 800 feet in the town of Tully, distant from Syracuse 19 miles. This summit is approached from the North by gradients varying from 0 to 52.8 feet per mile.

The alignment of the road, in general is very good. After passing the summit, the line falls into the valley of the West branch of the Chenango river, and throughout this part of its course, some 30 miles or more, the route and character of the Line, both in its direction and the favorable nature of the ground for a railway, in the cuttings and fillings as represented in the profile, and the material for the Road bed, combine to constitute this portion of the line uncommonly good.

The curve of least radius (with the exception of one in the town of Syracuse) is 1910 feet, certainly very favorable.

The quantity of earth work exceeds 2,700,000 cubic yards, of this there is some 80,000 cubic yards of excavation in rock.

The aggregate length of bridges upon the line is 1460 feet, of which there is but one which exceeds 88 feet span, viz.: at the crossing of the Chenango river and the Chenango canal, at the same point, a few miles North of Binghamton. This bridge is 500 feet in length and elevation 35 feet above the stream, but as the bottom is good, no unusual expense need be incurred in establishing the foundations. There will be 16 trussed framed bridges exclusive of the Chenango above described.

The gauge of the Road is to be 6 feet, that being the established gauge of all the roads with which it is to be connected, except the Syracuse and Oswego, and the New-York Central. The Syracuse and Oswego is of 4 feet 8½ inches, but this, the Directors think, will be modified, and that no transhipment need take place between the Lake and the coal fields or points beyond; an object worthy the attention of all parties concerned at an early day; a break of gauge being a serious evil.

The first great article relied upon for business of the Road is coal from Pennsylvania. The first deposit of this invaluable mineral is found in the greatest abundance in the neighborhood of Scranton, some 60 miles South of the terminus of the line, Binghamton Coal is required at Syracuse in large quantities to supply the fuel needed for the

extensive manufacture of salt carried on at that place and in its vicinity. It is wanted for the steam vessels and propellers navigating the lakes and the St. Lawrence; it is needed for domestic purposes, and finally it will be needed, at no distant day, for the use of locomotive engines on all our railways, the fuel now used exclusively for this last purpose becoming more scarce year by year and consequently more expensive.

Merchandise from New-York, Philadelphia and Baltimore, and iron for foundry purposes as well as in its manufactured state, from Pennsylvania, constitutes the second large class of freight.

The returns from the North to the South will be salt, gypsum, lime, cement, flour; from Oswego, grain, cattle, timber, &c.

The estimate which the Directors make of the passengers business is somewhat vague, as all such estimates made before a line is opened must necessarily be, but the general experience in this country which has followed the opening of new lines of railway, lead to the conclusion that even the most sanguine expectations of well informed persons have been more than realized upon the opening of all the well situated lines of railway, not only in the more densely settled portion of the United States, New England and New-York, but in parts of the country more remote, and even where the population, as compared with New England and New-York, is very sparse; Illinois for example; even there the results of the large number of railways which have been constructed within the last two years have been encouraging to all.

In the case now under consideration there is a certain business already at hand, and one which has proved itself sufficient in the case of the Reading Railroad to bring in, unaided by the other business of the line, from one to two millions of dollars annually, and this upon a road of less than 100 miles in length.

With such an article of increased consumption as coal to start with, it is not unreasonable to suppose the Syracuse and Binghamton Road, with its important connections North and South, and its situation in a district of country so rich in soil, and so well covered with a population requiring the means of transportation for themselves and their productions, should realize all that the projectors of the Road predict of it.

I have no means of verifying the estimates of the various kinds of business which is supposed by the Directors will result from the opening of this road, nor does this appear to be necessary on my part. I have shown that one great article is alone sufficient to infuse vitality into the undertaking and of itself may furnish a large return on the capital employed in the construction of a very extensive line of railway, for example the Reading Railroad of less than 100 miles in length has cost more than \$17,000,000, yet that road derived a gross revenue from its business for the year ending November 30th, 1853, of \$2,688,287 of which, the earnings from the transportation of coal were (gross) \$2,254,694. The working expenses of the whole line, including drawback on coal, for the same period, are stated at \$1,222,637, leaving the sum of \$1,465,750 applicable to interest on loans, renewals of road and machinery, and dividends on stock.

I have stated that I have no means of testing the estimate made by the Directors, of the general business which they suppose the line will receive, but I find at page 14 of the Report of the Directors, some statistics furnished by Mr. John Wilkinson and others of Syracuse. Mr. Wilkinson is well known as the former efficient President of the Utica and Syracuse Railroad, and is probably as well informed in these matters as any person to be found.

It may be well to show the extent of the population which it will be reasonable to suppose may have occasion to make use of the Syracuse and Binghamton Railway, between the lake and New-York and Erie Railroad. Oswego being the point on the lake which will become the coal mart for a very extensive district, including the Canada shore

as well as the American, it will not be improper to consider the Syracuse and Oswego Railroad 36 miles as an extension of the Syracuse and Binghamton Railway, and thus we shall properly include the population of the county of Oswego. This county, and the three counties through the middle of which the line of the Syracuse and Binghamton Road will pass, embrace all that we shall consider immediately dependent upon the railway for their own transportation, but even these four counties by themselves it will be seen present quite a large aggregate for 115 miles of Railroad.

The Census Tables of 1850 furnish the following results, viz:

	Population 1850.
Oswego County,.....	62,198
Onondaga ".....	85,890
Cortland ".....	25,140
Broome ".....	30,660

Aggregate,.....203,888

Say for the 115 miles 1,770 souls for each mile of Railway: 1-6th of the entire population cannot be considered an over-estimate of the number which would probably become travellers upon the Road, or say 300 per mile.

The Road from Binghamton to the Coal field at Scranton, 50 miles, is completed and in use. The construction of the line from Scranton to the Water Gap, 52 miles, and thence to Hampton on the New Jersey Central line, 23 miles, is in progress, and it is represented that all that portion of the line will be completed before the close of the present year.

The Road from the Water Gap to Philadelphia is expected, as I am informed by Mr. Gilbert, to be completed about the time the other Road (to New York) is finished.

From Hampton, on the New Jersey Central, to New York, the Road is completed and in use.

The Syracuse and Binghamton Road is intended to be opened throughout in August, 1854.

ESTIMATE OF COST.

Mr. Gilbert, the Engineer of the Road, makes the following estimate of the entire cost:

Grading, masonry and bridging....	\$665,445 00
Superstructure, including iron.....	677,050 00
Land, land damages and fencing..	176,000 00
Depot buildings.....	60,000 00

\$1,578,495 00

Road Furniture Equipment..... 230,600 00

\$1,809,095 00

Or for the whole \$22,728 per mile.

This estimate, based as it is, I presume, upon prices actually paid for portions of the work, I must regard short so far as the ultimate cost of the road is to be considered. I mean by this the cost that may be reached say within two years after the line is first opened for use.

The equipment, I perceive, is stated by Mr. Gilbert in his estimate of the 31st May 1853, to be designed to supply the wants of the road for the first year only, and it may be that Mr. Gilbert intends it to be inferred that further expenditures for the road itself will be required after it shall have been in use one year.

My own experience in these matters has led me to become somewhat skeptical where estimates of cost of works of such magnitude as railways are concerned, and in practice, I have found it indispensable to accuracy, to make large allowances for various contingencies not specified in the estimates, because not foreseen. If such allowances be not made in time to meet probable wants, great embarrassment will sometimes be produced, and continued to the great annoyance of the managers of a road, and to the positive disadvantage of the proprietors.

Excluding the estimated cost of the equipment (\$230,600) the sum \$1,578,495 is left as the cost of the road and its fixtures, or at the rate of \$19,780 per mile. This appears to me to be a low estimate for such a road as this must become even before it shall require a second track.

In the Official Report of the State Engineer of

New York, for the year ending Sept. 30th, 1852, I find the following statement of the average cost of the principal items in 24 railways new and old, per mile of single track, including branches.

Grading, masonry and bridging,	per mile.....	\$13,547 00
Superstructure, including iron.....	9,693 00	
Lands and fencing.....	2,750 00	
Station buildings, per mile.....	1,264 00	
Shops and machinery.....	445 00	
Engineering and agencies.....	1,028 00	

Total per mile.....\$28,729 00

In the report of the State Engineer for the year ending September 30th, 1853, it is stated that of the 23 corporations which had rendered full reports, the aggregate length of all those reported amounting to 2,102 miles, that the entire expenditure (exclusive of the cost of engines and cars,) had reached \$86,780,000, or at the rate of \$40,800 per mile of road.

I do not mean to be understood by this, that the Syracuse and Binghamton Railroad is to cost at this time the average thus deduced; for we see by the reports that there are some roads which are reported to have cost as low as \$15,000 per mile including equipments while others we see exceeding \$50,000 per mile.

Analyzing these statements a little, we perceive that grade, masonry, and bridging, varies from \$4,000 per mile the least, to \$23,000, the greatest, and superstructure, including iron, from \$5,000 per mile, the least, to \$19,000 per mile, the greatest, and the same of other items.

What I desire to do is, to call your attention to the average cost of railways in New York, as deduced from the general results furnished by authentic documents.

For example; the length of all the roads laid in New York is about 2,600 miles, and the amount paid for construction and equipment is about \$117,700,000, or at the rate of say \$47,000 per mile. This embraces all classes long and short, old and new. Some corporations have carried renewals of road, superstructure, and even engines and cars, to cost or construction as it is technically called, but this, it is to be supposed, makes but a small portion of the grand aggregate of \$117,000,000.

In looking to the ultimate cost of the Syracuse and Binghamton Railroad it would seem to me to be not unwise to regard the actual cost of similar works here and elsewhere.

With these remarks premised, I shall conclude this paper by expressing the opinions which I have formed in regard to the road, and of its value as an investment.

1st. That the Syracuse and Binghamton road is a most important work, completing as it will, the shortest and most direct line of railway between the Anthracite Coal district of Pennsylvania and Lake Ontario.

2d. It opens a shorter line of railway from Lake Ontario to New York, Philadelphia and Baltimore than any other route.

3d. Independently of its advantage as a through line, it possesses a sufficient population immediately upon and around it to constitute it a well situated line for local business.

4th. In its grades and its alignment it is favorably located. The heavy trade, coal, moving from the South to the North. There being no ascending grade in that direction which exceeds 25 feet per mile, nor a curve which is less than 1,950 feet radius.

5th. The ultimate cost of the line, say within two years from the time it is opened for use, I think will exceed the present estimated cost; and I do not consider it safe to suppose that the cost of the several items enumerated at page 14, derived from the average of a large number of similar works in New York will, in the case of the Syracuse and Binghamton, fall short of that average, at the period stated.

6th. The road itself being in the right place is an all important point. The coal business is a certain thing, and one by which alone, properly

conducted, the road can live. I do not, therefore, consider that the success of the enterprise is to depend upon its cost simply. Whether that cost be \$5,000, or even \$10,000 per mile more than the present estimate, would in my judgment be quite a secondary consideration; the point to be assured being, that the road is in the right place. That place being where the certain wants of the community will be sure to furnish sufficient traffic to render the enterprise a remunerating one. Such a line I believe the Syracuse and Binghamton Railroad to be at this time, with the prospect of future development which must further contribute to the ultimate value of the property.

In short I consider it an enterprise well worthy of the attention of capitalists, desirous of making investments in railways.

Your obedient servant,
Boston, March 11th, 1854. W. H. SWIFT.

Journal of Railroad Law.

WHAT ARE "RAILWAY ACCIDENTS?"

In the English Court of Exchequer, a case relating to this subject, *Theobald vs. the Railway Passengers Insurance Company*, was lately tried before a special jury, and the Chief Baron. The plaintiff was the celebrated publisher in Paternoster row, and being frequently engaged in travelling by railway, had effected an annual insurance for £1000 with the defendants in May, 1853, for which he paid £1. In January last, he was travelling with his wife, in a second class carriage, from Birmingham to Shrewsbury, and on his arrival at Wolverhampton, where it was necessary to change carriages, he stepped out on to the platform. The day was very wet, and the steps being very slippery, the plaintiff missed his footing and fell between the platform and his carriage, and in so doing seriously injured both legs. The plaintiff claimed £100 for loss of time and £34 for medical expenses, and also £100 for loss of profits. The declaration of plaintiff alleged that the accident was a railway accident, and was not caused by any negligence on his part; but the defendants, by their plea, alleged that the injury was caused by the plaintiff's negligence, and was not a railway accident for which they were liable on their insurance.

The plaintiff insisted that the amount which he claimed was a fair proportion of the £1000 insured, the accident not having terminated fatally.

Mr. Macauley, for the defendants, admitted that the question of negligence must probably be decided in favor of the plaintiff; that he argued that the Insurance Company were not liable under the circumstances of the case, as the accident was not a "railway accident." He also contended, that if the defendants were liable for anything the damages must be assessed in that proportion which the degree of injury actually sustained by the plaintiff, bore to death. The company insured the plaintiff's life against railway accidents for £1000, and undertook to pay such sum as bore a proportion to that amount, if the accident did not terminate fatally. The claim ought to be limited to a mere compensation for the injury done to plaintiff, and ought not to embrace loss of profits nor loss of time.

The Chief Baron said that the case was new and difficult from the terms of the act by which the company was chartered. He thought this was not a case for which the company was liable, and that their liability was confined to cases of accidents caused by the negligence of some one connected with the management of the railway.

But that would be reserved for the Court above, and the question for the jury was, whether the accident arose from the plaintiff's negligence, and what proportion of the £1000 they should assess as damages.

The plaintiff was clearly entitled to his £34 for medical expenses. He might also be entitled to £100 for loss of time, or profits, but he could not recover £100 for time and the like amount for profits in addition. The jury rendered a verdict for plaintiff for £134.

American Railroad Journal.

Saturday, April 1, 1854.

Back Numbers of the Journal.

Those who wish back numbers of the JOURNAL for binding are requested to order them at once, as we shall be able to supply them but a few weeks longer.

We can furnish BOUND VOLUMES for any or all years complete since 1831—price \$5—per year.

Our RAILWAY MAP in sheets will be sent by mail to any address on the receipt of \$1.00—price on rollers \$2.00.

We have a few copies of Mr. JOHNSON'S valuable work on the Northern route to the Pacific—price by mail \$1—with maps.

Stock and Money Market.

Since our last, the share market has shown a gradual though not excessive decline. A steady contraction appears to be going on in all monetary operations. Only a small business is doing in Bonds and operations in these are confined to first class securities. The foreign news appears to exert a paramount influence over our money market, and favorable change is hardly to be expected till affairs in Europe assume a more definite aspect. The rates for money for all purposes continue high.

Cleveland and Toledo Railroad.

The receipts of the Cleveland and Toledo road for the third week of March were \$16,750. The Toledo Blade says:

"Few persons who are not in a position to see it, can form an adequate idea of the amount of travel through this city by railroad. Night before last thirteen car loads of first class passengers went west in one train. The number could scarcely be less than 700. Three trains pass through each way daily, and we are told that a fourth train is in contemplation. There is probably no road in the country doing a better business than the Cleveland and Toledo. The freight business is becoming large and will be immense when proper arrangements for its transportation between Cleveland and the New York lines shall have been perfected.

"The Canada road seems rather to have increased the travel by the South Shore; for since that was opened this has wonderfully increased its passenger business."

Delaware and Hudson Canal Companies.

The annual election of the Delaware and Hudson Canal Company, came off to-day, and resulted as follows: Managers—John Wurts, Wm. M. Halsted, Silas Holmes, Jacob R. Le Roy, Wm. S. Heriman, Charles N. Talnot, Maurice Wurts, Lora Nash, Edward J. Woolsey, William Musgrave; Geo. T. Oliphant, Daniel B. Fearing, Robert Ray, John Wurts, President; William Musgrave, Vice-President; Isaac N. Scymour, Treasurer; Gilead A. Smith, Secretary.

The profits of this Company during the last year were \$830,972, equal to 11½ per cent. on the capital stock of the Company. The coal shipped

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Total cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	809,878	1,016,500	2,064,458	140,561	80,053	none	80
Kennebec and Portland..... "	72	952,621	291,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	97½
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	30
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	107½
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	36
Northern	82	3,016,634	.....	.....	328,782	163,076	5	56
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	80
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	109
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	12½
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	26
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9½
Vermont Central	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	12½
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. Cent.	.....	.....	97½
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	.....	1,995,249	388,108	130,881	7	90½
Boston and Maine..... "	83	4,076,974	150,000	4,092,927	659,001	338,215	7	103
Boston and Providence..... "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	82
Boston and Worcester..... "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	99½
Cape Cod branch..... "	28	421,295	171,800	633,906	60,743	30,066	2	40
Connecticut River..... "	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern	75	2,850,000	500,000	3,120,391	488,793	241,017	7	86½
Fall River..... "	42	1,050,000	none.	1,050,000	229,445	99,589	8	97
Fitchburg..... "	66	3,540,000	112,305	3,623,073	574,674	232,787	6	86½
New Bedford and Taunton.. "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County..... "	26	547,015	819,743	1,245,927	67,261	23,415	none	68
Old Colony..... "	45	1,964,070	282,300	2,293,534	374,897	122,816	none	100
Taunton Branch..... "	12	250,000	none.	307,136	137,406	24,399	8	.....
Vermont and Massachusetts.. "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	20½
Worcester and Nashua..... "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	62
Western	155	5,150,000	5,319,520	9,953,759	1,525,224	746,736	7	97½
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	71
Providence and Worcester.. "	40	1,457,500	300,000	1,751,999	291,417	120,892	6	99
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,289	10	125
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill. "	60	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	56	558,861	800,000	1,611,111	114,410	.....	.....	39
New York and New Haven... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	100½
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	none	.....	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	56½
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	none	.....	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira.... "	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	75½
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	66
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	54½
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	32
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	118½
Ogdensburg (Northern).... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	25
Oswego and Syracuse..... "	35	350,000	201,500	607,803	90,616	43,609	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	none	.....	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,677	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	none	.....	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster. "	36	830,100	713,227	1,702,523	265,327	106,820	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	77½
Phila., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	79

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.		Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton....	"	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	"	47	.....	.....	.....	.....	.....	.....	102
Baltimore and Ohio.....	Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch.....	"	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..	"	67	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....	Va.	55	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	"	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	"	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	"	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg....	"	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	"	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	"	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	"	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	"	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac....	"	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh....	N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina.	S. C.	110	.....	300,000	In prog.	.....	.....	.....	.....
Greenville and Columbia....	"	140	1,004,231	.....	In prog.	.....	.....	.....	.....
South Carolina.....	"	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..	"	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central.....	Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	115
Georgia.....	"	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western.....	"	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee.....	"	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western.....	"	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River	Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston....	"	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	"	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..	"	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern.....	Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..	Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..	"	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington....	Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington....	"	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort....	"	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington....	"	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh....	Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	85
Cleveland and Toledo.....	"	147	2,000,000	1,600,000	.....	.....	.....	.....	98½
Cleveland, and Erie.....	"	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus....	"	135	3,027,000	408,200	3,655,000	777,793	483,454	12	120½
Columbus, Piqua and Indiana.	"	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.....	"	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati., Ham. and Dayton	"	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta....	"	.....	.....	.....	In prog.	.....	.....	.....	62

We invite the attention of contractors to the advertisement of lettings on the above road. The object of the road is to connect Memphis with the Ohio at Louisville and Cincinnati. Our next issue will contain a detailed statement in reference to the project.

Breakage of Railroad Axles.

The attention of Engineers and those engaged in the management of Rail Roads has been especially directed to this subject of late, by the decision of Mr. Justice Woodward of Pennsylvania, in the case of Scott vs. the Ohio & Pennsylvania Rail Road Co.; and also by a table of accident arising from imperfect axles published in the past report of the Philadelphia & Reading Rail Road Co. It is our purpose to communicate a few practical suggestions that have arisen from a consideration of this matter; satisfied if they should prevent any accident or assist indirectly, in placing the responsibility upon the right parties.

The Honorable Judge was of the opinion, that the company, having failed to show that they had made any attempt to discover whether any latent defect existed in the axle were liable, etc. This may be legally sound, but is practically impossible; the fact being, that any effort to discover a latent defect, ruins the axle; or in other words, if the axle were properly tested, it is unfit for use, in nine cases out of ten. This, Mr. Edward Miller, Chief Engineer of the Northern Pennsylvania Railroad, mentioned in his evidence before the Judge, (if we recollect aright,) and also very justly remarked, "that the chief reliance must be upon the standing and character of the manufacturer."

A trial might be had of every tenth or twentieth axle, or the sag ends of each axle tested, but neither of these methods are likely to find favor, owing to the great labor and expense they would involve and the merely approximate results attained by them. We regard the stamping of the makers name upon the middle of the axle, as a good practical endorsement of the quality, and it should be done in full clear characters, (not a mere initial, only partially stamped,) where there can be no danger of turning it off in finishing up the axle. This is now left optional, but we cannot see the difference in importance of stamping boiler plate, (made compulsory, we think, by legislative enactment,) and the stamping of car and engine axles, as far as concerns public safety. And, as there will always be those, who prefer economy to safety, and will not pay the price necessary to purchase a good axle, let the different qualities be stamped as on boiler plate. Then, if a verdict is required for damages, by the breaking of a second quality axle, the case is much simplified. How may it be simplified in case of breakage of an axle of first class quality, from makers of undoubted standing?

We have before us the report of the Philadelphia and Reading Railroad Company, exhibiting a table of broken axles from 1848 to 1853, showing an average of two hundred and thirty-one per annum, and an average of ten bent axles per annum. (May not the latter arise from the shape of the axle, being reduced to 3 inches in the middle?) We have heard this table used as an argument against hammered axles; these axles all being made at the Tilt Hammer Shop of the Railroad Company. The writer is intimately acquainted with the method of manufacturing these axles—they are drawn from piles of tough scrap into slabs or billets and then refiled and drawn into axles with very heavy steam hammers, which do their work effectually; so that if the scrap iron is good, and there can be no doubt that it is, being

principally made in the works of the company; we have no hesitation in saying that it will make an axle equal or superior to the best blooms to be had.

Why, then, the great amount of breakage shown in the tables? From the simple fact, that the tonnage and wear of this railroad, is greater than any other railroad in the United States, and consequently the wear on axles must be very great also, and we are confirmed in the opinion, (viz: that the broken axles have each done good service proportional to their size and strength,) from the circumstance that every fracture that has come under our notice has been perfectly crystalline or granular; and we will venture to say that Mr. Milbolland sends out no crystalline axles from the works of the company. Until the Pennsylvania and Reading Railroad Company have used rolled axles (reduced in the middle) for an equal length of time, with better success, we cannot see the force of this argument against hammered axles.*

An accurate test of the truth of the above would be made by stamping each axle with the date of its manufacture, as the cars of the company are dated, and we might then arrive at the period that an axle should be run under a given tonnage. Tables of this kind from the different railroad companies would be of great interest and value.

We therefore would recommend in this matter, which we view as of great importance to the public safety; that the stamping of car and engine axles should be made the subject of legislative enactment, as in the case of boiler plate—that railroad companies, for their own security, shall require the stamp of makers name, and quality; and finally, that the maker should stamp the date on every axle, which will show when an axle has been in use long enough to throw the responsibility of breakage upon the railroad company using it; and thus simplify the verdict when an axle is from a good maker, but overworked. A. & P. R.

Philadelphia, March 21, 1854.

New Locomotive upon the New Jersey Railroad.

The well known firm of Rogers, Ketchum and Grosvenor have just placed upon the above road a new locomotive, combining all of their known improvements with an extent and perfection of finish and ornament never before attained as we think, for a like purpose in this country. Being the best effort of these builders, and combining all of their original improvements, designed and adopted as the result of all their experience, this engine deserves especial notice.

It is named "Gov. Southard," and has 14½ inch cylinders, 22 inch stroke, four drivers of 6 feet diameter and a truck.

Beginning with the boiler (the most essential part of the machine) it has most liberal proportions of heating surface and steam room; the outer crown of the firebox, for its whole length, being elevated about 15 inches above the top of the barrel of the boiler. With the "elevated crown," first adopted by Mr. Rogers, more steam-room and a better security against "priming" is obtained, and as it allows of more flue-room it really makes a larger boiler. It also facilitates the entrance of a

*We say this from no interested prejudice, being engaged in the manufacture of both rolled and hammered axles; but that each side should be fairly presented.

man within the boiler for examination, or repairs. The boiler has two steam domes, also, both protected by gracefully formed brass coverings. By the use of two domes more steam-room is afforded, while, from drawing the steam one-half from each, a more uniform draught of steam is obtained, an important protective against "working water" or priming. The "elevated crown" is also a valuable protection from the same difficulty.

The firebox is protected with a highly planished covering of sheet brass, resting upon wooden lagging. The ordinary Russia iron covering of the barrel of the boiler is confined by swelling brass mouldings, of a showy and elegant form, in place of the usual flat bands.

The "expansion braces" for connecting the furnace with the frame, and for allowing the expansion of the boiler, without strain, when heated, are peculiar excellencies of Mr. Roger's engines, and they have always been made and fitted with as much care and accuracy as any part of the running machinery.

The frame, while it has no dead weight, has great strength. The pedestals are welded on, and wedges are provided for taking up the wear of the boxes.

The cylinders, which are arranged for the "outside connection," are secured in a very strong manner. The smoke box is made thicker, even, than the shell of the boiler, and is stiffened by a stout wrought iron ring, riveted within its forward end. To the flat sides of this firm support, and to the frame, the cylinders are bolted. These, with the steam chests, are amply protected from cold by handsome brass covers.

The truck frame takes its load upon its centre, but upon an extent of bearing surface sufficient to prevent any rocking motion. By this valuable arrangement the truck adapts itself with the least friction to curves in the road, while jolts and shocks are also better distributed upon the main frame. The truck axles have both inside and outside journals, by which the boxes wear much better than with inside journals alone.

The link-motion was first practically applied in this country by Mr. Rogers. At his hands its proportions and adjustments have been perfected, and its wearing qualities improved. By the most exact compensations its suspension has been established to yield the greatest equality of admission of steam on both strokes of the piston. Beside this, the "lead" is regulated so as to be the least when working steam through the full stroke with a heavy load, and the most with a high degree of expansion and rapid motion. In the material, mode of finishing, and adjustment of these links, and of all parts of the valve motion, we can say, with a full knowledge on our own part, that they surpass most others for durability, accuracy and efficiency.

The pumps are of brass, with capacious air chambers on both their suction and forcing sides.

It would be out of place in a general notice to specify all the detailed merits of the class of engines of which the "Gov. Southard" is but a single member. But it deserves to be said that in every point, whatever long and successful experience, practical and theoretical skill, and energetic management could accomplish, is attained. We have been the more particular to refer to some of the leading excellencies of these engines as the greater

part are originally due, either in conception or in their first successful application to this firm. The managing partner, Mr. Rogers, by his practical appreciation of improvements has done more, probably, to influence the style and proportions of American passenger engines than any other builder. In behalf of the engineering principles which have been so consistently maintained in this Journal, we take pride in exhibiting such successful examples of their practical application as his engines afford.

Beyond these general merits, common to all of the engines from these builders, the "Gov. Southard" deserves especial notice for the superb finish and elegant and profuse ornament which has been bestowed upon it. In beauty it rivals a poetic creation. Every part has been subjected to assiduous labor or creative art. It seems like the ideal in comparison with the forbidding real of much of our railroad machinery. Beauty is an element deserving of consideration, even in its application to locomotives. With other engines, on the New Jersey road, upon which much ornament has been bestowed, they retain after long use, a fine appearance, showing that with care, and the natural pride which an engineman has in a handsome engine, this pleasing quality is not out of place in such an application.

It would be well, if railroad companies could know the importance of time to a builder, in building a good engine. Engines are often built and delivered in an unfinished condition, generally at greater cost to the builder, and invariably at a loss to the purchaser, for at his expense imperfections exhibit themselves and require renovation. Such a work as the one just noticed can never be commanded, either "ready made" or at the "shortest" notice.

Buffalo, Corning and New York City Railroad.

A meeting of the stockholders of Buffalo, Corning and New-York Railroad Company was held at Le Roy on the 16th inst., which was very largely attended. The *Buffalo Courier* gives the following summary of the proceedings:

"The Secretary presented and read to the meeting a very full and detailed statement of the affairs of the road, from which we are able to present the following brief summary;

Capital Stock \$1,400,000
Paid in 1,100,000
First Mortgage Bonds 1,000,000
Second Mortgage Bonds 600,000
Of which the Company have on hand about \$200,000 unsold. \$400,000 of these have all been sold to stockholders on the line of the road at not less than 80c.

"The floating debt of the Company is about \$200,000. There are sufficient unsold bonds and other available assets of the Company to pay off the entire floating debt and leave a small surplus remaining, leaving some \$300,000 of unpaid stock yet in the hands of the Company.

"The whole distance from Batavia to Corning, 100 miles, is finished and running; of the remaining 35 miles from Batavia to Buffalo, the right of way is all obtained, the bridging, masonry, and grading completed, and the ties and fencing stuff are on the ground.

"The first 45 miles of the road complete and ready for running cost less than \$13,000 per mile. The entire portion from Batavia to Corning cost a fraction less than \$19,000 per mile all complete.

"It was resolved with great unanimity by the stockholders to petition the Legislature to pass the bill now before it authorizing the Directors to issue preferred stock to the amount of one-third the original capital at not less than its par value,

for the purpose of completing the road at the earliest possible moment. And from the spirit manifested by the stockholders present, there can hardly be a doubt but that the stock will be immediately taken up, thereby enabling the company to finish the road to Buffalo with the necessary equipment early the coming season.

"We learn that notwithstanding the delays and detentions that the management have had to encounter, the road has cost less per mile than any other road in the State of New-York, and we are assured that when completed, it will be one of the most substantial, well built, and best paying roads upon its cost in the State."

New Orleans and Mobile Railroad.

The New Orleans Commercial Bulletin, furnishes the following synopsis of an Act which has recently passed the Legislature of Louisiana, authorizing the city of New Orleans to subscribe to the stock of the Pontchartrain Railroad Company, to enable said company to construct a railroad from New Orleans to Mobile:—

The first section authorizes a subscription on the part of the Common Council of \$1,500,000, and provides that the depot shall not be located above Canal street. Section 2d enacts that the subscription of the city is to be made by the Mayor, payable in bonds of \$1000 each, having 30 years to run, bearing 6 per cent interest, transferable by endorsement of the President and Secretary. Said bonds may be converted into stock of said company at any time not exceeding five years from date, under such regulations as the parties in interest may agree to; that a tax on every species of property, etc., now taxable, shall be levied in January of each year, to pay the annual interest on said bonds; that the bonds of the city issued for the stock of said company shall be received at par value, and the stock thus issued shall be forever pledged for redemption of the bonds.

Section 3d prescribes that no act of the Common Council shall be legal, after the 1st of January in each year, until the railroad tax is levied, provided that no levy for interest shall be made after the payment of 6 per cent. by the company on the stock held by the city, which dividends shall be applied by the city to the payment of the interest; and when the dividends on said stock owned by the city shall amount to more than 6 per cent., the excess shall be applied by the said Railroad Company to the purchase of city bonds thus issued; when dividends of less than 6 per cent. are received it is understood that a tax for interest shall be levied for difference only. The net earnings of the existing Pontchartrain Railroad are to be divided, as heretofore, among the stockholders, until the extension of the road to Mobile.

Section 4th provides that immediately after the passage of an ordinance authorizing the subscription aforesaid, and its approval by the voters, the Mayor shall cause bonds to be issued to the company for the amount of said subscription, on receiving from the company certificates for 15,000 shares of the stock thereof, of \$100 each, full paid; thereupon the Mayor is required to execute before the Secretary of said company, who is authorized to receive and execute the same, a pledge of said stock in the amount of 10 shares for each \$1000. The bonds issued under this act are never to be made a basis for free banking.

Section 5th provides that no ordinance passed by the Common Council shall be valid until it is ratified by a majority of the legal voters of the city. Said election to take place within fifteen days after the passage of ordinance, to be conducted in the manner prescribed for city elections. Ordinance not to be submitted to the people on the same day that ordinances for similar purposes shall be submitted.

Section 6th declares that no ordinance of the Council, in conformity with this act, shall be submitted for the approval of the voters until the Directors of said company, duly authorized by

the stockholders, shall notify the Mayor of their acceptance of said ordinance.

Section 7th refers to the election of Directors, the representation of the city in the directory, and the conversion of the bonds into stock, the details being unnecessary to give the reader a general idea of the charter.

Section 8th provides that the company may, at any time, on handing over to the Treasurer, any bond or bonds issued under this act, receive from the city an equal amount of the capital stock of said company, the same to be transferred by the Mayor, subject to their disposition, the bonds thus returned to be immediately cancelled—provided the city shall have the option to pay the bonds and retain the stock. According to the 9th and last section, the act takes effect from and after its passage.

Railroads of Maine.

We give below the cost of the several railroads in Maine, carefully compiled from the returns made to the office of Secretary of State, for the year ending December 31, 1853.

Name of Road.	Length of Line, Miles.	Stock Fund.	Amount of Indebtedness.	Total Cost of Road.
Androscoggin	20	\$56,868 84	\$220,000 00	\$316,868 84
Androscoggin and Kennebec	55	824,181 80	1,043,549 00	2,030,140 38
Atlantic and St. Lawrence	149	1,692,200 00	3,614,520 01	5,306,720 00
Bangor and Piscataquis	12	100,000 00	1,650 00	188,913 67
Cataus and Barling	6	100,000 00	136,563 26	217,265 55
Kennebec and Portland	72½	1,073,673 00	1,459,694 48	2,520,981 30
Machias port	7½	75,000 00	800 00	100,000 00
Penobscot	—	64,781 00	73,000 00	Unfinished.
Penobscot and Kennebec	2¼	133,865 00	49,657 12	1,303,195 49
Portland, Saco and Portsmouth	51	1,337,000 00	122,000 00	Unfinished.
Somerset and Kennebec	—	54,667 51	—	Unfinished.
York and Cumberland	18	292,549 89	408,192 31	748,699 30
Buckfield Branch	13	5,879,832 33	7,005,126 18	—
	406¾	399¾	No return.	—

In addition to the above the Boston and Maine railroad owns some three miles in this State, but they keep only one account showing the cost and operations of the entire line from Boston to the South Berwick Junction.—*State of Maine.*

Hannibal and St. Joseph Railroad.

We have the satisfaction of being able to state, that the meeting of the Directors and Contractors connected with this Company, in this city, has resulted in placing it upon a substantial basis, and the work will now be prosecuted with all possible energy. The whole of the stock which remained unsubscribed has been taken by Eastern capitalists, and the funds advanced for the purpose of prosecuting the work, according to the terms of subscription. It is confidently expected that forty miles of the road, from St. Hannibal west, will be in operation in September next, and the whole road is to be completed and in running order to St. Joseph, in thirty month. This will give a new im-

pulse to property, business and population all along the route, and greatly add to the wealth of the State.—*Missouri Republican*

Jackson, Tenn., March 13th, 1854.

Editor of Railroad Journal.

Sir, I notice in the money article of a New York daily paper, of recent date, the following remarks touching the Mobile and Ohio Railroad.—"It is one of the great trunk lines of the Southwest, which the recent change in the Railway bond market has left in an unfinished condition; with a very short section, only completed next to Mobile, and with little done beyond the preliminary surveys, out of Alabama."—In this the writer, has made three mistakes.—First, the "little" done out of Alabama is as follows; a careful location of the whole 494 miles of the main road and 104 miles of important branches.—The "very short section completed" is 43 miles long. The successive divisions of the road, counting from the part finished, are now in the following stage of advancement, as I know, from my own personal inspection, and from the returns of the Division Engineers.—The first division of 83½ miles, is nearly graded, and is ready for the iron, as fast as it can be laid. The second division of 59 miles, embracing the heaviest work upon the whole road, is nearly half graded.—The third division of 82¾ miles, is two-fifths graded.—The fourth division of 66½ miles, is two-fifths graded.—The fifth division of 118½ miles, is one-third graded, and the Paducah branch of 59 miles, the sixth division, is one-fourth graded. In addition, the Columbus, Miss., branch 14 miles long, is two-thirds graded, and considerable work done upon the Columbus Ky. branch, and the contiguous part of the main line, which together are 13½ miles long; making an aggregate of 540 miles under contract, and in rapid progress, with all necessary means subscribed to prepare them for the rails in the following order, to wit: from Mobile to Pontotoc County, Miss., 282 miles, including the Columbus Miss. branch; and from Paducah, Ky. to Jackson, Tenn., 110 miles; in all of this year; leaving 134 miles between Jackson, Tenn., and Pontotoc County, Miss., including the latter, of which 9-10th will be completely graded, within the next 12 months, and the remaining 1-10th in all of 1855.

The Company now have 15,000 tons of rails on hand, and arriving, and which will be laid during the ensuing spring and summer, the work of track-laying having begun some weeks since, not again to be suspended until the line is completed.—If all this is but "little," how much may be considered a large amount, in the estimation of a progressive editor?

Again the Paragraph reads: "the recent change in the Railway bond market" has left "the Mobile and Ohio Railroad in an unfinished condition."—This is wrong, because the local work of the road never was and never will be dependent upon the bond market. Its advancement has been, and is as rapid from payment of instalments, as it would have been, were Railway bonds selling as freely as in 1852.—Instead of being "left," it should in justice be said, that the Company, for all but rails and machinery, amply provided with means, has gone ahead, and "left" the bond market behind.

The third mistake is, that the Mobile and Ohio Railroad, as a borrower for rails and equipment only, is confounded by hasty writers, with specula-

tive and trashy enterprizes of local character, commenced without means or system, and destitute of commercial or public guaranties of profit or success. Such schemes must borrow from first to last, or stop and die. The latter alternative, in many cases, is a blessing to all parties concerned. You know, Mr. Editor, the financial principles, upon which the Mobile Road has been projected, also its national, local and commercial, characteristics; that it needs no exaggerated statements, nor inflated essays, from any quarter; nor needs the errors and envious antagonism of opposing interests. It has pursued, and will pursue, the even tenor of its way to completion, by applying wisely, and with reasonable dispatch, the means provided for its construction, which are as follows:

For local work expended	\$1,456,000
" " " to be	3,645,576

Total cost of local work.....	\$5,101,576
-------------------------------	-------------

Total subscriptions for do.....	\$5,107,576
---------------------------------	-------------

For Rails and Equipment.

Loan of the six per cent. bonds of the State of Tennessee, \$10,000 per mile for 5th division, 118½ miles	\$1,185,000
Cash loan of the State of Alabama for immediate payment of rails.....	400,000
Stock subscription of the State of Mississippi from the internal improvement fund of that State	100,000
Leaving to be raised by sale of Company's bonds, now partly in the hands of George Peabody & Co., of London	5,215,000

Total required for rails and equipment	6,900,000
--	-----------

Total for the road and branches.....	\$12,007,576
--------------------------------------	--------------

Please give this letter a place in your Journal, and rest assured, that the Mobile and Ohio Railroad Company is a long and strong working team, all pulling together upon the right track; and their road cannot be "left" unfinished, so long as the people do all their own grading, and good securities for rails are preferred by capitalists to poor ones; nor retarded by accidental or designed misrepresentations.

Very respectfully I am yours

JOHN CHILDE,

Eng'r and Gen'l Ag't, M. & O. R. R.

Warsaw and Port Byron Railroad all Under Contract.

We have gratification of announcing, says the Oquawka Spectator, to our readers that this road is now all under contract—from Warsaw to Port Byron—and that the high character of the contractors, Messrs. Colver, Kent & Co., is a sure guarantee that the work will be done within the time limited by the contract.

We understand the terms to be, on the part of the contractors, to build from Warsaw to Nauvoo, and from Rock Island to Port Byron by the 15th of September next, and complete the balance of the road between Nauvoo and Rock Island within thirty-three months from the date of the contract, build depots, and furnish all necessary rolling stock for freight and passengers, for \$25,000 per mile. The contractors to become stockholders for one-fourth of all the stock.

The Company agree to pay one-fourth in cash as the work progress, and the balance in bonds of the Company at par.

Pacific Railroad—Contract for the Southwest Branch.

Mr. Allen, President of the Pacific Railroad, returned from the East night before last, bringing with him the contract for the Southwestern Branch Railroad, and the land office certificate, and list of lands selected on the route of the road under the grant of Congress. The amount of land obtained by the company is nearly 1,200,000 acres, and is deemed very valuable. The principal part of the selections outside of the six mile limit, are located among the public lands of the Southwest. The date of the approval of the lists by the Secretary of the Interior is March 14, 1854.

The contractors for the Southwestern Branch are Messrs. A. S. Devin & Co., of New York, who are spoken of as an able and reliable, and well known firm of successful contractors.

With the exception of the State Stock appropriated to that Branch (\$1,000,000,) and the \$500,000 of private subscription necessary to secure it, the Contractors take their pay in the construction bonds of the company. The first division, 77 miles and over, to be built in two years; the second division, about 100 miles, in three years; and the whole line in four years, being a little over 271 miles in all. In the raising of the \$500,000 private subscription, as a condition precedent to obtaining the Stock, the contractors will assist.

The President of the company will immediately order books to be opened for this subscription on the Southwestern Branch, in this city, and supply suitable agencies to canvass for the purpose. It is quite possible, if it should be necessary to secure it, that the company will agree to make this \$500,000 a guaranteed stock.—*St. Louis Republican*.

Indiana and Fremont Railroad Company.

Sometime last season, a company was organized with the above title, to build a railroad from Fremont, Ohio, to Union, Indiana. That organization was consummated by the election of the following officers: Lec Q. Rawson, Esq., President; Wilson Vance, Esq., Treasurer; and J. A. Ward, Esq., Secretary. Directors: L. Q. Rawson and James Moore, Fremont; C. W. Foster, Rome; D. A. Cory, S. Carlin, J. M. Coffinbury and George W. Gallaway, Findlay. The capital stock authorized is \$1,200,000, with power to increase.

The road commences at Fremont, Ohio, at the head of navigation for steamboats and sail vessels on the Sandusky River, and passes through the flourishing towns of Rome, Findlay, Lima, and St. Mary's, in Ohio, and terminates at Union, on the State Line of Indiana, where it connects with the Bellefontaine and Indianapolis Road. A road is also about being constructed from Fremont to Sandusky City, making nearly an air line from Sandusky City to Indianapolis; and by the construction of about 40 miles of road in Indiana, from Union to the Jeffersonville Road, will give a very direct line to Louisville. At Fremont, it connects with the Cleveland and Toledo Road, and at Lima, with the Dayton and Michigan, having a contract with the latter for running trains from Sandusky City to Dayton and Cincinnati, and making the shortest line between these points. The work from Fremont to Lima, 64 miles, is under contract to Messrs. Shoemaker, Doolittle & Co., who are prosecuting this work with their accustomed energy. From Fremont to Findlay, 34 miles, the line is nearly prepared for the iron, and the whole will be completed to Lima by the first of September next. The balance of the line, from Lima to Union, is to be put under contract immediately. The company have reliable stock subscriptions sufficient for the whole work, including the laying down of the iron. The public,

generally, have heard but little of this enterprise. The people along the line have taken hold of it with a determination to build the road, relying mostly on their own means, having the utmost confidence in its success and utility; and the fact that the shrewd and enterprising contractors, Messrs. Shoemaker, Doolittle & Co., have taken hold of the work, is a guaranty, not only that it will be prosecuted to a speedy completion, but that it will also prove to be a profitable investment for the stockholders.

The Crystal Palace.

The extent of the losses suffered by this "calamity" have been fully shown by the labors of the investigating committee:

It appears in substance, that the indebtedness of the Association is about \$170,000. The loss on the Exhibition is estimated from the 1st Jan'y last to the 9th March inst. at a little over \$19,000, or about \$134 per day. It appears, therefore that the Company has sunk

Its whole capital... \$489,000
All its receipts, about 380,000
And is in debt..... 170,000

Total.....\$1,089,000

Against which it has the Crystal Palace building, insured for \$91,000, Kiss's Amazon, &c.

The result shows how New Yorkers do some things. While they manage as well as any other body of men, matters that come within the sphere of their own duties, or employments, there are none that make a worse figure in the superintendence of such as do not. Private enterprise might have made a good thing out of the Crystal Palace, which has proved such a disastrous speculation in the hands of a most highly respectable body of men, who acted under no other responsibilities or motives, than those usually felt by directors of a company, in the result of whose success they had not a large pecuniary interest.

Chicago and Mississippi Railroad.

The *Alton Telegraph* furnishes the following statement in reference to the progress of this work,

We are informed that the work upon the Alton and Chicago Railroad, beyond Bloomington, has been resumed. The road is in charge of Mr. Gardiner, the Chief Engineer of the Company, and will be pushed to completion with all dispatch to Joliet, whence it will be extended by the cut off to Laporte in Indiana. The line is in an advanced state of forwardness, the greater portion of it being graded and ready for the superstructure. The rails are already laid several miles north of Bloomington, and several miles south of Joliet. Large quantities of iron are now going up from this point, intended for the Chicago road. There appears to be a reasonable certainty that the road will be finished through to Joliet during the coming season, thus shortening the time to Chicago several hours.

In regard to the "Laporte Cut-off," over which Chicago has made so much ado, we have been told that the contractors are pushing it through to Joliet as rapidly as money and men can accomplish it. A large force has been upon it during the greater portion of the winter, preparing it for the rails. The Southern Michigan Company, who are building it, have likewise the control of the Alton and Chicago road. The two lines together will form a road, leaving Chicago nearly fifty miles to the North, and intersecting the Southern Michigan road at Laporte, a point near the southern shore of Lake Michigan. When these connections are completed, the running time to New York city will be less than 70 hours.

Atlantic and St. Lawrence Railroad.

The following abstract of the annual report of the Atlantic and St. Lawrence Railroad Co., shows the condition of that road, December 31 1853.

Length of Line—149 miles.	
Weight of Rail—63 lbs per yard.	
Capital paid in,.....	\$1,692,200 00
Amount of indebtedness,.....	3,614,520 01
Amount due Corporation,.....	53,648 85
Number of passengers in 1853,.....	161,354
" through " " " " " " " " " " " "	64,047
" way " " " " " " " " " " " "	97,308
Received from passengers,.....	\$130,435 26
" " freight,.....	167,733 40
" " other sources,.....	17,869 34
Total receipts in 1853,.....	\$316,038 00
Number of Depots,.....	28
" Engine-houses,.....	6
" Shops,.....	1
" Engines,.....	23
" Cars,.....	453
Miles run by Passengers trains,....	173,374
" Freight " " " " " " " " " " " "	155,341
" other " " " " " " " " " " " "	29,187
Whole number of Stockholders,....	1,885
" residing in Maine,...	1,836
Dividends in 1853, 6 per cent.	
The line to Montreal was not opened in season to materially affect the earnings of the past year	

Emigration from Great Britain.

The following table, copied from authentic returns shows the extent of the emigration from Great Britain at the present time, and its annual increase for the past ten years, ending in 1852.

	To North Br. Am.	To U. St.	To Australia &c.	Total.
1843....	23,518	28,335	5,359	57,212
1844....	22,924	43,660	4,102	70,686
1845....	31,803	58,538	3,160	93,501
1846....	43,439	82,239	4,173	129,851
1847....	109,680	142,154	6,436	258,270
1848....	31,065	188,233	28,791	248,089
1849....	41,367	219,450	38,681	299,498
1850....	32,961	223,078	24,810	280,849
1851....	42,605	267,357	26,004	335,966
1852....	32,876	244,261	91,630	368,764

The present rate of emigration is over 1,000 per day, and is rapidly increasing. The effect of this rapid efflux of population must be to raise the rate of wages in England to very nearly the standard paid in this country, and will be very likely to destroy the advantage which cheap labor has given to the manufacturing establishments of that country over those of the United States.

Cincinnati, Union and Fort Wayne Railroad.

This road is an extension, virtually, of roads now in operation from Cincinnati and Dayton to Union, Indiana; to Fort Wayne, on the Wabash and Erie Canal. Being the commercial center of one of the best portions of the Wabash Valley. Fort Wayne is an important point, and one from which a railway connection with Cincinnati is very desirable.

The route, in passing nearly due South, to Union, will accommodate a section of the State which is now nearly deprived of railway facilities; but which, on account of its exceeding productiveness in grain and live stock, is adequate to the most ample support of the road proposed.

We are happy to be able to announce the prospect of a vigorous prosecution of the work on this line, from Union to Fort Wayne. The President of the company, Jeremiah Smith, Esq., has recently visited this city, and Boston, to perfect arrange-

ments for the iron necessary to complete the road, and there is now every prospect, we are assured, that it will be opened for business as soon as the track can be laid. As the management of this enterprise is entrusted to men of large experience, great prudence, and unfaltering energy, we anticipate for it a speedy completion and highly remunerating business.

Growth of Detroit.

We clip from the *Detroit Tribune* the annexed figures exhibiting the growth of Detroit in population since 1810. It will be seen that her progress in this respect is very rapid and excelled by few of her compeers. The amount of taxable property returned for the year 1853 was, \$10,741,115. The *Tribune* also furnishes a long and interesting review of the business of the city in its various branches denoting a progress in industrial affairs and commercial operations quite as gratifying as that of her population. The *Tribune* says:

A few figures will show the rate of increase in population to the present time.

The population in 1810.....	770
do. 1820.....	2,442
do. 1830.....	2,222
do. 1840.....	9,193
do. 1844.....	10,939
do. 1845.....	13,065
do. 1850.....	21,057
do. 1852.....	26,648
As taken in the summer of 1853.....	34,439

This, however, includes only those strictly within the corporate limits, while there is both above and below the present boundaries a space quite equal to either of the city wards built up, and inhabited by people whose entire occupation and interests are in the city, and who should therefore properly be enumerated with it. Adding these to the number stated above, and we have a population of nearly or quite 40,000. The increase for the year 1853 was about 35 per cent., and from the many large enterprises now setting forward, and the extensive preparations for building, we cannot anticipate at the close of the current year a population of less than 50,000 or 55,000. In every direction the city is extending itself beyond its present limits, new streets are being opened, shops, dwellings and stores being erected in districts where both convenience, health and security require the extension of the city laws and police, as well as improvements for drainage, water, paving, &c. It is hoped that the charter may be amended at the earliest possible date, to embrace such sections as are thus situated. The value of property there will be greatly enhanced, and the interests of the city promoted.

Norwich and Worcester Railroad.

The Legislature of Massachusetts has passed a bill extending the loan for \$400,000 made to the Norwich and Worcester Railroad Company in 1836, and which comes due in 1856, twenty years beyond its maturity, at 5 per cent. per annum. The act provides that the State Treasurer shall sell \$400,000 State Five per Cents, and place the premium obtained for the same to the credit of the Railroad Company, as the nucleus of a sinking fund, to be increased by the payment by the company of \$10,000 per annum, which the Treasurer is to have placed on interest, and compounded until the whole debt is liquidated. This places the funded debt of that company in a most desirable position. Of floating debt it has none; and what is very remarkable in the history of railroads, the construction account has been reduced within the past three years instead of increased.

Delaware Railroad.

The Directors of the Delaware Railroad have contracted to build the whole line from the New-castle and Frenchtown road to Seaford.

New Jersey Camden and Key Port Rail Road.

The New Jersey Legislature has passed a law chartering a company to construct a railroad from Camden to Keyport, which will be in a straight line from Philadelphia and New-York. The road will pass through Mount Holly, New-Egypt and Freehold to Keyport. Another road is also chartered to run from Keyport to Tom's River, and thence to Delaware Bay and Cape May.

Howland, Burgess & Smith,



MANUFACTURERS of PURE SPERM OIL for Railroad Engines and Lamps, of Refined Whale Oil now so generally used for car wheels.—Works, *New Bedford Mass*—Store, Albany, N. Y.

Orders (directed to either place) respectfully solicited from Superintendents.—All Oil warranted pure and perfectly satisfactory.

Pneumatic Pile Driving.

FOUNDATIONS FOR BRIDGES, PIERS &C. BY THE PNEUMATIC process hollow cylindrical piles or tubes from eight inches to ten feet diameter can be driven through sand, mud, clay or other material to any required depth. The complete success which has attended the operations of this process shows it to be eminently practicable in, and much the best method known for, the construction of railroad bridges across deep and rapid rivers where permanent foundations of great strength are necessary, and have to be secured at great depth.

Applications for license for the use of the invention in any part of the United States may be made to H. V. POOR, Esq., Editor of the *American Railroad Journal*, 9 Spruce street; or for contracts for pile driving, or licenses as above to

CHARLES PONTEZ,
New York.

March 25th, 1854.

Notice to Contractors.

PACIFIC RAILROAD OF MISSOURI.

SEALED proposals will be received by the undersigned, at their office in the city of St. Louis, until six o'clock, P. M., of the 15th day of May next, for the Grading, Masonry, etc., of the first division of the South-west Branch of the Pacific Railroad, extending from Franklin Depot, the present terminus of the road, some 40 miles West of St. Louis, to the crossing of the Gasconade River, a distance of about 78 miles. The line will be divided into sections of about one mile each, and proposals may be made for one or more sections. The line, plans, profiles, specifications, form of contract, etc., will be ready for inspection on and after the first day of May next. The work to be let is quite heavy, situated in a healthy country, and is easy of access.

The undersigned reserve to themselves to reject all proposals that are not satisfactory.

A. S. DIVEN & CO.

March 24th, 1854.

Notice to Capitalists.

THE GREENVILLE AND COLUMBIA RAILROAD COMPANY

Now offers for sale their Coupon Bonds, redeemable in ten years, bearing interest at seven per cent, per annum, payable semi-annually, secured by mortgage of the entire Road, being the first lien upon it.

For a full understanding of the purposes, value of the property, and prospects of the Company, the following statement is made. It is proposed to issue Coupon Bonds, to the amount of three hundred thousand dollars which with those already issued will make the Bond debt \$800,000. The mortgage of the Road bearing date the eighteenth instant, is to cover these Bonds, as well those issued, as those to be issued, to the amount of \$800,000, and no more.

The Road was finished on the 9th December last, is well equipped, and in full and successful operation. The entire length of the Road, including its Branches, is 164 miles, and cost as follows:

Surveying and Engineering,.....	\$ 66,881 34	
Right of way.....	10,441 89	
Graduation,.....	474,787 69	
Masonry,.....	323,50 00	
Trestle Bridging,....	88,351 69	
Broad River Bridge,..	37,571 33	
Saluda Lower Bridge,	6,530 78	
Saluda Upper Bridge,	8,416 48	
Timber for Tracks,...	158,181 23	
Iron Rails,.....	575,235 59	
Spikes and Chairs,...	50,891 30	
Superstructure and Track Laying,....	94,921 42	
		\$1,604,560 74
Real Estate,.....	\$ 22,754 90	
Depots and Water Stations,.....	44,745 52	
Workshop Building,...	17,125 54	
Machinery for Workshop,....	16,702 19	
		101,328 15
Locomotive Engines,...	\$119,176 48	
Passenger and Freight Cars,.....	130,000 00	
		249,176 48
		\$1,955,065 37

Accounts for Materials, Work, &c., entering into construction, not yet fully ascertained, but supposed to be about,.....

100,000 00

2,055,065 37

Capital Stock paid in, \$1,100,029 49

Assessment on Stock paid in,..... 131,937 26

\$1,231,966 75

The Earnings of the Road for the last three months in an unfinished condition were as follows:

October—From Freight,...	\$12,761 13	
From Passengers	8,321 17	
From Mail,.....	700 00	
		\$21,782 30
November—From Freight,...	\$ 9,764 41	
From Passeng's	8,403 35	
From Mail,...	800 00	
		\$18,967 76
December—From Freight,...	\$12,205 26	
From Passeng's	9,034 00	
From Mail,....	900 00	
		\$22,139 26

For three Months,..... \$62,889 32

The whole expenses of the Road, it is believed, will not exceed \$11,000 per month, or 50 per cent, on the earnings. The Road, for the greater part, is well constructed—of good material and heavy iron, and could not now be made and furnished as it is for less than \$3,000,000.

By order of the Directors,

THOMAS C. PERRIN, *President*.

January 18th, 1854.

N. B. The Bonds can be had by applying to Mr. Jacob Cohen, of Charleston; Mr. J. P. Southern, of Columbia, or to me at Abbeville Court House. Bids for these Bonds are requested.

Railroad Iron.

1,300 TONS superior quality Yorkshire rails 56 pounds T pattern can be immediately delivered at New York, Savannah, or New Orleans.

For sale by

NAYLOR & CO.

New York, April 1st, 1854.

Brass Tubes for Locomotive and Marine Boilers.

THE undersigned having been appointed Agent for the highly respectable manufacturers Messrs. Allen, Everitt & Son of Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to

JOHN H. HICKS,
90 Beaver str.

March 1854.

Notice to Contractors.



Proposals will be received for all the heavy work on the Blue Ridge Rail Road, South Carolina; Blue Ridge Rail Road, Georgia; Tennessee River Rail Road, North Carolina; Knoxville and Charleston Rail Road Tennessee. The above lines of rail-way are consolidated and under the management of one Company, Extending from Anderson South Carolina, via Clayton, Georgia, Franklin North Carolina, to Knoxville Tennessee, a distance of 194 miles. That part of the road from Anderson South Carolina, to the Turniptop Mountain, a distance of 40 miles is principally earth excavation, of about equal quantities of cut and fill, with several bridges. From the Turniptop Mountain to the Rabun Gap, a distance of 24 miles, the work is very heavy, there being on the line one tunnel of 5800 feet, one of 1400 feet, and one of 400 feet in length; a suspension bridge across the Chatanga River 500 feet long, with some very heavy earth and rock cuts. The rock in the Tunnels is gneiss stratified. From the Rabun Gap to twenty miles below Franklin, a distance of 50 miles, the line follows down the Tennessee River; the class of work is principally side hill excavation, some of which is rock; their will also be several bridges. From the point 20 miles below Franklin to Hardens, a distance of 35 miles, the line follows the Tennessee River the entire distance, causing heavy side rock excavations. On this portion of the line will be several expensive bridges, and a tunnel of about 1000 feet. From Hardens to Knoxville, a distance of 45 miles, the line follows the river about eight miles, then leaves it, running across the Chilbona mountains almost a north line to Knoxville; this portion of the road is heavy work, with about equal quantities of cut and fill, an expensive bridge 1000 feet long and 45 feet high, crossing the Holston River at Knoxville. The character of the rock from Knoxville to Hardens is limestone, and from Hardens to Franklin gneiss rock stratified, and from Franklin to Anderson, stratified sand stone and gneiss rock. The character of the earth is sandy and clay loam. The line for the whole distance runs through high table lands, well settled, remarkable for its health, good water and ample resources for subsistence. The above line of rail-way offers great inducements to experienced contractors. The undersigned will be prepared to receive proposals and enter into contracts for the graduation, bridging, tunneling and masonry for the heavy portion of the line, from and after the 1st day of May next, at Knoxville Tennessee, Franklin North Carolina, and Pendleton South Carolina, and will continue at such places, until the same is under contract. Profiles and maps of approximate location can be seen at each of the above places after the 1st day of May. Proposals are asked with cash payments; also eighty per cent cash and twenty per cent in the Capital Stocks or Bonds of the Company. All communications prior to may 1st must be addressed at Pendleton South Carolina.

4,13

ANSON BANGS & Co.



ZERAH COLBURN, CIVIL AND MECHANICAL ENGINEER.

OFFERS his services to Railroad Companies and others, in designing and constructing Locomotive Engines of superior adaptation and efficiency.

Refers to CHAS. MIXOT, Supt. N. Y. and Erie Railroad; WM. RAYMOND LEE, Pres't, Ogdensburg railroad; G. W. WESTLER, Esq., Vice Pres't, New Haven railroad; ROGERS, KETCHUM & GROSTENOR, Paterson, N. J.; O. M. HYDE, Esq., Detroit.

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.
WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their **SYSTEM OF LOCOMOTIVE ENGINES** in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture **Five different kinds of Engines** and several classes or sizes of each kind.

Particular attention paid to the **strength of the machine in the plan and workmanship of all the details.** Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowling Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
 ILLINOIS CENTRAL RAILROAD.
 Vandalia, Ill.

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of

Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
 64 Courtland st., N. Y.

**To Railroad and Canal Co.'s,
Contractors, &c.**

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics, &c. of any description, and also to inform them that they forward such men to whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.
 No. 85 Greenwich street, New York.

New York and Erie R. R.**PASSENGER TRAINS**

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the B. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8¼ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAY EXPRESS, at 12¼ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAY PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.

These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

CHAS. MINOT, Sup't.

Railroad Iron.

2000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G L and "Crawshaw" manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by **P. CHOUTEAU, Jr., SANFORD & CO.,**
 December 4, 1852. No. 51 New street.

Duggan's work on Bridges.

SPECIMENS OF THE

STONE, IRON AND WOOD BRIDGES, VIADUCTS, Tunnels, Culverts, etc., of the United States Railroads; illustrated by a series of drawings, from actual measurement of the works; including plans, sections, elevations, and details of each structure, and an appendix, illustrative of the art of bridge building, as at present practiced in Europe.

Illustrated With Numerous Accurately Engraved Drawings.

15 Numbers, 75 Cents, each.

*A few sets of the above work, may be had by applying to the subscriber.

JOHN WILEY, 167 Broadway.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Railroad Letting.

PROPOSALS will be received by the undersigned at the Engineer's Office, Dover, Delaware, until March 14th, inclusive, for the Graduation, Masonry and Superstructure of the **DELAWARE RAILROAD**, extending from the New Castle and Frenchtown Railroad to Seaford, a distance of 70 miles, through a healthy region, and convenient to procure hands and supplies.

The work will be divided into sections of about 4 miles each.

Maps, profiles, and specifications will be ready for the examination of contractors, after the 1st of March.

Bidders personally unknown to the undersigned, will be expected to produce satisfactory evidence of their responsibility.

D. H. KENNEDY,
 Resident Engineer.

feb.18-tm14

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

BOORMAN, JOHNSTON & CO.,
 90 Broadway, New York.

Sept. 7.

Notice to Contractors.

Office of the Milwaukee and Horicon R. R. Co.
 Milwaukee, Wis., March 15th, 1854.

PROPOSALS will be received at this office till the first day of May next for the construction of the second division of the Milwaukee and Horicon Railroad, from Horicon to Berlin a distance of forty-two miles or sections thereof.

Maps, profiles and specifications will be ready for the examination of bidders on and after the tenth day of April next.

JOHN B. SMITH,
 Pres't M. & H. R. R. Co.

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality

by **THOMAS HUNT,**
 No. 53 Fulton Street,
 New York.

1y10*

OFFICE OF THE CLEVELAND AND TOLEDO RAILROAD CO.—No. 18 William Street—New York, 15th March, 1854.—DIVIDEND.—

A semi-annual Dividend of 5 per cent. on the capital stock of this company, has this day been declared, payable in cash, at the office of the company, on and after the 5th April next. Certificates of stock in either of the late companies, (Junction, or Toledo, Norwalk and Cleveland,) will be required to be exchanged for certificates of this company, before dividends are paid. The transfer books will be closed from the 25th inst., to the 5th April.

By order of the Board of Directors,
E. B. LITCHFIELD,

mh.17 lm.

Treasurer.

Railroad Iron Via Quebec.**JOHN ANDERSON & CO.**

**COMMISSION MERCHANTS,
 SHIPPING AGENTS AND BROKERS,
 Quebec and Montreal.**

PARTICULAR attention given to the Transshipment of Iron, &c., in Transit to the Western Lake Ports, and to the Shipment of Rails in Great Britain.
 Quebec, Dec. 2, 1853.

Notice to Contractors.

**EUROPEAN & NORTH AMERICAN RAILWAY
 NEW BRUNSWICK.**

PROPOSALS will be received by the undersigned at his office, Princess street, St. John, N. B., up to the 5th day of April 1854, for the entire construction of that portion of the Eastern Division of the above Railway extending from the crossing of the Road from Schediack to Dorchester to the Bend of the Petitcodiac River being a distance of about twelve miles, comprising the Grubbing, Grading, Masonry, Bridging, and the Ballasting and Laying of the permanent Road.

The work will be divided into two sections which being adjacent to others to be proceeded with on their completion, is well worthy the attention of Contractors.

Proposals may be made for one or both sections and with or without the permanent Road and Ballasting.

Plans and Specifications will be ready for the inspection of bidders on and after the 5th day of March at the above office where all other necessary information may be obtained.

W. E. ROSE.

St. John, N. B., 27th Feb'y 1854.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,
European, American Employment Office,
 287 Broadway, corner Reade-st.
 3d Under the Irving House, New York.

**THE
New Yorker Handels-Zeitung**

A **GERMAN** Commercial Paper, containing Prices Current, Market Reports, Exchange and Stock Rates, Shipping List and Correspondence from all parts of the world, appears twice a week in two separate editions, viz: one for home circulation, published each Wednesday and Saturday morning; the other for circulation in Europe,—the only German Paper published in the United States admitted to the German States—appears before the departure of each mail steamer for Europe. Terms: The paper, per annum, at New York, \$5, for Germany, full Postage included, \$11, and for all other parts of Europe, the U. S. Postage inclus., \$8. Advertisements taken at liberal terms.

To Contractors.

PACIFIC RAILROAD OF MISSOURI,

THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres't.

THOS. S. O'SULLIVAN, Chief Eng.
 Pacific R. R. Office, St. Louis, Feb. 1854.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by
BOORMAN, JOHNSTON & CO.,
 90 Broadway, New York.
 June 9, 1853.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to
THOS. CHAMBERS, President,
 September, 1850.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.

VOSE, PERKINS & CO.,
 9 South William St.

New York, June 1, 1851.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.
 Mayville, Ky., Sept. 29, 1853.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
 157 Broadway, New York.

CHARLES R. STUART,
DANIEL MARSH,

EDWARD W. SERRELL,
SAMUEL McELROY.

Railroad Iron.

3000 TONS superior quality, delivery from April forward, with 5 to 600 tons per month, for sale by
NAYLOR & CO.,
 121st 99 & 101 John street.

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by
JOHN H. HICKS,
 90 Beaver street.
 21 Feb'y.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars. Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West.

W. CLOUGH.

Refer to

JNO. BROUGH, Esq. **WINSLOW, LANIER & Co.**
 Feb. 18. 1m.

To Railroad Engineers and Contractors.

WANTED, a corps of efficient Engineers and Contractors, for the construction of a Railroad in one of the Southern States. Apply to
DUFF GREEN.

New York, Feb. 14th, 1854.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloohah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
 Superintendent.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the **BELLEVILLE IRON WORKS**, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
 No. 61 Camp Street,
 New Orleans;

and further information may be had by applying to Messrs. **BARSTOW & POPE**, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
 17 Burling Slip, New York.

February 15, 1850.

SHANAHAN & LOEBER,

181 William-st,
 (1st floor—Up Stairs.)
NEW-YORK.

**MANUFACTURERS OF
 THEODOLITES, TRANSITS, LEVELS,
 Surveyors' Compasses, Drawing Instruments,
 Chains, Scales, Levelling Rods, &c. 1y10**

**Notice to Contractors.
MEMPHIS & OHIO RAILROAD.**

SEALED proposals will be received at the office of the Memphis and Ohio Railroad Company, at Memphis, Tenn., until the 15th day of April next, for the grubbing, clearing, gradation, and masonry of the first 65 miles, from Memphis to Cherryville.

Contractors must give the most undoubted security for the completion of the work at the time, and in the manner specified; and contracts will be let in sections, or for the entire work, as may be deemed best by the Directors.

The Directory reserve the right of rejecting all bids, should none prove satisfactory; and it is desirable that all propositions should be submitted, with the view of preparing the whole work for the iron as soon as possible. Bids of that character and otherwise equally favorable, will have preference.

Maps, plans and specifications may be seen at the office of the company, after the first of April.
E. PEABODY,
 Engineer in charge.

To Contractors.

SEALED PROPOSALS will be received at the office of the undersigned, in the city of St. Louis, until Thursday, March 30th inst., for the Grading and Masonry on the **ST. LOUIS & IRON MOUNTAIN RAILROAD**, extending from St. Louis to the Pilot Knob Mountain, a distance of 87 miles, (except sections Nos. 1, 2, 3, 4 and 6.)

Plans and profiles will be ready for inspection one week previous to the letting.

This line is located through a remarkably healthy region of country. The work to be let embraces a tunnel through solid rock, heavy earth and rock cuttings, and various descriptions of masonry. Payments monthly in cash.

Further information may be obtained on application to either of the undersigned, or to the Engineers at the office of the St. Louis and Iron Mountain Railroad Company in St. Louis.

WM. M. WATTS,
 Carlisle, Pennsylvania.

CHAS. N. WATTS,
 St. Louis, Missouri.

W. MILNOR ROBERTS,
 Pittsburgh, Pennsylv.

St. Louis, March 2, 1854.

Knox & Shain,

**MANUFACTURERS OF
 LEVELS, TRANSITS AND SURVEYING
 COMPASSES.**

No 72 Dock st. first door south of Walnut, west side
PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

H. SAWYER

(of the late firm of **SAWYER & HOBBS**),
 Manufacturer of Transits and Levels,

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 14.]

SATURDAY, APRIL 8, 1854.

[WHOLE No. 938, VOL. XXVII.]

The Mechanical Engineering department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

The Economy of Railroads, as affected by the Adaptation of Locomotive Power.....	209
Mississippi and Atlantic Railroad.....	212
Journal of Railroad Law.....	213
Lackawanna Coal Fields.....	213
Ogdensburg Railroad.....	214
Pacific Railroad of Missouri.....	214
Illinois Central Railroad.....	215
Stock and Money Market.....	216
Cost and Productiveness of Western Railroads.....	218
Franklin Canal Railroad.....	218
Baltimore and Ohio Railroad.....	219
Statistics of the New Jersey Railroads.....	219
Mississippi Central Railroad.....	220
State of the Maine Railroads.....	220
Ohio and Mississippi Railroad.....	221

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, April 8, 1854.

The Economy of Railroads, as Affected by the Adaptation of Locomotive Power—Addressed to the Railroad Interests of New England.

BY ZERAH COLBURN,
Mechanical Engineer.
(Continued from Page 198.)

Railroads, being the types of progress, their history is soon forgotten; but the most cursory examination of their capital and revenue accounts for the last few years will show the relation which has prevailed between their cost and movement. When the Boston and Worcester road was conducting a movement about the same as now exists on some of the interior roads, its cost was only about \$30,000 per mile, while that of the Boston and Providence road was much less. The only example of fares and tolls furnished for the operation of the earlier roads were such as were exhibited in stage travel and "heavy teaming."

The increase of the capital account of some of the older New England roads is a matter of much interest. It was only by an extraordinary increase of business, in all parts to which railroads had been built, that this increase ever became able

to afford a return. Had the number of passengers and tons of freight, offering for transportation been but nearly in proportion to the increased investments, much of the railway interests of New England would have become bankrupt long ago.

The following table will exhibit the construction account, net earnings and passenger and freight mileage upon the principal Massachusetts roads at the ends of 1847 and of 1853. The upper row of figures are for the year 1847.

Name of Road.	Cost.	Net Earnings.	Passengers. one mile.	Tons freight one mile.
Lowell,.....	\$1,956,719	\$195,147	9,523,436	7,117,656
1853.....	2,044,536	114,098	9,576,208	7,542,574
	inc. 4½ pr. ct.	dec. 41½ pr. ct.	inc. ½ pr. ct.	inc. 6 pr. ct.
Maine,.....	3,021,172	291,245	12,599,118	8,612,840
1853.....	4,111,346	418,358	27,426,685	8,066,170
	inc. 36 pr. ct.	inc. 43½ pr. ct.	inc. 117½ pr. ct.	inc. 123½ pr. ct.
Providence,.....	2,544,715	187,983	7,196,743	1,937,027
1853.....	3,576,041	226,639	11,150,038	4,712,754
	inc. 40½ pr. ct.	inc. 20½ pr. ct.	inc. 55 pr. ct.	inc. 143½ pr. ct.
Worcester,.....	4,113,610	340,185	14,480,678	10,755,799
1853.....	4,850,755	413,290	24,700,512	11,577,498
	inc. 18 pr. ct.	inc. 21½ pr. ct.	inc. 70½ pr. ct.	inc. 8 pr. ct.
Eastern.....	2,937,207	264,757	12,757,026	1,165,873
1853.....	3,120,392	310,875	14,710,581	2,774,307
	inc. 6¼ pr. ct.	inc. 17½ pr. ct.	inc. 15½ pr. ct.	inc. 138 pr. ct.
Fitchburg,.....	2,406,724	223,011	8,009,487	5,198,497
1853.....	3,716,870	214,634	17,314,206	12,180,140
	inc. 54½ pr. ct.	dec. 3¼ pr. ct.	inc. 116 pr. ct.	inc. 184½ pr. ct.
Western.....	8,769,474	648,646	17,867,644	28,037,628
1853.....	9,953,759	736,736	27,488,944	28,153,554
	inc. 13½ pr. ct.	inc. 15 pr. ct.	inc. 54 pr. ct.	inc. ¾ pr. ct.

A comparison of the earnings and movements on these railroads, for the six years named, does not exhibit the relative increase of movement in so strong a light as a comparison for the six previous years would have done. Although the comparisons given show that material change has occurred in the relation between work done and compensation received, yet during this time the system of fares and trains may be said to have been established. During the previous six years, however, the most important changes were making in the speed and capacity of trains, commutation, regular fares and in freight tariffs. The relative increase of movement, compared with permanent investment and earnings, as shown in the table, has resulted from the introduction of a considerable business from connecting roads, and from the increase of commutation travel in the neighborhood of Boston, both of which branches of transportation pay less per head or per ton than the regular local business.

A comparison of the value of the stocks of the roads named, at both periods, may be interesting.

	Nov. 6th 1847.	Nov. 9th 1853.	Decrease in 6 years.
Lowell.....	120½	94½	26
Maine.....	116	102½	13½
Providence.....	104	86½	17½
Worcester.....	120½	101	19½
Eastern.....	110	91	19
Fitchburg.....	125	93½	31½
Western.....	113	99	14

Averages .115½ 96½ 20½

An average decline of 8½ per cent., per annum, on the principal New England roads; nearly all of which have had the benefit of extensions of their lines, mostly made at a loss by other companies, but bringing business previously excluded from Boston.

If the trunks have suffered how has it been with the tributaries? Compare other sales at the same periods as above.

	Nov. 6th, 1847.	Present price.	Decline in 6 years.
Vermont and Mass.	75½	22	53½
Cheshire	91	30	55
Vermont Central ...	88	12¼	75¾
Northern (N. H.)...	102½	57½	45
Passumpsic	90	26	64

The average decline in these stocks has been about 60 per cent; or three times that upon the leading roads out of Boston.

Some of the causes of the decline of the stocks of the interior roads are very well known. Unexpected cost, financial sacrifices, and the results of competition have been principally active. The result conveys a lesson to those who would impose the support of a large amount of capital upon a limited extent of production. The present discount on the cost of the roads named represents the proportion of capital invested beyond the wants of the paying business.

Massachusetts, in any effort to open another route through her state, has the example of the construction of two rival roads in Vermont, a rich agricultural and mineral state. Above Burlington, a single road, built on a good route at a moderate outlay, ought to be worth in the market nearly all that it cost. Were not the business of the Vermont Central principally diverted from Bellows Falls, the Cheshire might earn the interest on its cost, also. Yet the Cheshire has cost heavily, and is still subject to a rise and fall which would give it a grade of 40 feet per mile for its entire length. What would this road do if it were not extended beyond the Connecticut River. Its stock, as a marketable basis, would have no value at all, as the business could not pay running expenses.

It is the increase of capital account that has worked loss to the interior railroads of New England. It makes no difference whether the money has been sunk in one road, or in two roads occupying essentially the same relation to the general business of the country traversed. The old roads have increased their cost, but, as has been shown, with a greater increase of business, and therefore with less loss.

The Fitchburg road has secured a good position in Boston, but only at a great cost, not as yet demanded. At the same time, to attract business to make its investments productive, it has competed for it at prices which have kept no proportion to the outlay on which they have been earned. Its stock has suffered the heaviest decline of that of any road running into Boston, being now at about 85 per cent. or 40 per cent. below its value in 1847. Its fares must be raised, even against the wishes of one whose known principles have influenced their adjustment:—else, the business must be done at less cost. Can this be? This essay has been undertaken in the hope that such a result may be yet attained.

How has the Providence road increased its cost also. A road originally opened at about the engineer's estimate of \$800,000.—It has brought the cost of its main track up to \$70,000 per mile to compete with a route giving nearly 40 miles less railroad travel to the New York passenger, and costing, as built, but \$25,000 per mile. The reason why the Fall River route is popular is because, by reason of its low cost, it can afford

superb accommodations in its boats. It is profitable because it works to advantage upon \$2,500,000 less capital than either of the other New York and Boston lines. Yet it is very much the longest in distance. There is not a stockholder in the Providence road who can present business reasons for the construction of the great passenger station at Providence, and the costly connection with the Stonington road.

Let any stockholder consider the independence of a company having a real monopoly of any business. Let him consider that the cost of movement, which is the governing element, not only depends upon the mere cost of power and attendance, but on the interest of the permanent investment. Witness the Fall River road, whose fixtures in Boston would not be missed except by its patrons if taken away. That company has secured the largest business of any route between New York and Boston. Having to pay tolls over but a short distance of connecting road, only about one-fourth of that of the other boat routes, there is no doubt but it could have sustained the great competition of 1852-3 without loss. It is now building a boat which will surpass, in extent of finish and accommodation, anything ever planned in marine architecture.

It costs little more to run a boat to Fall River than to the Thames or to Stonington, while the cost of railroad movement beyond is greatly reduced. Marine travel, once embarked, seeks the point nearest to its ultimate destination. This is why New York is preferred as an importing city to Boston. It is nearer in time and distance to the great centers of distribution than any other Atlantic city. The same reason gives Buffalo a supremacy over Dunkirk, and Chicago over Milwaukee. The same reason gives Baltimore a trade which passes by the commercial facilities of Norfolk unnoticed.

So long as interest really forms a principal part of the cost of transportation so long will works fail which are built at great cost only for competition.

Consider this element of interest in the case of the Hoosic tunnel route. The tunnel is estimated to cost \$2,000,000.

With the same character of material to be removed, with a given length, and with a given depth and number of shafts, the cost of a tunnel will depend upon its area of cross section. The proposed Hoosic tunnel will be 21 feet wide at grade, 24 feet wide at 6 feet above grade, and 18 feet high at the highest point, above the level of the rails. The area of its cross section is 405 square feet. Compared with other important tunnels, built in this country, this area is deficient. The long tunnel of the Pennsylvania Railroad, at Sugar Run Gap, is five feet higher. The tunnel at Cincinnati, to be, when finished, nearly two miles in length, is five feet wider and two feet higher. The tunnels on the Reading Railroad are smaller than the Hoosic, but they were intended for coal trains. The passenger cars upon that road are of limited width, some having but a single seat on one side of the aisle, and all have strong gratings outside of the windows.

The Michigan Central Railroad has adopted the use of cars wider than those in general use on other narrow gauge roads. These cars have proved steady and are more comfortable than others of

less width. Cars, of this width, nearly 10½ feet over all, would hardly pass with safety on double track in the proposed Hoosic tunnel, and for that reason might not be eventually adopted, even if it were desirable, from motives of comfort and accommodation to do so. In addition they would run too near the sides of the tunnel for the safety of the train men, and of the passengers also unless they were prevented from putting their heads and arms out of the windows.

The height of the tunnel, above the centers of the tracks, would allow little more than the actual necessary height of chimney, without giving proper room for draught. A short tunnel, in a level road, might not require steam for a train already in motion, but the Hoosic is to be nearly five miles long and on a grade of 25 feet rise per mile. Such a passage would require the best working of the locomotive. The 4,100 feet tunnel of the Pennsylvania Road is on a much steeper grade, but its roof is 23 feet above the rails. Without a proper height, some difficulty might be apprehended as to ventilation. In Mr. Derby's argument in the tunnel hearing he remarked that with 25 feet depth there would be no difficulty as to ventilation. He had based his estimate of cost, however, upon his engineer's section of but 18 feet above the rails. Add 7 feet of height and the tunnel becomes much more expensive.

The men employed upon the freight trains would require to be on the tops of the cars much of the time. On any signal to stop or start the trains in the tunnel, these men would be in motion and would not be safe within the proposed height.

From the length of such a passage it will require to be divested of all possible danger and difficulty. From all the considerations above presented it is probable that an increase of the area of the tunnel by one-third of its proposed extent would be required, an enlargement which would cost, at the estimated rates, about \$500,000.

Assuming that \$2,500,000 will complete the tunnel. This would pay for 50 miles of road at \$50,000 per mile. The cost of operating 50 miles of road would be \$150,000 per annum for interest, and the same, say, for expenses. Hence \$150,000 the whole cost of interest and operation of 25 miles of road per year, would be against the 4 miles of tunnel; or 21 miles added in distance. Is not here a consideration of some consequence in estimating comparative grades, curves, and distances? Add 21 miles to the actual length of the road and we have 207 miles as the distance between Troy and Boston, leaving out all equation of grades and curves.

It is clearly for the interest of Boston to participate in so much of the Western business as she can without loss. But never can she realize a practical advantage from being five miles nearer New York than to Troy. Actively employed rolling power and working facilities, will best make her present investments productive; but never can she impose the support of another large investment upon her present foreign business, without driving it away from her, and bringing loss, both to herself, and to the principal railway interests of New England.

As the greater part of the railroad investments in Massachusetts, New Hampshire and Vermont

have been made with reference to securing a part of the Western business, it is worth while to consider the inducements which exist to make the cost of transportation the least possible. When I have already explained that I include the interest on the investment as a necessary part of this cost, it will be seen that the construction of even somewhat easier routes, will impose a new tax on the movement, such as will require a great reduction of working expenses to compensate. It would be no economy in saving in one pocket to lose from the other. The best economy is that which, without any sensible increase of capital, or any hazard of income, would effect the present transportation at lower rates.

Economy of transportation is more essential with freight than with passengers. The channel taken in the movement of property is governed wholly by selfishness, and so strongly is freight influenced by this consideration that it takes the business travel with it, however reluctantly former mercantile relations may be severed. While of such travel as is not altogether dependent on the movement of freight, much may be said to be already secured, even at moderately high fares. The social ties originating in New England, which influence a good share of its present movement, will not be extinguished while the population retains its present character. Whatever natural attractions exist, to invite pleasure travel, cannot be removed. But freight, being the locomotive wealth of the country, carries travel with it. It builds ware-houses, attracts shipping and creates manufactures. It employs labor, capital, taste and skill; and where these are combined, society becomes organized. It is the production and disposition of "freight" that form the greater part of the business operations of a community. It is the activity of business and the extent of its operations which give value to property—which create the wealth of society. In a country like ours, where capital must be supplied, nothing like business can create taste, fashion, science and art. This fact is an inevitable consequence of the democracy of our institutions.

If travel be then dependent on commercial inducement, so soon as this element is supplied the railroad system is in demand. If Boston is to become a great mart, the movement of merchandise must be encouraged. Low passenger fares, beyond a certain limit in the suburban districts of a metropolis, do not offer commercial inducements to travel. A man who visits his friends in Boston, another who visits the place merely to become acquainted with it, a third who goes to select a stock of goods, or to dispose of produce; all, or either, can better spare a few shillings of increased fare than the same sum exacted on every ton of freight which they might find convenient or profitable to have moved.

From the position of Boston, being destitute of natural communication with the interior of New England and the West, it would be supposed that her great system of railroads would be worked chiefly with reference to the movement of freight. New York has the Hudson, the great outlet and natural harbor of the tonnage of the Erie and Champlain Canals; that reaching the Hudson amounting to over two millions of tons yearly. She has the Sound, with its long stretch of coast, furnishing from the back country large quantities

of manufactures, building materials, and other valuable freight. The Morris Canal is bringing down about half a million tons of coal, iron and iron ore, yearly. The Delaware and Hudson Canal is bringing in two millions of dollars worth, or half a million tons, of coal, in the same time. The Delaware and Raritan Canal is another freight route.

Boston brings freight from the interior only, by railroad. The whole number of tons of freight carried upon the railroads entering that city were, for 1853, as follows:

Boston and Lowell, tons.....	342,629
Boston and Maine, ".....	251,327
Boston and Prov. ".....	142,126
Bost. and Worcester, ".....	309,715
Eastern, ".....	102,617
Fitchburg, ".....	430,606
Old Colony, ".....	118,410

Total.....1,697,430

A part of this tonnage did not originate or terminate in Boston, being moved between local stations, or from local stations outward. Another portion of this tonnage entered Boston in transitu, being carried directly to other roads running out of Boston, and was not, therefore, properly inclusive in the trade of that city. It may not be far from correct to allow nine hundred thousand tons of freight as entering Boston by railroad, and unconsigning to other roads, in 1853; and six hundred thousand tons as leaving, in the same time.

Of this quantity of freight, 59,018 tons were carried from Albany to Boston by the Western road. (This was carried between Nov. 30, 1852, and Dec. 1, 1853.) The through freight from Ogdensburg to Rouse's Point, for the year 1852, was 112,048 tons, a portion of which originated at Ogdensburg, and another portion of which, at or below Rouse's Point, was diverted from Boston. The "Western business," brought from beyond Albany and Ogdensburg to Boston, cannot reach 150,000 tons per annum, even allowing for what may come by the way of Whitehall and Rutland.

Let us look at the cost of the roads over which this business has entered Boston:

Boston and Worcester.....	\$4,850,755
Western.....	9,953,259

Cost of the Bost. and Alb. line..	\$14,804,014
Fitchburg.....	\$3,716,870
Cheshire.....	3,075,195
Rutland and Burlington.....	5,477,467
Vermont Central.....	8,072,281
Vermont and Canada.....	1,500,000
Northern, N. H.....	5,133,834

\$26,975,647

Taking also the cost of the New Hampshire line, to the connection with the Vermont Central, a route taking a part of the Western business that now comes over the Ogdensburg road.

Boston and Lowell, leaving out branches, say.....	\$1,900,000
Nashua and Lowell.....	651,215
Concord.....	1,409,092
Northern, N. H., about.....	3,100,000
Manchester and Lawrence.....	750,000
26 miles of Boston and Maine, say.....	2,000,000

\$9,810,313

Whole cost of lines engaged in the "Western business" of Boston, \$51,589,974. To work these lines at a profit under their ordinary expenditure, their business must pay 15 per cent. per annum,

on their cost; or the sum of \$7,788,496 every year. Could all of the roads named receive adequate support, and be employed wholly in Western business, their customers would pay nearly as much in a year as would build a route from Boston to the Erie Canal, equal in capacity to all the business which would be done over the present routes.

It remains to be seen if Boston will add \$5,000,000 to the \$3,500,000 of dormant capital of the Vermont and Massachusetts road, and thereby saddle the support of \$8,500,000, and ultimately, at least \$10,000,000 of additional investment upon the business already taxed towards the support of over fifty millions of dollars. If this be done, it shows a profusion of capital not to be expected in times when Western roads, of necessary construction, are offering a seven or eight per cent. interest on every dollar they can get.

Whatever may be the result of the Hoosic tunnel route upon a portion of existing investments, it will always have a powerful competitor in the Western road. The Western road has the larger part of its cost employed in local business, and could, as it stands, control a great amount of through business with a very little increase for interest on capital, and, as I shall hereafter endeavor to show, at a cost of operation much below the present expenditure.

Its rival line, the Troy and Boston, on the contrary, must look for its chief support from through business. The Vermont and Massachusetts road, a part of the line, has done comparatively nothing towards supporting itself for the four or five years of its operation. The Pittsfield and North Adams road, which enters the region intersected by the proposed Troy and Boston road, has exhausted the fund contributed to guarantee the payment of interest by its lessees, the Western Railroad Company. It is true that the branch cannot accommodate the business of Berkshire North, so well as would a trunk road, and it is also true, that the movement upon the branch may have increased the business, somewhat, upon the main road. But should the new road be built, the Western Railroad could well afford to lose the present business of the branch, by transferring its lease, if possible, to the Troy road.

The whole aim of this essay, is to show the real elements of the cost of transportation, and how it may be reduced. So long as money is an exchangeable material, so long does its use enter into the cost of transportation; and, what is more, much in proportion to the permanent investment will be the actual decay and destruction of the work. This remark does not apply to the quality of the work, but the quantity. Two tracks cost more than one for repairs; twenty stations, more than ten in the same length of road; two engines more than one, etc.

The New England railroad system has become less profitable, as an investment, than were its capital employed in some other kinds of business; while the tendency of railway property is still downward. As I have charged this state of things partly to a too large investment in the business, I could not overlook the case of the Hoosic tunnel route, now urging its claim upon the people of Massachusetts.

In expressing my opinion, as to the results likely to flow from its construction, I am free of all

interest and obligation to either party. With its present cost, I look upon the Western road as the proper Western inlet of trade and travel to Boston, but from this road I have never asked nor received so much as a free ticket, nor do I anticipate that it will appreciate volunteer counsel in its cause. Its principal officers know my views in relation to locomotive power, and I have been told that no change would be likely to be effected in railway machinery in Massachusetts. I have no interest in a change, apart from a professional knowledge of its economy. Next to the over-construction of railways in New England, the system has suffered from an imperfect adaptation of power. Locomotive power and the wear of locomotives upon the tracks, includes a large share of the operating expenses of roads, and this power has been used in New England so that a given cost could earn but a small freight.

To be continued.

Mississippi and Atlantic Railroad Company.

We copy by request, from the New York Courier and Enquirer, the following statement, showing the history, position and objects, of the Mississippi and Atlantic Railroad Company.

To the Editors of the Courier and Enquirer.

In the Money Article in your paper of the 25th instant is an elaborate assault upon the Mississippi and Atlantic Railroad. The article is such a marked exception to the general tone of your paper—it so entirely misconceives the position and character of the above project, and is so calculated to mislead the public mind, that I must claim the privilege of presenting through the same medium a brief reply. In order that the true position of the Mississippi and Atlantic Company may be fully understood, it is necessary to refer to the history of what has been called in Illinois "State Policy."

That State in 1836 devised a scheme of railroad construction which it undertook in its own capacity and with its own resources and credit. This scheme, it will be remembered, embraced a variety of routes extending in every direction north and south, east and west. A part of the "policy" adopted was to build up various points within the State without reference to the consideration whether they were the natural depots of commerce or the most convenient for the purposes of trade. The most striking evidence of this was that St. Louis was not recognized as the terminus of any of the projected lines; but Alton, an insignificant village 25 miles above that city, and within the State of Illinois, was selected as the great port on the Mississippi River, which was to rival St. Louis, and cause all the trade and travel of Illinois coming from the East to terminate at that point. Now it is evident that true "policy" would dictate that a direct line eastward should have taken St. Louis as its starting point, without reference to the consideration whether it was or was not within the geographical limits of Illinois. It is well known that the magnificent projects of the State ended in ruin, and the State was left without one mile of its projected improvements completed and with a debt of \$17,000,000 incurred, which was wholly lost (the Alton and Terre Haute Road being one of the projected and abandoned lines). The disgrace and embarrassments of the State which followed are well known. The consequence of this disastrous policy was, that in the new constitution of the State a provision was inserted prohibiting all similar undertakings on the part of the State. This left the whole matter of building railroads to the efforts of private enterprise only.

There have always been persons with capital ready to build a road between St. Louis and Terre Haute. It being the straightest and consequently the shortest route from Terre Haute (a point at which now terminates virtually about 10,000 miles

of railroad, diverging at Indianapolis to every important point on the Atlantic) to St. Louis, the obvious terminus of a road designed to connect the Mississippi with the Atlantic. Under the general Railroad Law of the State they organized a Company for this purpose. But here again arose the same spirit which had involved the State in such disaster, and appealing to the same narrow prejudices which had before influenced the people, they erected the banner of "State Policy"—and no pains were to be spared to give to Alton an importance which it can never attain either from its natural position or its local advantages. A road was projected from Alton to Terre Haute, and by taking it through various country seats and unimportant villages, its projectors enlisted considerable influence in its favor. But it was soon found that no favor in the eyes of eastern capitalists could be obtained for the scheme so long as the proposed straight line from St. Louis was in their way.

There is a provision in the General Railroad Law, that no lands can be condemned by any company for its use, unless the Legislature shall declare that the contemplated road is of sufficient public interest to warrant the taking of private property. "State policy" being for the time omnipotent in the Legislature, the new Company proceeded to purchase the right of way on the whole length of the road, thus avoiding the necessity of the legislation above referred to. One would suppose that here, at least, opposition would cease, and the stockholders would be permitted to prosecute their enterprise without further interruption. But no! "State Policy" was yet alive, and it all at once discovered that not only did the Railroad Law require this legislation to protect the right of parties whose lands it was proposed to condemn, but that it was equally required to protect the stockholders against themselves; and that the Railroad Company could not build a road across its own lands.

It was then determined to apply to the Legislature to give the Company all the powers that it was pretended it lacked, but "State Policy" was again in the ascendant, and the Legislature refused to recognize the Company as a valid corporation under the Railroad Law, and rejected the bill by a large majority. But now came a reaction, and the sense of the people began to operate, and "State Policy" was doomed and the Legislature at its late special session, by a vote of two to one, gave the Mississippi and Atlantic Railroad Company all the powers that it required to prosecute its work to completion.

Now it will be seen that the Mississippi and Atlantic Railroad Company have surmounted all the difficulties that its opponents have placed in its way; and that, driven out of the Legislature, they next make their appearance in Wall street, and renew the contest with different tactics. They have failed to protect the people of Illinois against the schemes of capitalists who would build roads and expend money within their borders, now are much distressed for the capitalists themselves, and they read them a lecture, urging them to a conservative course, and warning them against contributing to the building of rival roads. It will be seen from the above which is the rival road. The one contemplated long since, and which would, but for the opposition it has met with, ere this have been in full operation, and occupying the straight line between St. Louis and the point from which 10,000 miles of road diverge to the Atlantic coast; or the crooked line, beginning at Alton, and pursuing a devious course, finally comes to the same eastern terminus with the Mississippi and Atlantic. The one for which the capital stock has been long subscribed, or that which could with difficulty be prosecuted, even after capitalists had been induced to take an interest in it only by assurances, to which they trust that "State Policy" would forever prevent the prosecution of the other.

The Mississippi and Atlantic Road has no rival in any proposed Road. It can have no rival that does not occupy its own line. The opposing lines can never interfere with its usefulness or its profits. If they suffer from the construction of this

Road, they certainly cannot blame any but themselves. They had full notice that this Road would be built. If they have failed to prevent it, they must suffer the consequence for their mistake. Had the friends of the Mississippi and Atlantic resorted to the mode of warfare adopted by their opponents, it would have been an easy matter to have driven their securities out of the market.

For the local business there can be no rivalry whatever between the roads, as a glance at the map will show. The Ohio and Mississippi Road crosses the Wabash river some sixty miles south of Terre Haute, and does not sensibly approach nearer than that distance to the line of the Mississippi and Atlantic Road, until they have traversed nearly three fourths of the way to St. Louis, and as these lines proceed east of Terre Haute they are still wider apart. The Alton and Terre Haute, although starting from the same eastern point with the Mississippi and Atlantic Road, diverges immediately therefrom, and runs its whole distance, about twenty-five miles from it, at which distance they are apart when they touch the Mississippi River.

For the through business between St. Louis and all the East, the Mississippi Road can suffer from no competition that is not ruinous to those who attempt to compete with it; for the reason that it is the short-route in the right direction, opposed to the long route in the wrong direction. From St. Louis to Terre Haute it will have the advantage of 30 miles in distance. This measures its superiority as a through line. In view of all these considerations, where is the project in the United States that holds out such inducements to capitalists as this? A route of greater merit cannot be found in this country, nor one, the advantages of which are better understood by the business world and capitalists.

The contracts for this Road have been made in short portions and to be paid in cash only. Those familiar with the mode so generally in vogue of letting in large masses to large contractors, payable in stock and bonds, and of which practice the roads opposing the Mississippi and Atlantic are specimens, will at once see that every dollar of the capital of this road will be represented by value received, and not one-third or one-quarter of it a fiction, representing the profits of the contractors and nothing else. The intelligent capitalist will have no difficulty in deciding which is the true and which the bogus line.

Perhaps, however, the most unwarrantable feature in the article alluded to is the slur attempted to be cast upon the President of the Mississippi and Atlantic Railroad Company, Mr. Brough, and whose name is so intimately connected with the work, in consequence of the decline in the market value of the stock of a Company of which he was the former President, and which is styled one of his projects, (and which it is confidently expected will be but temporary. That Road was not a project of Mr. Brough. It was begun by the State of Indiana, and abandoned from its inability to complete it. It was then given to a private Company who placed it under the charge of Mr. Brough, by whom it was resuscitated and made one of the best paying Roads in the country. It did a large business, which has been reduced by the opening of other roads. For the location of the Road, Mr. Brough certainly is not responsible, nor for the building of rival Roads which have interfered with its business; what he did was well done, and the efficiency and ability displayed by him in his management of that work after its abandonment by the State, point him out as the most suitable individual to whom could be confined the construction of the great line from Terre Haute to St. Louis, and to him is certainly due great praise as having been instrumental in overthrowing that incubus upon Illinois—"State Policy."

In conclusion permit me to assure the gentlemen who have been so active and untiring in opposing the construction of the M. and A. Railroad, that they may spare themselves any further effort in that behalf. THE ROAD WILL BE MADE.

A NEW YORK STOCKHOLDER.

Journal of Railroad Law.

CONFLICTING RAILWAY GRANTS.

This was the chief subject of discussion in the case of the *Union Branch Railroad Company vs. the East Tennessee & Georgia Railroad Company* lately decided by Judge Lumpkin in the Murray Superior Court in Georgia, and reported in the *American Law Register* for last month. In what cases one statute can repeal a previous statute by mere implication is often a grand question, as the Nebraska controversy abundantly shows. The legal authorities agree that an older statute cannot be impliedly repealed by a later one unless the repugnancy between the two is irreconcilable. The law does not favor such a construction as repeals a former law by mere implication derived from a later one. It is to be presumed that a legislative body will not hide its meaning in innuendo and mystery, but will explicitly say what it intends. In construing different laws relative to the same subject, Courts of Justice inquire into the guiding policy of the Government by which those laws were enacted, and availing themselves of the light derived from that source they endeavor to harmonize their apparent incongruities.

But this cannot always be done. And in such case the latest expression of the Legislative will if clear and decisive must prevail.

It was denied by the complainants in the case above-mentioned that the State of Georgia could give authority to the East Tennessee and Georgia Railroad Company as a corporation of the State of Tennessee to extend their road into Georgia. But this is untenable ground. For it is the law of the land that a corporation of one State or country may make valid contracts in another State or country, provided their charter warrants such contracts, and there be no positive disability by statute for a corporation to make such contracts in the State where they are made. The fullest comity prevails, in this respect through the different States of the Union. This point was definitively established by the Supreme Court of the United States in the case of the *Bank of Augusta vs. Earle*, 13 Peters 519.

It was also objected that the Act of the Legislature of Georgia authorizing the defendants to extend their line into that State in consideration of a similar act passed by the Legislature of Tennessee giving a reciprocal privilege was an unauthorized compact between two States, and as such prohibited by the Constitution.

But this was held only to apply so treaties of a political character.

We subjoin a summary of the principal points decided by Judge Lumpkin in the case first above-mentioned.

1st. In the year 1840 the Legislature of Georgia incorporated the complainants (by a name different from their present one) reserving the right to repeal the act of incorporation. In 1847 an act was passed granting the right of way over the same route to the defendants. In 1849 the Legislature recognized the privileges granted to the said Company by the act of 1840 but repealed the clause in their charter reserving the right to repeal the same.

The act of 1847 repealed the act of 1840 so far as the exclusive right of way was

concerned, because the former act is directly repugnant to the latter. An affirmative statute is a repeal by implication of a prior affirmative statute, so far as it is contrary thereto.

2d. The prohibition in the Constitution of the United States to the effect that "no State without the consent of Congress shall enter into any agreement or compact with another State or with a foreign power" is political in its character, and has no reference to a mere matter of contract or to the grant of a franchise which nowise conflicts with the powers delegated to the General Government by the States.

3d. The existence of a corporation as a party capable of contracting may be recognized by Courts other than those in which the charter was granted.

Report on the Lackawanna Coal Region.

Professor Henry D. Rogers has made a detailed report on the geology and mineral resources of that portion of the Lackawanna Coal Basin owned by the Delaware, Lackawanna and Western Railroad Company and the Lackawanna Coal and Iron Company.

These lands are situated in the Lackawanna Valley, about 50 miles from the Erie Railroad at Great Bend, and contain, in all, about 5,000 acres of land in and about the town of Scranton. Of their extent, about 2,000 acres are covered with excellent timber, underlaid for a considerable portion with a bed of excellent iron ore. The other and more valuable part of the estate, containing about 3,000 acres, is wholly underlaid with coal.

After giving a general view of the topographical features of the district in which these lands are situated, a description of the strata is given.

The first and lowest in the order of stratification, is a thick series of gray sandstones, occasionally pebbly, and including beds of shale. This outcrops high on the inner slope and summit of the outer broad mountain ridge of each border of the Basin. The formation is several hundred feet in thickness; and is the lowest or oldest of our American carboniferous strata, but in this part of the mountain chain of the country, contains no coal nor any notable amount of iron ore. Some of the extreme South Eastern tracts of the Company's estate, extend into this formation, where it forms the high mountain bordering the upper reach of the valley of Stafford Meadow Brook.

Next in succession, overlying the previous set, and outcropping to form the bench, or sometimes valley, which follows the inner slope of the outer or main mountain all round the Coal Basin, is a mixed group of strata, red shales in the inferior portion, gray sandstones and buff-colored slates in the middle, and a peculiar hone-like, very close-grained calcareous sandstone in the upper. It is among the layers of the lower or shale group of this formation that we encounter the interesting *calcareous iron ore* of the Stafford Meadow Valley, now extensively mined there on the Lackawanna Iron and Coal Company's lands, and largely smelted in the furnaces at Scranton.

Immediately over the fine-grained, hone-like sandstone of the top of the last Series, rests the coarse, massive, white and gray conglomerate, which constitutes the base or supporting member of the productive coal measures, or Upper Carboniferous Series;

At Scranton, on Roaring Brook, the coarser rock is about eighty feet, and the finer grained, which is here quarried and makes a valuable, strong building stone, is about the same thickness. In some parts of the Anthracite coal region, and pos-

sibly in certain localities on the borders of the Wyoming Basin, indications exist of the presence of a bed of coal in the shales which sometimes separate these two divisions of the conglomerate. This fact, and the identity in composition of the upper member with the coarser grits of the true coal measures, induce me to class it as a part of these, though, as it usually lies below any workable coal, it may equally retain its place as a division of the conglomerate upon which it directly reposes, and into which it in many places graduates.

The last and highest of the formations of the region in the order of stratification, is the Coal Formation proper. In the Wyoming and Lackawanna basin, this consists, as is well known, of coarse and fine-grained gray micaceous sandstone, pebbly in some of their beds; and of argillaceous sandstones, shales, slates, and fire-clays, some more siliceous and gritty, some more aluminous and smooth; and between all these are interstratified beds of anthracite of all dimensions, from a few inches to many yards in thickness. All the coal seams, with one or two very local exceptions, yield either white or gray ashes, and as in the Pottsville and Shamokin basins, the coals of this character are overlaid by a group of beds, producing red and brownish ashes such as are not here met with, it is fair to infer that in this Wyoming valley we have the representatives of only the lower or White Ash Series of the other basins.

It is impossible to estimate with precision, until researches now in progress are completed, the total thickness of the coal measures in the deepest parts of the Wyoming and Lackawanna basin, nor to count with accuracy the number of the available beds of coal in those localities. For my present purpose, that of a general sketch of the geology and vast mining resources of this valley, it will be sufficient to state here, that exact measurement has already disclosed, in the vicinity of Wilkesbarre, the widest and apparently the deepest portion of the coal field, the existence of from 1000 to 1,200 or more feet of coal-bearing strata, and the presence within these of sixteen or eighteen separate beds of coal; two or three of them being compound seams of great size, and about ten or more of the whole series being permanently of ample dimensions for profitable mining. This depth of the coal measures, and the number of the contained coal seams grow less, of course, from the centre of the basin towards its two margins, and also towards its two contracting extremities.

In the immediate neighborhood of Scranton, a portion of the Coal Basin where the coal measures are unusually well developed by natural features in the topography, and through the researches directed by the companies, the coal rocks, counting from the upper surface of the Seral or lower conglomerate to the highest sandstones of the plateau South-west of Hyd: Park Village, disclose, upon careful measurements, an aggregate thickness of about seven hundred feet; and in this depth of strata the whole number of coals, large and small, amounts to no less than twelve, not estimating as separate seams any layers which might be regarded as subdivisions of compound beds. The assembled thickness of those twelve plates of Anthracite is not less than seventy-four feet, taking for some their mean, for others their minimum, dimensions; and the thickness available for market, under judicious mining, I would estimate at thirty-nine or forty feet. These aggregates, arrived at through careful personal observation and many patient measurements, exhibit certainly an unusual amount of coal in so moderate a depth of strata, being nearly eleven feet of the former to each one hundred feet of the latter; or of good salable coal, the high proportion of six feet to every one hundred feet of rock. The immediate and encouraging inference from this incontrovertible statement of thicknesses is, that here is a tract particularly eligible for mining by perpendicular shafts or pits, since the whole body of the coal measures, possessing generally but a gentle dip, may be perforated, and the coal reached to the large amount above mentioned, by shafts

descending only a few hundred feet from the surface. An inspection of the appended column of the Scranton coal measures discloses the still more interesting fact, that in a depth of no more than four hundred feet, starting with the third coal from the surface, or the five feet seam, found near the base of the hills, and ending below with the lowest included in my estimate as workable,—the six feet bed or the third up from the bottom,—the thickness of coal amounts to fifty-eight feet, of which the quantity available for mining may, at a prudent estimate, be computed to equal at least some thirty-five feet divided in seven different workable beds. These seven beds are equivalent to sustaining seven separate collieries, capable of delivering their coals to the surface through a single wide shaft, or better, through two shafts, neither of them more than four hundred feet in depth.

In reviewing the descriptions of the coal seams comprised within the Scranton property, it will be seen that the general summary given in the earlier pages of this Report, to the effect, that in a depth of no more than four hundred feet of strata, the net thickness of coal available for market exceeds some thirty-five feet, is here abundantly confirmed. But to bring out in a clearer light the remarkable productiveness of this portion of the lower coal measures as they present themselves near Scranton, I will assemble in a tabular form, the actual least thicknesses of the several coals within this bulk of strata, their net thickness of good coal fit for market, and the computed yield of such coal per acre from each bed.

TABLE.

Coals. Least thickness.		Good coal.	Yield of good per acre.
K.	5 feet.	3 feet.	4,000 tons.
I.	7 "	4½ "	7,000 "
H.	10 "	7½ "	12,000 "
G.	6 "	3 "	5,000 "
F.	22 "	9 "	16,000 "
D.	8 "	6 "	10,000 "
C.	6 "	4½ "	7,000 "
54 feet.		37½ feet.	60,000 tons.

As a group, these Scranton coals are to be classed with the free-burning, white ash Anthracite, a very valuable variety, uniting the strength, or great heating power for which the true Anthracites are preeminent, with that readiness of kindling and activity of combustion, which distinguish the firmer semi-Anthracites, and which the densest and hardest coals do not possess. Both in structure and composition the more ignitable of these coals hold a station apparently intermediate between the most compact Anthracites nearly destitute of inflammable gases, and those more fissured and lighter varieties containing a notable amount of the carburetted hydrogen gases, and which I have elsewhere denominated the semi-Anthracites. While the dryest and densest Anthracites include about three per cent. of their weight of inflammable gases, and the semi-Anthracites, some seven or eight per cent., these Lackawanna coals, on the verge, as it were, of the class of Anthracites or flameless coals, possess an average as much as five per cent. of these free burning elements. And so, again, in respect to the structure of these coals. In the hardest and dryest Anthracites, the beds are imperfectly and irregularly jointed, the fissures being few and wide apart; and on the other hand, in the semi-Anthracites, these crevices are parallel and very close together, averaging two or three in an inch; but in this group of the less dense and quicker kindling Anthracites, the joints, though regular and parallel, are intermediate in degree of frequency, not occurring oftener than once in every two or three or four inches. As a large proportion of these natural fissures commence and end within the same band, they permit the coal to be heaved and transported in chunks or massive and as solid as need be desired, while they impart to the coal, when intentionally broken up, a prevalence of the square or cubical shape. This feature seems to be attended with at least

two decided advantages: one is, that it assists materially the closer stowage of the fuel, an element of much importance in ocean navigation: and the other is, that it facilitates the kindling and ready burning of the coal, by the multiplicity and sharpness of the corners and edges exposed to the heat and the current of air during combustion.

In point of purity or freedom from earthy matter, these coals of the vicinity of Scranton will compare favorably with the beds of the corresponding lower white ash group of the Lackawanna and Wyoming basin generally, and indeed, with the better class of Anthracites anywhere throughout the coal region. Analysis shows that the portions which are mined for transportation, contain not more than six or eight per cent. of ashes, and this, it is well known, is a low proportion for merchantable Anthracite coals. The earthy residue of these coals, being of the kind called white ashes, consisting chiefly of silica and alumina, and containing but little alkali, lime, or oxide of iron, and being capable therefore of withstanding a high heat without melting, or more than softening into a spongy cinder, are exempt from the serious defect of producing the hard, stony clinker caused generally by the red ash, and often by the so-called grey ash Anthracites.

The proportion of solid carbon,—the amount of which in coals, from the best practical researches on fuel, must be accepted as very nearly the measure of their absolute heating strength,—is, in the instance of these Scranton Anthracites, about eighty-seven to eighty-eight per cent. of the whole mass, a ratio only about two per cent. less than distinguishes the dryest or least gaseous varieties in the Lehigh coal fields, while the difference is amply compensated for in the gain of this amount of ignitable, inflammable gases—hydrogen and carburetted hydrogen,—which serve materially to increase the promptness of kindling, and rapidity of burning, or the total amount of heat evolved in a given time.

These Scranton coals, in their comparative purity or freedom from earthy matters, and large amount of carbon in their possession of a moderate density and some free inflammable gas, and in their square mode of fracture, combine in a high degree the three chief essential attributes of a superior fuel, namely, great absolute heating strength, quick ignitibility or activity of combustion, and the power of packing closely. Other coals may surpass them in some one of these qualifications to a small extent, but I doubt if, on a fair experimental comparison of properties, any will be found to combine a larger total of efficiency in all these several ways.

With a view to exhibit more distinctly the excellences of the class of free-burning white ash Anthracites, such as these I have above described, I will conclude this Essay, with a condensed survey of the principal qualities essential to a good fuel for producing steam, or for domestic uses:—

1. It should possess great actual heating power.
2. As far as consistent with the foregoing, it should kindle quickly, and burn fast, generating the largest amount of heat in the shortest time.
3. Its earthy matter should be small in quantity, and difficult to fuse; it will thus make no clinker, demand but little raking of its fires, and undergo but little waste in consequence.
4. It should contain but little sulphur.
5. The volatile ingredients of the coal should be free inflammable gases, not bituminous matters forming smoke; and they ought to be barely abundant enough to assist rapidity of combustion, as the larger the proportion of fixed carbon, the greater seems the heating power.
6. They should not be too tender on the fire, nor yet too refractory; a certain tendency to fall to pieces spontaneously while burning, but not an over amount of this, is a great desideratum, as it confers activity and steadiness of combustion; too much of impedes combustion by increasing the friction of the air passing through the fire.
7. The lower the temperature at which an Anthracite will kindle and maintain itself burning,

the more manageable, more active, and more economical will it prove.

8. The better a coal unites the tenacity necessary for economical transportation, with this medium amount of frangibility on the fire, the larger the effective result of a given quantity, from the time it leaves the mine.

9. And the greater the aggregate of positive heating power, rapidity of combustion, and compactness of stowage compatibly assembled in a coal, the nearer does it approach the ideal standard of a perfect fuel.

Respectfully submitted,
By your obedient servant,
HENR J D. ROGERS.

Boston, Jan. 21st, 1854.

Ogdensburg and Vermont Central Railroad.

Three Directors of the Ogdensburg Railroad have resigned, and Mr. Lee, the President of the Vermont Central Railroad, has retired from that office, and Mr. John Smith of St. Albans, (President of the Vermont and Canada Road,) has been chosen in his stead. Mr. Smith has also been re-elected Trustee of the Vermont Central Road, under its first mortgage. The Ogdensburg Directors who retire are Messrs. Livermore, Conant and Hendeo, and their places are filled by Messrs. John Smith, Joel W. White of Norwich, Conn., and Col. John H. Peck of Burlington.

Annual Report of the Pacific Railroad to the Stockholders.

OFFICE PACIFIC RAILROAD, }
St. Louis, March 27, 1854. }

In conformity with the requirements of the charter, the Directors of the Pacific Railroad submit to the stockholders an exhibit of the condition and affairs of the company, for the year ending the last Monday of March, instant.

1. The amount of capital stock subscribed to this date is \$2,382,650.

2. All the stock subscribed on the first division has been called in, 70 per cent. of that on the second division, and 10 per cent. of the subscriptions on the third and fourth divisions, west of Jefferson City. Of these calls \$1,202,967 50 has been paid. The amount unpaid of the whole capital subscribed is \$1,179,682 50. The number of shares forfeited for delinquency is 205, amounting to \$20,500.

3. The amount of Bonds received from the State is \$1,950,000. Yet to be issued for Kansas line, \$1,650,000. For South-western Branch, \$1,000,000.

4. The total amount expended by the company to the 10th of March, in construction, is \$2,644,437 36. The total amount actually expended for all purposes, is \$2,780,699 26.

5. The floating indebtedness of the company, including bills payable, amounts to \$111,140.

The funded debt, exclusive of State Bonds received, is \$90,000, being six per cent. bonds, payable in twenty years, issued in purchase of depot lands in the city.

6. The first division of the road, extending from St. Louis to Franklin, 38 miles, was so far completed as to admit of the passage of a train over it on the 19th July, 1853, and on the 23d of the same month, the division was opened for business, since which period daily trains have been regularly running, carrying freight and passengers.

7. The second division was put under contract early in May, 1853, and work on the line from Franklin to Jefferson City, eighty-eight miles, generally commenced in August.

8. The actual amount of receipts and expenditures (apportioned) to the 10th inst., appears in the balance sheet hereunto annexed. But a general apportionment of the expenditures and estimate of unexpended means of the company, without reference to the South-western Branch, is as follows:

For construction, first division. \$1,554,455 00
For construction, rolling stock. 144,709 37

For construction, S. W. Branch, including expenses of land grant.....	55,176 50
For construction, real estate.....	179,563 77
For construction, Iron Mountain Branch.....	1,853 58
For construction, second division and surveys to Kansas.....	708,679 24

Total expended in construction and real estate.....	\$2,644,437 46
Materials on hand unapplied.....	71,045 11
Transportation expenses. \$41,036 69	
Interest charged to transportation.....	24,180 00
	\$65,216 69
Total expenditures.....	\$2,780,698 26

MEANS UNEXPENDED.

Stock subscription to be collected.....	\$1,179,682 50
Balance in hands of officers.....	201,185 39
	\$1,380,867 89
State Bonds not yet called for.....	1,650,000 00
	\$3,030,867 89
The portion of land grant applicable to Kansas line is 127,000 acres, at \$5 per acre, is.....	635,000 00
	\$3,665,867 89

THIRD AND FOURTH DIVISIONS.

These divisions comprising that part of the line lying between Jefferson City and the terminus in Jackson County, are advertised for proposals for contract to be received in May next. A party of engineers are now in the field making the final location. This part of the line, being in a prairie country, will admit of comparatively cheap and prompt construction. The Board have authorized the issue of \$2,500,000 of 7 per cent. convertible bonds, to be secured by mortgage of this line of road, in the belief that a negotiation at fair prices of such amount of bonds will be sufficient to open the road to Independence. Of the land grant 127,000 acres are found to be due to this line of road, and that quantity of the located and selected land will be set apart to aid in its construction.

SOUTH-WESTERN BRANCH.

The final surveys of the past season resulted in a considerable shortening of this line. The length of this branch, as located from Franklin to the State line, is 271 17-100 miles. A copy of the location of the entire line, from St. Louis, has been filed in the General Land Office. By authority of the Board of Directors, the President closed a contract with A. S. Diven & Co., on the 14th inst., for the construction of this entire branch, on terms which are deemed favorable. It was determined to cancel the former mortgage and all bonds issued under it, and to issue a less amount of bonds, not exceeding nine millions, and mortgage the South-western Branch Railroad only, together with one million of acres of land, subject to the prior lien of the State for \$1,000,000. The acceptance of the State bonds and the procurement of the \$500,000 private subscription, requisite to obtain it, are deemed vitally necessary to the successful prosecution of this enterprise. The construction bonds of the company, six-tenths convertible, will be received by the contractors at par. The first division, 78 miles, they agree to finish in two years from 1st of May next; the second division, 105 miles, in three years, and the third division of 88 miles in four years, the company reserving the right to terminate the contract at any point, 20 miles or less, east of the State line.

THE LAND GRANT.

As agent for the State, the President of the company has succeeded in getting the land grant adjusted in much less time than has been usually employed in similar service. The quantity ob-

tained also is but about 25,000 acres short of six sections for each linear mile of road. The quantity absolutely granted of all vacant land by even numbered sections within six miles of the road, is 762,607.51 acres, and the quantity selected outside of the six mile limit, and within fifteen miles, in lieu of those sold within the six miles, is 395,852.34 acres, making a total of 1,158,459.85 acres. The quantity due to the first division is 127,000 acres, of which 8,050 acres was found within six miles; 23,500 acres selected within fifteen miles, and the remainder, 93,650 acres selected of superior lands in the south-west.

The selected lists required the approval of the Secretary of the Interior, which they received on the 14th of March. While the grant was absolute and vested in the State, all vacant lands, by even numbered sections, within six miles of the road, and of which no act of the agent or of the land officers could divert the company; yet the great body of the selected lands outside of that limit were placed by choice among the fertile plains of the south-west. Within the six mile limit are, doubtless, many pieces of great value; some, perhaps, near the starting point, or eastern terminus of the road; others, adjacent to towns; others, containing mineral deposits, while the general character of the selected lands will probably prove of a better grade than has been generally apprehended.

There is, therefore, more than ever, occasion to infer that these lands have not been over-estimated. Steps should be immediately taken to classify these lands, and to affix values to them, below which they should not be sold as long as a construction bond is outstanding, and only sold for bonds or for cash, to be applied in redemption of bonds. An Assistant Engineer has been detailed to assist the State Geologist in making a geological reconnaissance of the route on which these lands lie. By judicious management it is believed that the lands will redeem the construction bonds, and being a free gift, will bestow the South-western Branch Railroad, without cost to them or the stockholders.

The total expenditures, including cash on hand, amount to \$2,981,884 65. The receipts have been as follows:

RECEIPTS.	
Capital stock subscriptions.....	\$1,202,967 50
Capital stock paid up.....	126,100 00
P. R.R. Depot Bonds.....	90,000 00
Bills payable.....	49,904 47
State of Missouri, (in bonds).....	1,350,000 00
Premium on bonds.....	48,473 55
Floating debt.....	61,235 32
Income from rent.....	\$323 00
" " passengers.....	40,039 75
" " freight (exclusive of business done for the company, amounting to over \$15,000 which is charged to construction).....	12,037 73
	52,400 48
Miscellaneous.....	852 32
Total.....	\$2,981,884 65

Respectfully submitted on behalf of the Directors.

THOMAS ALLEN, President.

The following is a list of Directors, chosen for the present year:

Thomas Allen,
Hudson E. Bridge,
James E. Yeatman,
Luther M. Kennett,
Henry L. Patterson,
Edward Walsh,
J. B. Brant,
A. H. Glasby,
John C. Rust,
R. M. Renick,
David P. Waldo, Jackson,
George R. Smith, Pettis,

St. Louis.

Memphis and St. Louis Railroad.

We are gratified to learn that a company has been incorporated under the general law of the State of Arkansas, by the above name, and consisting of such men as Geo. W. Underhill, Rhea Wallace, and Wm. A. Jones, of Arkansas, and L. M. Kennett, E. M. Ryland, J. H. Lucas, and Wm. M. Morrison, of St. Louis, and Amos Woodruff, Miles Owen, W. A. Bickford, Thomas Peters, S. P. Walker, D. B. Turner, R. C. Brinkley, E. H. Porter, Samuel Tate, Robertson Topp, J. T. Swayne, C. B. Guthrie, James Elder, A. M. Hopkins, A. O. Harris, I. N. Burnett, John Overton, Q. C. Atkinson, and H. C. Walker, of Tennessee.

We learn that on the 18th ult. the gentlemen constituting the Board of Commissioners, met and elected E. H. Porter, Esq. President of the Company, and chose a Secretary for the Board.

The object of this Company is to construct a railroad to connect Memphis with St. Louis, by supplying the link of some eighty or one hundred miles between the terminus of the Iron Mountain Railroad, at or near the Missouri and Arkansas State line and this city, thus completing an air line connection between St. Louis, Memphis, and New Orleans, and connecting St. Louis, via Memphis, with the other southern and southeastern cities, over the roads pointing to them from this city.

The importance of this enterprise to all the cities named, and most especially to St. Louis, must ensure its construction, sooner or later, whilst the country to be traversed, as known to those acquainted with it, furnishes every advantage that could be desired; making the cost of construction the cheapest possible for a railroad, and the hands into which this enterprise has fallen are an ample guaranty that the work will go forward with energy and certainty, and be executed in the shortest time possible. And this result will be hastened by the wants of trade, not to say the necessities of the cities concerned.—*Memphis Eagle*.

Illinois Central Railroad.

The late annual report of this company shows its receipts up to the present time, to have been \$13,664 756 21, viz:

Capital.....	\$809,050 00
Construction Bonds issued to Contractors and others.....	1,100,000 00
Subscriptions to.... \$4,000,000 loan	2,016,000 00
" to.... 3,000,000 "	2,311,500 00
" to loan of '54	310,000 00
Instalments on.... 4,000,000 "	349,109 07
" on.... 3,000,000 "	378,818 48
" on.... 5,000,000 "	3,764,997 78
" on loan of Feb. 7, 1854	245,134 44
To parties on Special Contract.....	699,000 00
Exchange, Interest, &c.....	104,982 78
Bills and Accounts Payable.....	1,476,163 66

Total Receipts to March, 1854.... \$13,664,756 21
For which sums bonds are to be issued.

The expenditures have been:

Charter expenses prior to the organization of Company.....	\$51,299 00
Company Expenses, Salaries, Counsel Fees, &c. &c.....	230,685 42
Land—Land Damages, Right of Way, &c.....	620,570 06
Engineering—Surveys, Maps, Profiles, &c.....	295,952 11
Construction Account—Graduation, Masonry, Bridging, &c. &c.....	6,523,824 62
Iron Rails, including Transportation to Illinois.....	2,858,202 00
Equipment—Engines, Cars, &c.....	733,372 12
Commissions.....	291,429 23
Interest—Balance of Interest Account.....	249,971 83

Total Expenditures..... \$11,855,306 29
Cash on hand..... \$463,993 15

Bills and Accounts Receivable..... 1,345,450 67—\$1,809,449 82

The engineer reports that the whole length of

the Road will be 704 miles; of which the track is laid 270 miles; miles of grading finished, 601.51; and miles of grading unfinished, 102.49. There is no track laid from the 112th to the 204th mile; nor from the 582d mile to the Northern terminus of the Road.

American Railroad Journal.

Saturday, April 8, 1854.

Back Numbers of the Journal.

Those who wish back numbers of the JOURNAL for binding are requested to order them at once, as we shall be able to supply them but a few weeks longer.

We can furnish BOUND VOLUMES for any or all years complete since 1831—price \$5—per year.

Our RAILWAY MAP in sheets will be sent by mail to any address on the receipt of \$1.00—price on rollers \$2.00.

We have a few copies of Mr. JOHNSON'S valuable work on the Northern route to the Pacific—price by mail \$1—with maps.

Stock and Money Market.

The decline in stocks continues under the war news from Europe, particularly since the arrival of the last steamer. Opinions differ as to the probable effect of an European war, upon this country, but it appears to us certain that the drying up of the fountains of European prosperity, must exert a strong influence over our own. Capital consumed in war, would otherwise have come to this country. If the means of our European customers are diminished, they must curtail in an equal degree their purchases of our staples. It is very possible that our commercial marine may be called upon to do a heavy carrying trade, and that a temporary demand may be created for bread stuffs, but the profits derived from these, must be slight compared with what our people must lose in other directions.

The earnings of our railroads for March continue to show a large increase over the past year. As far as heard from they are as follows:

	1854.	1853.
New York and Erie.....	\$476,816	\$371,499
Michigan Southern.....	149,395	87,144
Cleveland and Toledo.....	70,782	44,855
New York and New Haven.....	68,130	60,555
Rock Island and Chicago.....	74,700	new.

As might be supposed, there is little doing in Bonds. Orders from Europe are light, and under the present state of things, our own people are cautious about making any movement that shall create a liability. There can be no doubt that it is the policy of all Railroad Companies to curtail their expenses as rapidly as possible, and place themselves in a condition to weather the storm. Those that are in port had better remain where they are. By doing so the country may avoid any disastrous shock in consequence of the state of affairs in Europe. Our object should be to have neither political nor commercial complicity with them. In this way we may escape any serious disasters, though we may not make the material progress which we should, were the whole world prosperous with ourselves.

Consolidated.

The Fall River Railroad Company have voted to unite with the Old Colony Railroad, by a vote of 2667 yeas, to 2442 nays.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equip't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	809,378	1,016,500	2,064,458	140,561	80,053	none	80
Kennebec and Portland..... "	72	952,621	297,80	2,514,067	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	97
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	80
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	107
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	86
Northern	82	3,016,634	.....	.....	328,782	163,075	5	56
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	80
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	108½
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	none	12½
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	28
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9½
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	12½
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	.....	.....	Leased to the Vt. C. Cent.	97½
Western Vermont..... "	51	392,000	700,000	.....	.....	.....	Recently opened.	none
Vermont Valley	24	.....	.....	.....	.....	.....	.....	none
Boston and Lowell..... Mass.	28	1,880,000	.....	1,995,249	388,108	130,881	7	90½
Boston and Maine..... "	83	4,076,974	150,000	4,092,927	659,001	338,215	7	103
Boston and Providence..... "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	82
Boston and Worcester..... "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	100
Cape Cod branch..... "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River..... "	52	1,591,100	193,500	1,801,946	229,004	72,028	5	55
Eastern..... "	75	2,850,000	500,000	3,120,391	488,793	241,017	7	85½
Fall River..... "	42	1,050,000	none.	1,050,000	229,445	99,589	8	97
Fitchburg..... "	66	3,540,000	112,305	3,623,073	574,574	232,787	6	86½
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County..... "	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony..... "	45	1,964,070	282,300	2,293,534	374,897	122,816	none	100
Taunton Branch..... "	12	250,000	none.	307,136	137,406	24,399	8	.....
Vermont and Massachusetts.. "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	19½
Worcester and Nashua..... "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	62
Western..... "	155	5,150,000	5,319,520	9,953,759	1,525,224	746,736	7	98
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	70
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	99
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	125
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	100½
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	.....	.....	Recently opened.	none
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	56½
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	.....	.....	Recently opened.	none
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	.....	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	.....	.....	Recently opened.	180
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	72½
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	65
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	54
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	32
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	108
Ogdensburgh (Northern).... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	25
Oswego and Syracuse..... "	35	350,000	201,500	607,803	90,616	43,609	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	.....	.....	Recently opened.	none
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	.....	.....	Recently opened.	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	80
Troy and Rutland..... "	32	237,690	100,000	329,577	.....	.....	Recently opened.	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	.....	.....	Recently opened.	none
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,418	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,225	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	181
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	8	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,148	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	.....	.....	Recently opened.	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,827	106,820	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	77½
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	76½

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton....	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,038,420	798,193	7	66
Washington branch.....	38	1,650,000	.....	1,650,000	348,622	216,287	8	.....
Baltimore and Susquehanna..	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg....	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.....	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia....	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina.....	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	115
Georgia.....	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western.....	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee.....	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western.....	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston....	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia.. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga... Ky.	125	2,093,814	850,000	In prog.	.....	.....	.....	63
Covington and Lexington....	38	1,430,150	900,000	In prog.	.....	.....	.....	80
Frankfort and Lexington....	29	357,218	.....	584,902	87,421	44,250	.....	.....
Louisville and Frankfort....	65	.....	.....	.....	.....	.....	.....	45
Maysville and Lexington....	.....	.....	.....	In prog.	.....	.....	.....	83½
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	91
Cleveland and Toledo.....	147	2,000,000	1,600,000	.....	.....	.....	.....	.....
Cleveland, and Erie.....	95	.....	.....	.....	.....	.....	.....	120½
Cleveland and Columbus....	135	3,027,000	408,200	3,655,000	777,793	483,454	12	65
Columbus, Piqua and Indiana..	46	.....	.....	2,000,000	.....	.....	.....	102½
Columbus and Lake Erie.....	61	.....	.....	.....	.....	.....	.....	62
Cincinnati, Ham. and Dayton	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	75
Cincinnati and Marietta....	.....	.....	.....	In prog.	.....	.....	.....	56
Dayton and Western.....	40	310,000	550,000	925,000	.....	.....	.....	.....
Dayton and Michigan.....	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	36	.....	.....	.....	.....	.....	.....	.....
Greenville and Miami.....	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro.....	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami.....	84	2,668,402	482,000	3,169,783	667,559	352,133	10	111
Mansfield and Sandusky....	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie....	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central.....	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania.....	187	1,750,700	2,450,000	.....	.....	.....	.....	.....
Ohio and Indiana.....	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley... Ind.	44	750,000	300,000	.....	.....	.....	.....	.....
Columbus and Xenia.....	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois.....	31	.....	.....	In prog.	237,506	.....	.....	77½
Indiana Central.....	.....	.....	.....	.....	.....	.....	.....	.....
Indiana Northern.....	131	.....	.....	.....	.....	.....	.....	87
Indianapolis and Bellefontaine	83	.....	.....	.....	.....	.....	.....	76
Indianapolis and Cincinnati..	90	1,128,436	1,289,000	1,869,932	.....	.....	.....	.....
Lafayette and Indianapolis....	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Terre Haute and Indianapolis	72	632,387	663,100	1,353,919	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.....	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central.....	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago.....	92	21,982,361	500,000	In prog.	478,548	286,152	.....	121
Michigan Southern and Ind. N. Mich.	315	4,800,000	3,741,564	7,276,616	1,200,922	586,929	17	118½
Michigan Central.....	282	1,856,700	3,977,563	8,618,505	1,145,598	582,816	8	109
Pacific..... Mo.	38	.....	none.	In progress	.....	.....	.....	.....

Engineers and Mechanics College.

We are pleased to learn that E. NUGENT, Esq., Civil Engineer, has recently established a College, in Cleveland, Ohio, for the purpose of instructing young gentlemen in the profession of Civil Engineering.

Such an institution may be of great utility in laying the groundwork for the arduous practical duties which are attendant upon the profession. Properly conducted, it may become more useful to society, in this age of progress, than almost any other kindred institution of recent origin which we can now call to mind. Civil Engineers must now be men of science, familiar, to a certain extent, with all its branches. As scarcely any enterprise is undertaken at the present day without the aid of an engineer, even to the erection of a building, running a fence, or draining a meadow, a professor of Civil Engineering should have such knowledge and training as will qualify him for the accurate performance of the simplest and most trifling, as well as the more deep and complicated, of his duties.

We wish Professor NUGENT the most unqualified success in his new enterprise, for which no more central or pleasant location could have been selected than the beautiful Lake City of Cleveland.

By the Albany Evening Journal we see that the University of Albany, in this State has also recently established a class for the instruction of Civil Engineering. Under the charge of able instructors it will no doubt be successful.

Bonds of the Greenville and Columbia Railroad.

We advertise for sale, in another column, the mortgage bonds of this company. The issue is \$800,000 on 160 miles of road, costing over two millions of dollars. The cash payments on stock exceed \$1,200,000. The road has been built with extraordinary economy, and commands the business of a very extensive and productive region of country. As an investment, it has the advantage of being entirely removed from the influence of competing lines, and from danger from such. This fact is one of the reasons why southern roads pay so well, and why investments in them can be made, with greater security even, than in northern roads. The Greenville and Columbia road is an excellent project, and we know of no more attractive security for capitalists than the bonds now offered for sale.

Western Railroad of North Carolina.

At the Annual Meeting of the Western R. Road Company, held in this town on Monday and Tuesday last,—Geo. McNeill, Esq., presiding, and John M. Rose acting as Secretary—Reports were Submitted by Maj. MacRae, President, Jno. M. Rose, Secretary and Treasurer, J. P. Goodsell, Chief Engineer, and John Eccles, Resident Engineer, which were all received by the Company.

Documents were laid before the meeting showing that Smith & Colby had disposed of their stock to the house of Seymour, Risley & Co., and that the Injunction heretofore pending is withdrawn.

Major Duncan G. MacRae was re-elected President, John M. Rose, Secretary and Treasurer, and viz: A. A. McKethan, George McNeill, T. S. Luterloh, T. B. Underwood, J. H. Cook, Warren Winslow, Wm. T. Horne, C. B. Mallett, and M. O. Roberts.—Fayetteville Observer.

The Railroad Record on the Cost and Productiveness of Western Railroads.

Some weeks since, the Railroad Record in a long article on the cost and productiveness of Western Railroads, expressed the opinion, that were eight railroads constructed between the Scioto River and the Indiana State Line, running North and South, they would pay 11½ per cent. on their cost. To make out a case, the Record showed that between Narragansett Bay and the Hudson River, there were 8 railroads, earning, as was stated, 5½ *net*, upon their cost. If such roads, running through a comparatively unproductive country, could earn 5½ per cent., the Record claimed that an equal number in Ohio, occupying an equal area and running in similar directions, would earn 11½ per cent. *net* upon their cost. The following was the Record's mode of reasoning—

"Here then," (in the territory between Narragansett Bay and the Hudson) "are eight railroads, on a breadth of 140 miles, running in the same direction, through a very poor country, in an agricultural aspect, yielding, (under generally bad management,) 5½ per cent. *net* income, with a moral certainty, that if no more are made, they will pay six or seven per cent. Even there, then, there are not too many railroads.

Now, let us try to get a parallel in Ohio. If we were to make eight railroads, between the State Line of Indiana and the Scioto River, *all of them running to the Ohio River*; with a sort of twist towards Cincinnati, it would be a similar case. Let us imagine, (if they were made,) what they would cost and yield:

Cost of 8 such roads in Ohio..	\$17,000,000
Gross receipts.....	5,000,000
Gross expenses.....	3,000,000
Net income.....	2,000,000
Net per cent.....	11½

We pronounced the above estimate to be altogether exaggerated. The Record in reply to our comments, talked about anything but the point under discussion. We insisted that the Record, (which, finding itself in a tight spot, shuffled the true issue), should meet the case squarely, and either reiterate its former statement, or back out. Finding it had no alternative, it answers as follows.

"There are now in exactly those limits seven railways, all doing well, and to these will soon be added two more, viz:

1. The Hamilton, Eaton and Richmond; 2. The Hamilton, Dayton and Central; 3. The Dayton and Greenville; 4. The Dayton and Mad River line; 5. The Little Miami, Xenia and Columbus; 6. The Wilmington and Circleville; 7. The Hillsboro', &c.

These are all running roads, and to them must be added, in a very short time, the Ohio and Mississippi, the Western, and the Fort Wayne, in part. Except the small portion in which some of them unite near the city, they are distinct roads, and they will have five or six distinct depots in the city. Practically, there will not only be eight but ten railways, besides two or three cross lines not mentioned, running between the Scioto and the Indiana State line. The question asked of us is simply whether we believe these roads will pay *ten per cent. dividend*? To this we reply at once, *they will*; and if they do not, we will consent to be told that we know less about what we are talking than the *Journal*—a scale of estimation sufficiently low."

In the first extract quoted from the Record, the eight roads between the Scioto and the Indiana State Line, were *all* to run to the Ohio. The Record now enumerates seven of the roads then referred to. Of these the Hamilton and Eaton terminates at Hamilton; the Dayton and Green-

ville, and the Dayton and Mad River, at Dayton. The Hillsboro' no longer exists as an independent line, being merged with the Cincinnati and Marietta. Neither this, nor the Wilmington road, run within about 30 miles of the Ohio. For ought now appears, the arrangements which they have with the Little Miami, their trunk line to the Ohio, may be made permanent.

As yet, there are the Little Miami, and the Cincinnati, Hamilton and Dayton, only *two* roads in the district where eight were to pay ten per cent. *net*, upon their cost. It is not certain that the other line enumerated, will ever be carried to the Ohio by their own lines. It may be stated with reasonable certainty that *four will not*. Yet the Record would lead a person unacquainted with the facts to suppose that the seven roads enumerated are *all in actual operation to the Ohio*!

If here is not a precious piece of consistency, we should like to know where we are to find one. Certainly it appears to us that no person who has not lost his wits, or who never had any, would make such an exhibition of himself before his own neighbors, by which he necessarily forfeits all confidence in the soundness of his judgment to say the least. An ordinary memory even, would have told him, that there was no relation whatever, between the evidence, and thing to be proved.

The eighth road within the territory described, is the Ohio and Mississippi! The portion of this road east of the Indiana State Line does not run to the Ohio. And more than this, it runs in exactly the opposite direction to the 8 roads that were to earn 11½ per cent. as is mainly the case with the Wilmington and the Marietta and Cincinnati Roads. But enough of this. We cannot in conscience pursue the discussion further out of pure regard to the interests of our cotemporary. We are unwilling to allow it additional opportunities of disgracing itself before the public. We desire to see it flourish, and become a useful paper to Western railroads. But to become such it will have to pluck "a few feathers from the wings of its imagination and stick them into the tails of its judgment." Indiscriminate puffing and bragging is not the way to secure favor to Western projects, however good they may be.

Franklin Canal Company's Railroad.

The following bill for the disposition of the Franklin Canal company's Road is before the Legislature of Pennsylvania;

An act transferring the late Franklin Canal Railroad to the Sunbury and Erie Railroad Co.

SECTION 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same, That the Railroad extending west from the city of Erie dividing Ohio and Pennsylvania, known as the Franklin canal railroad, and now in custody of the State by authority of law shall be, and the same is hereby directed to be transferred to the Sunbury and Erie railroad company, to be owned, occupied and worked by said Sunbury and Erie railroad company, upon the conditions, restrictions, reservations and regulations hereinafter imposed.

SECTION 2. That the Sunbury and Erie Railroad company are hereby authorized and empowered to mortgage the said late Franklin canal railroad, hereby transferred to them, or intended so to be, and issue mortgage bonds redeemable in twenty years, bearing interest at the rate of seven per cent. per annum, payable semi-annually at their office in Philadelphia; to an amount equal to the actual cost of construction of the said forfeited

Franklin canal railroad, and to pay them over to the parties in interest, or holding the stocks and bonds of said company, issued on account of the construction thereof.

SECTION 3. That the Governor of this Commonwealth shall appoint three competent and impartial persons, one of whom shall be a practical Engineer, who shall examine the books, papers, vouchers, and contracts of said late Franklin Canal Company, and having established the cost of constructing said work, shall certify the same under their hands and seals respectively, to the President and Managers of the Sunbury and Erie Railroad Company, and shall also furnish a copy thereof to the Governor, certified in like manner.

SECTION 4. That on the receipt of said certified cost of construction, the president, managers and company of the Sunbury and Erie railroad shall issue mortgage bonds as aforesaid under their hands and the seal of the Sunbury and Erie railroad company to the parties entitled to receive them, and having officially notified the Governor thereof, he shall proceed to deliver or cause to be delivered to the president and managers of the Sunbury and Erie railroad the late Franklin canal railroad now in his custody and held by authority of the act approved January twenty-eight, one thousand eight hundred and fifty-four.

SECTION 5. That the president and managers of the said Sunbury and Erie railroad shall be, and they are hereby empowered and authorized to levy and collect the same rates of toll per mile on passengers and tonnage passing over said road that are now authorized by law to be levied and collected on passengers and tonnage by the Harrisburg, Portsmouth, Mount Joy and Lancaster railroad company.

SECTION 6. That the said Sunbury and Erie railroad company are hereby required to extend the road hereby transferred to them from a point on its main line west of Liberty street, being the western boundary of the city of Erie, in a northeasterly direction, by the most practicable route, to the depot grounds of the Sunbury and Erie railroad, at the harbor of Presque Isle, and to have the same completed and open for use within one year from and after the passage hereof; the gauge or width of track of said Western road extending west from Erie, is hereby fixed to be four feet and ten inches, and it is prohibited to connect at the depot of Sunbury and Erie road with any road or roads of the same width of track, nor shall it connect with any road or roads extending eastwardly, except having a track respectively of four feet eight and one-half inches, and six feet.

SECTION 7. That before the said Sunbury and Erie railroad company shall take possession of the late Franklin Canal railroad, it shall subscribe for two thousand shares of the capital stock of the Pittsburg and Erie railroad company, and shall also pay into the treasury of the Commonwealth a bonus of two hundred and fifty thousand dollars for the right to way from Erie west of the line dividing Pennsylvania and Ohio: Provided, That the Pittsburg and Erie railroad may connect its track with the track of said road at any point west of the western boundary of the city of Erie, and the companies may make such agreements and arrangements for the working of the same as shall be mutually agreed upon.

We fear the probabilities are that the above bill will become a law.

Admitting the Franklin Canal Company to have no competent charter, the above act proposes, (what no other state but Pennsylvania has presumed to do), to sell the right to build a railroad over a particular route.

The real object of the bonus exacted, is, we presume, to give the Sunbury and Erie Company an apology for discriminating in favor of Philadelphia on charges upon persons and property passing over the Franklin Canal Company's Road.

If such be the object, comment is useless, as the act stands out to the most palpable apprehen-

sion as a shameless robbery of the public, for which no other excuse can be offered but that of *might*. That such discrimination is a gross violation of the *spirit* of the Constitution of the United States, will not, we think, be denied even by its authors.

But we do not see how Philadelphia is to be benefitted by discriminations in her favor by the Sunbury and Erie Railroad. This road extends from Erie to Williamsport. From Williamsport a railroad is in progress, following down the Susquehanna, to Baltimore. Another is in progress toward Philadelphia and New York, connecting with the Reading, and the New Jersey Central. Erie is so nearly equi-distant from both of the last named cities, that the charge both for persons and property will probably be same to each. Now we apprehend that the Sunbury and Erie Company will take good care to maintain a strict neutrality as far as favoring either are concerned. This road is more likely to be controlled by New York, than Philadelphia capital. About one-half of the capital stock is held here, and in Boston, already. As the road cannot be built without a large issue of bonds, which to be sold must be convertible, the management of the road must pass into hands of parties whose sole object will be to derive the largest revenue from it. They will undoubtedly place New York, Philadelphia and Baltimore precisely on similar footing, and will entirely ignore the claims of Philadelphia to any special favor.

The city most to be benefitted by the construction of the above road is New York, it being the largest, and consequently the best of all the markets with which the road will be connected. It is *much* the best market for western produce designed for *exportation*, for the reason that charges on freights to foreign Ports rule much lower in New York than in Philadelphia, or Baltimore, in consequence of the immense commercial marine of the former. Every city in the United States has its appropriate function. That of New York is *commerce*. It is, and must continue to be the *entrepot* of the foreign commerce of the country. We presume that no Philadelphian will seriously controvert this proposition. The foreign commerce of Philadelphia was as great 50 years ago, as it is at the present day. Its *exports* greater. In the mean time its population and general trade have more than quadrupled. It is the great manufacturing city in the Union; the great depot of our domestic manufactures and one of the great *distributing* points of imported merchandize. Philadelphia cannot change places with New York, unless she changes harbor and commercial facilities. Western produce does not, and in our opinion, cannot be made to, seek Philadelphia as the great produce market of the country. All money expended to make it such, will be made upon an erroneous hypothesis and consequently involve, as far as the immediate object is concerned, a *loss*. There is no question that for all time the produce of the West coming *East*, will take the route of the Erie Canal. Neither New York, nor Pennsylvania Railroads, can divert it from that route.

For these reasons we have always wondered that Philadelphia, with her exclusive and jealous policy, should be willing to lend her aid to a road, from which she can certainly derive no greater advantage than New York or Baltimore. We know

these cities look with as much favor, as she does upon the Sunbury and Erie Road. It is *idle* to suppose that in the end, the road is to be under a management partial to any one party or interest. Philadelphia would be precisely as much benefitted by the road, were it constructed by New York capital and under New York management, as if built by her own means, and under her control. The direction of commerce in *this* country is not to be controlled by *legislation*. Higher *laws*, cost of movement, and price, come in, and supercede the plans of politicians, who imagine, in their closets, that they can control commercial affairs by a few lines on parchment. Our people are not going to pay a penalty, as a price for going to the markets that suit them best, and all laws imposing them will remain a dead letter.

No good then can come to Philadelphia by allowing the Sunbury and Erie Railroad Company to discriminate in favor of that city. On the country great harm and loss *will* come of it. Any such attempt will keep the people of the West in a state of constant irritation, which in the end will cut them off from her altogether. Such is human nature. If Philadelphia wishes to draw the trade of the interior to herself, let her imitate the example of New York, and provide the best possible outlets for such trade to flow in just the direction it chooses, instead of disgracing her legislation by unjust and odious laws, which must inevitably defeat the very objects they have in view.

Finances of the Baltimore and Ohio Railroad

The following official statement of the capital stock and funded debt of the Baltimore and Ohio Railroad, has been prepared by the Treasurer of the Company.

The funded debt of the Baltimore and Ohio Railroad Company, as appears by its report made to 30th September 1853 is as follows; Loan No. 1 January, 1854 \$1,000,000 00

Less sinking fund, applicable to its reduction 287,531 28

Loan No. 2, of 1867 \$712,468 72
do. 3, (iron bonds) 1,000,000 00
do. 4, 1875 566,666 67
do. 5, of 1880 1,128,500 00
do. 6, of 1885, (for \$2,500,00) now issued 700,000 00
1,281,846 25

Add preferred stock of the State of Md. \$5,389,481 64
3,000,000 00

Making the whole funded debt of the Co. \$8,389,481 64
Residue of bonds of 1885, since issued 1,218,153 75

Making the whole funded debt to this date \$9,607,635 39

Capital stock \$10,118,902 00
Treasurer's Office, Baltimore and Ohio Railroad Company, March 31st, 1854.

SOUTH-SIDE RAILROAD.—At a meeting of the stockholders of this road on Tuesday last, in Petersburg, it was determined to mortgage the road to the amount of \$372,000 to cover the guarantee of that city, and a debt due for iron, and also to issue bonds to the amount of \$178,000 to cover the further sum necessary to complete the road. The President states in his report, that from present indications, the road would be completed to Lynchburg in August or September next.—*Richmond Whig*.

Operations of the New Jersey Railroad, for the year 1853.

The annual reports of the Railroad and Canal companies of New Jersey, for the year 1853, exhibit the following general facts, which we condense from the documents in pamphlet.

Camden and Amboy Railroad, capital stock \$1,500,000
Delaware and Raritan Canal 1,500,000
Loans of both companies for their own works, and for Trenton, Belvidere, Freehold and Flemington Railroad, say 7,000,000

Receipts of Camden & Amboy Railroad for 1853 \$1,744,207
Expenditures 1,145,473

Net earnings 598,734
Dividends 12 per cent in cash, and 12 per cent in bonds.

Income of Delaware and Raritan Canal \$382,248
Expenses 154,754

..... \$227,494
New Jersey Railroad—Stock \$2,750,000
Debt funded and floating 680,622

..... \$3,430,622
Earnings \$810,634
Expenses 319,516

..... \$491,117
Dividends, Interest, New Construction, &c 273,727

..... \$217,890
Morris Canal—Stock \$1,759,000
Debts funded, &c 473,067

..... \$2,232,067
Receipts \$190,441
Expenses 88,636

Dividends 66,390
Morris and Essex Railroad—Stock \$1,038,415
Debt funded and floating 219,869
Contingent Fund 113,276

..... \$1,371,060
Receipts 176,206
Expenses 91,201

..... 84,005
The Dividends were \$59,198.
Central Railroad—Stock \$1,611,030
Bonds 1,500,000
Other Indebtedness 132,259

..... 3,243,349
Receipts—Capital Stock \$624,900
Sundries 667
Earnings 349,018
Ordinary expenses 197,620

Net earnings 161,388
Dividends, 7 per cent.

Belvidere Delaware Railroad—Stock .. \$500,000
Loan of Camden and Amboy Railroad Company 1,000,000
Expended in construction and equipment, so far 1,467,000
No dividends yet made.

Mount Holly and Burlington Railroad—Stock \$70,000
Bonds, &c 29,551

..... \$99,551
Ordinary receipts \$16,567
Expenses 13,763

Interest 1,200
Net earnings 1,598
Paterson and Ramapo Railroad—Stock .. \$248,225
Debt funded and floating 104,000

..... \$352,225
Receipts \$26,500
Expenses 6,286

Interest.....	7,000
Dividends.....	7,440
Freehold & Jamesburg Agricultural R.	
R.—Stock.....	\$300,000
Subscribed.....	\$137,900
Road yet incomplete.	
The accidents on these works during the year 1853, were as follows:	

	Killed.	Injured.
Camden and Amboy....	12	34
New Jersey.....	13	13
Morris and Essex.....	2	—
Central New Jersey.....	5	3
Mount Holly.....	—	3
Total.....	32	53

Mississippi Central Railroad.
Holly Springs, Miss., March 28th, 1854.

H. V. Poor, Esq.

The work on our Central Road is progressing with as much rapidity as we could reasonably expect, when we take into consideration the newness of such enterprizes in this section of country. Many of our planters have taken their hands from the field, and taken contracts on the road. Thus far, I believe, all are satisfied with the change, and find the construction of a railroad may be as profitable to them as the production of cotton.

We meet with few discouragements in our enterprize; less by far than was expected. Our stockholders pay the calls made upon their subscriptions with promptness and willingness. We have as few delinquents as any company ever had, when we take into consideration the number of our stockholders. We have, and shall continue to have abundant *cash* means to pay the monthly estimates and for materials furnished. In fact we could pay larger amounts than have been or will be soon required of us. We need among us more of that class of people accustomed to the construction of railways, of whom you have so many on the Northern and Eastern States. They would here find plenty of work, good prices, and prompt pay.

Our Legislature at its recent session, appropriated the proceeds of the sale of 500,000 acres of land donated to this State in 1841 for internal improvement, in aid of the construction of the Central, and New Orleans, Jackson and Great Northern, Roads.

Thus you see, notwithstanding repudiation, our State is able and willing to aid to the extent of her ability, works of internal improvement.

This aid from the State, places the construction of the Central Road beyond contingency. Our individual subscriptions are large, and promptly paid. Our *county* subscriptions are paid by direct taxation to the amount of about one-fifth yearly. No bonds have been nor will be issued by the counties. Our subscription now amount to about *five-sixths* of the entire estimated cost of the road.

We have a rich, productive country, a very large export trade, with a very large portion of the soil yet in a state of nature. When all shall be brought into cultivation, the trade of the country will be more than doubled. Our road, as you know, has an almost direct north and south line from New Orleans to the Ohio River.

The State of Tennessee has loaned to the northern extension of our road through her territory, its credit to the amount of \$10,000 per mile.

Now what is to hinder the construction of our entire line of road? I know difficulties will arise,

but have we not the means and ability to overcome them? Let time answer. Have any of your Northern or Western roads secured more certain means of success in so short a time.

Northern people reproach us with *repudiation* and justly too; and this reproach "bites like a serpent and stings like an adder." Yet there are a very numerous class among us who would, if they could remove this cause of reproach. I have told you before, I repeat it now, that I believe the completion of our works of internal improvement is the *first* step in the redemption of our State credit.

If the North continue to discredit everything coming from *Mississippi*, for the reason that the State has been recreant to her plighted faith, without an examination of the causes of that action, they will arouse a spirit that will overcome all attempts at payment; Mississippi has some good grounds for questioning the validity of a portion of the State debt, particularly the *Union Bank Bonds*, "There is a reason in her madness," but the day may come when she will redeem a moral obligation when it has no legal effect.

The above letter, from a gentleman connected with the Mississippi Central Railroad, though private in its character, we have taken the liberty to publish. It comes from a most credible source, and its statements may be implicitly relied on.

The Mississippi Central Railroad is purely a *domestic* project, got up and carried forward by the parties who are to be immediately benefitted by its construction. The fact that those who *pay* for building it, are to own the road, is a good guarantee that the means provided will not be wasted.

There have been few roads built in the country that have been *less* dependent upon foreign aid, than will be the above. It traverses a district well filled with rich cotton planters, who can readily furnish the necessary means for its construction. Such means are now being liberally contributed, and the company, without making much noise, are pushing the work rapidly forward.

The road will run in the convenient direction, both for the district traversed, and for the general business of the country. On the South, it will connect with the New Orleans, Jackson and Great Northern road, at Canton. Through this road, it will have a direct communication with New Orleans. On the North, it will be prolonged into Tennessee to a point of Junction with the Mobile and Ohio line, through which it will be brought into connection with the whole northern system of railroads, which it will unite, by one of the shortest practicable routes, with the Gulf of Mexico.

The route is a very direct and easy one. Little or no, rock cutting, is found on the whole line of some 200 miles. The road is so far removed from the Mississippi as to avoid the crossing of the larger rivers, while, at the same time, it will be removed from their competition, as carriers of freight. The road is under the management of parties well known, and well esteemed at the North, as at home, and who are determined to show that some things can be done in *Mississippi*, as in other States.

Our correspondent incidentally alludes to the subject of *repudiation*. We fully concur in the

views he expresses. He, and a numerous class with him, feel that they are necessarily implicated in the stain cast upon the State, and that her disgrace, to a certain extent, is *their* dishonor. But they must endure for a while, what they cannot remedy. The question of the resumption of payments has become so involved with others, and so much misrepresentation and misconception of the whole subject prevails throughout the State, that time is absolutely necessary to allow the present excited state of feeling to subside, and to enable the people to look at the subject, not through the medium of prejudice, or passion, but of reason; and those principles of commercial integrity, to which every State is, and will, in the end, hold herself amenable. A part of the State debt is of very questionable validity. *All* the money received on account of it was squandered. The people never received any benefit from it. They feel that they were not the parties to the original transaction, and of course they cannot feel that sense of *personal* obligation, that they otherwise would. But we do not propose to offer any apology for the existing state of things. What is, cannot be immediately changed. It will not help the matter to taunt the people of the State with their defaults. The most effectual means of influencing them to the payment of the State debt, is to aid them in the construction of railroads. These works will exert a strong tendency to create a healthy sentiment. They will beget an ambition on the part of the people to stand as well in popular estimation as those of the most "*favoured States*," Railroads will create the means of gratifying this ambition. Those who are building these works, therefore, should receive every possible encouragement. *They* are as deserving, and enjoy as good credit, as any similar class of men, in any State in the Union. They are doing a work that will in time regenerate the whole State.

Abstract of Returns of the Maine Railroads, for the year ending Dec. 31st.

Portland, Saco & Portsmouth R. R., for 13 months, ending Dec. 31st, 1853.

Length of line—51 miles.	
Weight of Rail—50 lbs per yard.	
Capital paid in.....	\$1,337,000 00
Amount of indebtedness.....	182,000 00
Amount due Corporation.....	121,000 00
Number of passengers.....	298,818
" through.....	169,479
" way.....	128,939
Received from passengers.....	187,808 90
" " freight.....	58,197 84
" " other sources.....	16,661 07
Miles run by Passenger trains.....	100,001
" Freight.....	43,000
" other.....	20,000
Whole number of Stockholders....	999
" residing in Maine.....	52
Dividends in 1853, 6 per cent.	

York & Cumberland Railroad.

Length of line—18 miles.	
Weight of Rail—56 lbs.	
Capital paid in.....	\$292,649 89
Cost of Road.....	728,699 80
Amount of indebtedness about.....	408,192 91
Received from Passengers.....	35,170 84
" Freight.....	18,906 96
" Mails.....	284 76

Totals receipts in 1853.....	\$54,361 05
Miles run by Passenger trains.....	30,510
" Freight.....	15,000
Numbers of Stockholders.....	1,126
" who reside in this State.....	1013
Dividends in 1853, none.	

Calais & Baring Railroad.

Length of Line, 6 miles.	
Weight of Rail 56 lbs.	
Capital paid in.....	\$100,000 00
Cost of Road.....	217,255 55
Amount of indebtedness about.....	136,228 00
Due the Corporation, ".....	8,713 70
Number of passengers in 1853,.....	14,554
" " through.....	7,230
" " way.....	7,324
Received from passengers,.....	\$1,361 50
" " freight,.....	25,675 12
" " other sources,.....	1,000 50
Total receipts in 1853,.....	\$28,038 12
Number of Stockholders,.....	55
" " who reside in this State,....	20
Dividends in 1853, 6 per cent.	

Bangor and Oldtown Railroad.

Length of line—12 miles.	
Weight of rail—36 lbs. per yard.	
Capital paid in.....	\$135,000 00
Cost of road.....	138,913 00
Amount of indebtedness.....	1,650 00
Amount due corporation.....	12,439 06
Number of passengers.....	72,178
Received from passengers.....	\$23,269 67
" " freight.....	18,911 82
" " other sources.....	1,957 10
Total receipts in 1853.....	\$44,138 09
Miles run by trains.....	22,209
Whole number of Stockholders.....	13
" " residing in Maine.....	3
Dividends in 1853.....	\$21,000

Androscoggin Railroad.

Length of line, 20 miles.	
Weight of rails, 50 lbs.	
Capital paid in.....	\$86,863 14
Cost of road.....	315,365 00
Amount of indebtedness about.....	200,000 00
Due the corporation.....	21,600 00
Number of passengers in 1853.....	10,457
" " way.....	10,290
Received from passengers.....	\$9,168 12
" " freight.....	9,555 70
" " other sources.....	428 58
Total receipts in 1853.....	\$19,252 40
Miles run by passenger trains.....	12,520
" " freight.....	12,520
Number of Stockholders.....	328
" " who reside in this State.....	315
Dividends in 1853, none.	

Ohio and Mississippi Railroad.

On the 18th ult. we published a short article showing the financial condition of the above company, which we stated as follows:

Capital stock.....	\$6,500,000
First mortgage bonds.....	2,800,000
Second " ".....	3,000,000
	\$12,300,000

As the road was contracted to be built for \$9,000,000, we expressed some surprise at the large increase of the capital account at so early a day. The tone and inferences of our article were perfectly proper in themselves, and properly expressed.

The last number of the Railroad Record, published in Cincinnati, the editor of which has been, and for ought we know is still, in the employ of the company, contains a long reply, characteristic of the paper, full of gross personalities, charges of misstatements, etc., etc. This article we should not have noticed, had it not been paraded before the New York public in the money article of one of the leading city journals. Such being the case, we feel called upon to say a word or two in our

own vindication. The financial statement given above was compiled from the laudatory notice of the company, which appeared in the money article of the *Tribune* of the 8th of March last.

The Ohio and Mississippi Railroad is being pushed with energy. Within the next 60 days, 87 miles of the road from Cincinnati, connecting with the Jeffersonville Railroad, will be opened and equipped with ample rolling stock for the business of the road. This division forms a connection with Louisville by the Jeffersonville road, and reduces the time of transit between the two cities from 12 to 15 hours by the river, to not exceeding five hours by railway. This division of the Ohio and Mississippi Railroad will also form the most direct route for reaching Indianapolis and Terra Haute. Sixty days hence, 65 miles or more of the western end of the road (90 miles are graded and ready for the rails) will be opened and fully equipped, thus forming, by connection with the Illinois Central, which is soon to be opened, the first connection by railroad of St. Louis and Chicago. It will form by this connection with the Illinois Central a connection with Nashville and New Orleans by the roads now in construction. The gross receipts of these two divisions of the road, it is calculated, will reach from one and a quarter to one and a half millions of dollars per annum. The rails for the entire road are purchased and paid for, and about two-thirds of the whole amount are already delivered on the road or are now in transit from New Orleans to the same, and the remainder to be delivered this spring and summer.

The original cost of the road was estimated at \$9,000,000, and contract made for completion at that sum; but a growing conviction on the part of the managers of the road of the magnitude and importance of the work, and the immense amount of business to be done on it, has induced the latter to construct a much better road than was originally contemplated, by reducing the grades from a maximum of sixty to that of forty feet to the mile, on a large portion of the road; also, to provide bridges, culverts, &c., for a double track, and to more than quadruple the dimensions of the depots and machine-shops, and also, at a very large expense, the Eastern Division have provided depot accommodations and grounds in the City of Cincinnati and immediately on the bank of the river. The rolling stock of the road has also been largely increased over the provisions of the original contract. In addition to the foregoing, another item of cost has been made, which was deemed of very great importance not only to the public, but also to the interests of the stock and bondholders. The time originally agreed upon for the completion of the road has been shortened nearly one and a half years. The net earnings of the road for that period will, it is estimated, more than pay the entire additional cost of the road over original contract.

All these additional expenditures it is estimated will reach the sum of about two and a half millions of dollars. Already there has been expended in the iron, construction, and equipment of the road about nine millions of dollars. To meet the additional cost the companies propose to raise from two to two and a half millions of dollars by a sale to that extent of their Second Mortgage Bonds. They now propose to issue of this class \$3,000,000. It is believed by the Directors that with this negotiation made, the entire road from Cincinnati to St. Louis can and will be opened, equipped, and in successful operation within twelve months at the outside from the 1st March inst. The road completed will cost from \$11,500,000 to \$12,000,000; and the Company believe that, for its length, low grades, and general substantial character, it will compare favorably in point of cost with any road in the United States.

The first mortgage bonds issued by this Company amount to \$2,800,000, which, with the second mortgage now proposed to be issued and sold, \$3,000,000, makes \$5,800,000 of debt, or about \$17,000 per mile. The subscribed and paid up stock is \$6,500,000, so that the debt will be less than

one-half the cost of the road. The parties engaged in the construction of this road are guaranties of the honest administration of its finances, and this, with the convertible clause in the bonds, makes them worthy of the attention of investors.

The other figures in an article of the 18th ult., were copied from a report by the company, published in 1852. We made a slight error in stating the contract price for the road at \$8,500,000, instead of \$9,000,000, and in the proportions of the cash, stock, and bonds, which the contractors were to receive; otherwise the Company are responsible for the correctness of our statement, assuming them to be responsible for the article in the *"Tribune,"* which will not, we presume, be denied.

We knew the article in the *Tribune* to be incorrect in many important particulars. It warranted comments very different from those it received at our hand. We stated just enough to let the Company know they were being looked after. We know very well that \$9,000,000 had not been already expended upon the road, nor that \$6,500,000 of the capital stock has been paid in, and that the object of the article was to mislead, instead of conveying information as to the real state of the company's affairs.

It is certainly to be regretted that the money articles in some of our leading daily papers should be prostituted, as they are, to the use of every person who has an object to accomplish, by imposing on the public credulity. It is notorious that that is a department of the paper in which every person may officiate as *Editor* who will pay. The higher the general reputation of the paper, the higher the price for which the commercial columns are sold. An untutored person would naturally suppose that the puff in the *Tribune* was written by the editor of the paper in chief. It is editorial. It goes out to the world backed by the entire reputation that the paper possesses. Yet it is full of gross misstatements, which must have been known to have been such by the person writing it. But the character of the article has nothing to do with its insertion, providing the person furnishing it, will pay.

In this connection, we will give the following extracts from the company's report referred to.—(Page 5.)

The companies (of the two States, Indiana and Illinois,) obligate themselves to pay the contractors, as the work progresses, on the monthly estimates of the Engineers, as follows:

- 7-18 in cash;
- 5 1-18 in stock of the company;
- 5 1-18 in bonds of the company.

Thus, for the entire construction, engineering, furnishing and equipping as above, the companies will pay to the contractors nine millions, as follows, viz:

- \$3,500,000 in cash;
- \$2,750,000 in stock;
- \$2,750,000 in bonds.

This will cover the total cost of construction, excepting salaries of the two Chief Engineers, and of the officers, office expenses, depot grounds, and such incidental expenses as may arise in procuring the right of way.

It will be seen that by this contract, the companies obligate themselves to pay the contractors three and one-half millions of dollars in cash, to be obtained from subscriptions of stock and from the loan of the city of Cincinnati. There remains at present yet to be obtained about one and a half millions of stock subscription, to complete the entire amount of cash required under the contract. The companies have, however, reserved the right

to issue one million of dollars of second mortgage bonds in case it be impossible to procure the necessary amount of cash from other resources, these bonds only to be issued after five millions of dollars shall have been expended on the construction of the work.

The bonds given by the companies to contractors in part payment, are secured by a first mortgage on all the property of the companies. The sum total thus secured amounts to two millions seven hundred and fifty thousand dollars. No other mortgage can be given by the companies except that already mentioned of one million of dollars, which it is believed will never be required, and if used can only be employed after the expenditure of five millions of dollars in construction and equipment. It will thus be seen that the probable amount for which the road will stand mortgaged will be two millions and three quarters, while under no circumstances can it exceed three and three quarters millions.

After such a statement officially made, does not a proposed increase of over \$3,000,000 in the capital account of the company call for some explanation? Is it to go into the road, or does it represent profits to somebody?

We invite a comparison of the above with the articles in the Tribune and Record.

We do not propose general reply to the article in the Record. It is not worth it. We must say, however, that we do not admire the taste or judgment of the Company in parading it before the New York public, or in provoking discussion upon the merits of their project.

Notice to Contractors.

PACIFIC RAILROAD OF MISSOURI.

SEALED proposals will be received by the undersigned, at their office in the city of St. Louis, until six o'clock, P. M., of the 15th day of May next, for the Grading, Masonry, etc., of the first division of the South-west Branch of the Pacific Railroad, extending from Franklin Depot, the present terminus of the road, some 40 miles West of St. Louis, to the crossing of the Gasconade River, a distance of about 78 miles. The line will be divided into sections of about one mile each, and proposals may be made for one or more sections. The line, plans, profiles, specifications, form of contract, etc., will be ready for inspection on and after the first day of May next. The work to be let is quite heavy, situated in a healthy country, and is easy of access.

The undersigned reserve to themselves to reject all proposals that are not satisfactory.

A. S. DIVEN & CO.

March 24th, 1854.

Notice to Capitalists.

THE GREENVILLE AND COLUMBIA RAILROAD COMPANY

Now offers for sale their Coupon Bonds, redeemable in ten years, bearing interest at seven per cent, per annum, payable semi-annually, secured by mortgage of the entire Road, being the first lien upon it.

For a full understanding of the purposes, value of the property, and prospects of the Company, the following statement is made. It is proposed to issue Coupon Bonds, to the amount of three hundred thousand dollars which with those already issued will make the Bond debt \$800,000. The mortgage of the Road bearing date the eighteenth instant, is to cover these Bonds, as well those issued, as those to be issued, to the amount of \$800,000, and no more.

The Road was finished on the 9th December last, is well equipped, and in full and successful operation. The entire length of the Road, including its Branches, is 164 miles, and cost as follows

Surveying and Engineering,.....	\$ 66,881 34	
Right of way.....	10,441 89	
Graduation,.....	474,787 69	
Masonry,.....	323,50 00	
Trestle Bridging,....	88,351 69	
Broad River Bridge,...	37,571 33	
Saluda Lower Bridge,	6,530 78	
Saluda Upper Bridge,	8,416 48	
Timber for Tracks,...	158,181 23	
Iron Rails,.....	575,235 59	
Spikes and Chairs,...	50,891 30	
Superstructure and Track Laying,.....	94,921 42	
		\$1,604,560 74
Real Estate,.....	\$ 22,754 90	
Depots and Water Stations,.....	44,745 52	
Workshop Building,...	17,125 54	
Machinery for Workshop,.....	16,702 19	
		101,328 15
Locomotive Engines,...	\$119,176 48	
Passenger and Freight Cars,.....	130,000 00	
		249,176 48
		\$1,955,065 37
Accounts for Materials, Work, &c., entering into construction, not yet fully ascertained, but supposed to be about,.....		100,000 00
		2,055,065 37

Capital Stock paid in, \$1,100,029 49
Assessment on Stock paid in,..... 131,937 26

\$1,231,966 75

The Earnings of the Road for the last three months in an unfinished condition were as follows:

October—From Freight,...	\$12,761 13	
From Passengers	8,321 17	
From Mail,.....	700 00	
		\$21,782 30
November—From Freight,...	\$ 9,764 41	
From Passengers	8,403 35	
From Mail,...	800 00	
		\$18,967 76
December—From Freight,...	\$12,205 26	
From Passengers	9,034 00	
From Mail,....	900 00	
		\$22,139 26
For three Months,.....		\$62,889 32

The whole expenses of the Road, it is believed, will not exceed \$11,000 per month, or 50 per cent, on the earnings. The Road, for the greater part, is well constructed—of good material and heavy iron, and could not now be made and furnished as it is for less than \$3,000,000.

By order of the Directors,

THOMAS C. PERRIN, President.

January 18th, 1854.

N. B. The Bonds can be had by applying to Mr. Jacob Cohen, of Charleston; Mr. J. P. Southern, of Columbia, or to me at Abbeville Court House. Bids for these Bonds are requested.

Railroad Iron.

1,300 TONS superior quality Yorkshire rails 56 pounds T pattern can be immediately delivered at New York, Savannah, or New Orleans.

For sale by

NAYLOR & CO.

New York, April 1st, 1854.

Brass Tubes for Locomotive and Marine Boilers.

THE undersigned having been appointed Agent for the highest respectable manufacturers Messrs. Allen, Everitt & Son of Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to

JOHN H. HICKS,
90 Beaver str.

March 1854.

Notice to Contractors.

Proposals will be received for all the heavy work on the Blue Ridge Rail Road, South Carolina; Blue Ridge Rail Road, Georgia; Tennessee River Rail Road, North Carolina; Knoxville and Charleston Rail Road Tennessee. The above lines of rail-way are consolidated and under the management of one Company, Extending from Anderson South Carolina, via Clayton, Georgia, Franklin North Carolina, to Knoxville Tennessee, a distance of 194 miles. That part of the road from Anderson South Carolina, to the Turniptop Mountain, a distance of 40 miles is principally earth excavation, of about equal quantities of cut and fill, with several bridges. From the Turniptop Mountain to the Rabun Gap, a distance of 24 miles, the work is very heavy, there being on the line one tunnel of 5800 feet, one of 1400 feet, and one of 400 feet in length; a suspension bridge across the Chatnaga River 500 feet long, with some very heavy earth and rock cuts. The rock in the Tunnels is gneiss stratified. From the Rabun Gap to twenty miles below Franklin, a distance of 50 miles, the line follows down the Tennessee River; the class of work is principally side hill excavation, some of which is rock; their will also be several bridges. From the point 20 miles below Franklin to Hardens, a distance of 35 miles, the line follows the Tennessee River the entire distance, causing heavy side rock excavations. On this portion of the line will be several expensive bridges, and a tunnel of about 1000 feet. From Hardens to Knoxville, a distance of 45 miles, the line follows the river about eight miles, then leaves it, running across the Chilhona mountains almost a north line to Knoxville; this portion of the road is heavy work, with about equal quantities of cut and fill, an expensive bridge 1000 feet long and 45 feet high, crossing the Holston River at Knoxville. The character of the rock from Knoxville to Hardens is limestone, and from Hardens to Franklin gneiss rock stratified, and from Franklin to Anderson, stratified sand stone and gneiss rock. The character of the earth is sandy and clay loam. The line for the whole distance runs through high table lands, well settled, remarkable for its health, good water and ample resources for subsistence. The above line of railway offers great inducements to experienced contractors. The undersigned will be prepared to receive proposals and enter into contracts for the graduation, bridging, tunneling and masonry for the heavy portion of the line, from and after the 1st day of May next, at Knoxville Tennessee, Franklin North Carolina, and Pendleton South Carolina, and will continue at such places, until the same is under contract. Profiles and maps of approximate location can be seen at each of the above places after the 1st day of May. Proposals are asked with cash payments, also eighty per cent cash and twenty per cent in the Capital Stocks or Bonds of the Company. All communications prior to may 1st must be addressed at Pendleton South Carolina.

4,13

ANSON BANGS & Co.

Working Drawings of American Locomotives.

TREATISE ON THE APPLICATION OF STEAM TO LOCOMOTIVE ENGINES. Illustrated with large and accurate engravings of the most approved American Locomotives, accompanied by full and clear explanation, designed for the use of Students, Builders, and Working Engineers.

*A few copies of the first five numbers of this very desirable work may be had of

JOHN WILY, 167 Broadway.

Also an extensive assortment of English and American Books in every department of Engineering Science.

Railroad Car Works.

THE undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.

Mayeville, Ky., Sept. 29, 1853.

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.
WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their SYSTEM OF LOCOMOTIVE ENGINES in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture *Five different kinds of Engines* and several classes or sizes of each kind.

Particular attention paid to the strength of the machine in the plan and workmanship of all the details. Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowling Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

C. Floyd-Jones,

Division Engineer 3d and 12th Divisions.
 ILLINOIS CENTRAL RAILROAD.
 Vandalia, Ill.

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of

Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
 64 Courtland st., N. Y.

**To Railroad and Canal Co.'s,
Contractors, &c.**

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics, &c. of any description, and also to inform them that they forward such men to whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.
 No. 85 Greenwich street, New York.

New York and Erie R. R.

PASSENGER TRAINS
 leave Pier foot of Duane street,
 as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the B. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAY EXPRESS, at 12½ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAY PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.

These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

CHAS. MINOT, Sup't.

Railroad Iron.

2000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and 'Crawnsay' manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by **P. COUTEAU, Jr., SANFORD & CO.,** December 4, 1852. No. 51 New street.

Duggan's Work on Bridges.

SPECIMENS OF THE

STONE, IRON AND WOOD BRIDGES, VIADUCTS, Tunnels, Culverts, etc., of the United States Railroads; illustrated by a series of drawings, from actual measurement of the works; including plans, sections, elevations, and details of each structure, and an appendix, illustrative of the art of bridge building, as at present practiced in Europe.

Illustrated With Numerous Accurately Engraved Drawings.

15 Numbers, 75 Cents, each.

*A few sets of the above work, may be had by applying to the subscriber.

JOHN WILEY, 167 Broadway.**Passenger Cars for Sale.**

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

BOORMAN, JOHNSTON & CO.,
 90 Broadway, New York.

Sept. 7.

Notice to Contractors.

Office of the Milwaukee and Horicon R. R. Co.,
 Milwaukee, Wis., March 15th, 1854.

PROPOSALS will be received at this office till the first day of May next for the construction of the second division of the Milwaukee and Horicon Railroad, from Horicon to Berlin a distance of forty-two miles or sections thereof.

Maps, profiles and specifications will be ready for the examination of bidders on and after the tenth day of April next.

JOHN B. SMITH,
 Pres't M. & H. R. R. Co.

MANUFACTURERS' AGENCY

FOR

RAILROAD FURNISHING,

Office 18 Dearborn St., Chicago, Ill.

E. R. T. ARMSTRONG, Agent,

KEEPS constantly on hand Railroad Spikes, Burden's make, Railroad Wrought Iron Chairs, superior quality, Ames' manufacture of Locomotive Tires, Cranks, &c. Washburn, Pond & Co.'s Car Wheels, of best Salisbury and Stirling Iron, mixed under direction of Mr. Washburn, and warranted.

Orders invited for Locomotive and Car Rolled or Hammered Axles—Locomotive Lamps—Superior Pumps, for Stations, Switch Stands, Levers, and Targets—Locomotive Drivers and Cylinders—Boxes and Pedestals—Screw Cutters and Drilling Machines—Frog's Heads and Heel Blocks—Screw Presses, for forcing Wheels and Axles.

Oils of a superior quality, made expressly for railroads, and free from gum.

Refer to—Illinois Central railroad, Ohio and Mississippi river railroad, Michigan Southern railroad, Galena and Chicago Union railroad, Milwaukee and Mississippi river railroad, Little Miami railroad, Cincinnati, Hamilton and Dayton railroad, Central Ohio railroad.

14.6m's.

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality

by **THOMAS HUNT,**
 No. 53 Fulton Street,
 New York.

1y10*

OFFICE OF THE CLEVELAND AND TOLEDO RAILROAD CO.—No. 18 William Street

—New York, 15th March, 1854.—DIVIDEND.—

A semi-annual Dividend of 5 per cent. on the capital stock of this company, has this day been declared, payable in cash, at the office of the company, on and after the 5th April next. Certificates of stock in either of the late companies, (Junction, or Toledo, Norwalk and Cleveland,) will be required to be exchanged for certificates of this company, before dividends are paid. The transfer books will be closed from the 25th inst., to the 5th April.

By order of the Board of Directors,
E. B. LITCHFIELD,
 mh.17 1m. Treasurer.

Railroad Iron Via Quebec.**JOHN ANDERSON & CO.**

**COMMISSION MERCHANTS,
 SHIPPING AGENTS AND BROKERS,
 Quebec and Montreal.**

PARTICULAR attention given to the Transshipment of Iron, &c., in Transit to the Western Lake Ports, and to the Shipment of Rails in Great Britain.
 Quebec, Dec. 2, 1853.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,
 287 Broadway, corner Reade-st.
 St. Under the Irving House, New York.

THE

New Yorker Handels-Zeitung

A GERMAN Commercial Paper, containing Prices Current, Market Reports, Exchange and Stock Rates, Shipping List and Correspondences from all parts of the world, appears twice a week in two separate editions, viz: one for home circulation, published each Wednesday and Saturday morning; the other for circulation in Europe,—the only German Paper published in the United States admitted to the German States—appears before the departure of each mail steamer for Europe. Terms:—The paper, per annum, at New York, \$5, for Germany, full Postage included, \$11, and for all other parts of Europe, the U. S. Postage inclus., \$3. Advertisements taken at liberal terms.

Howland, Burgess & Smith,

MANUFACTURERS of PURE SPERM OIL for Railroad Engines and Lamps, of Refined Whale Oil now so generally used for car wheels.—Works, New Bedford Mass.—Store, Albany, N. Y.

Orders (directed to either place) respectfully solicited from Superintendents.—All Oil warranted pure and perfectly satisfactory.

Pneumatic Pile Driving.**FOUNDATIONS FOR BRIDGES, PIERS & C.**

BY THE PNEUMATIC process hollow cylindrical piles or tubes from eight inches to ten feet diameter can be driven through sand, mud, clay or other material to any required depth. The complete success which has attended the operations of this process shows it to be eminently practicable in, and much the best method known for, the construction of railroad bridges across deep and rapid rivers where permanent foundations of great strength are necessary, and have to be secured at great depth.

Applications for license for the use of the invention in any part of the United States may be made to H. V. POOR, Esq., Editor of the *American Railroad Journal*, 9 Spruce street; or for contracts for pile driving, or licenses as above to

CHARLES PONTEZ,

March 25th, 1854.

New York.

To Contractors.**PACIFIC RAILROAD OF MISSOURI,**

THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.**THOS. S. O'SULLIVAN, Chief Eng.****Pacific R. R. Office, St. Louis, Feb. 1854.**

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by
BOORMAN, JOHNSTON & CO.,
90 Broadway, New York.
June 9, 1853.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to
THOS. CHAMBERS, President,
September, 1850.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.

VOSE, PERKINS & CO.,
9 South William St.

New York, June 1, 1851.

Knox & Shain,

MANUFACTURERS OF
LEVELS, TRANSITS AND SURVEYING
COMPASSES.

No 72 Dock st. first door south of Walnut, west side
PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
157 Broadway, New York.

CHARLES B. STUART,
DANIEL MARSH,

EDWARD W. SERRELL,
SAMUEL McELROY.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West,
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
Feb. 18. 1m.

**To Railroad Engineers and
Contractors.**

WANTED, a corps of efficient Engineers and Contractors, for the construction of a Railroad in one of the Southern States. Apply to
DUFF GREEN.

New York, Feb. 14th, 1854.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery, for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

GOOPEN & HEWITT,
17 Burling Slip, New York.

February 15, 1850.

SHANAHAN & LOEBER,

181 William-st,
(1st floor—Up Stairs,)
NEW-YORK.

MANUFACTURERS OF

THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
Chains, Scales, Levelling Rods, &c. 1y10

Notice to Contractors.

MEMPHIS & OHIO RAILROAD.

SEALED proposals will be received at the office of the Memphis and Ohio Railroad Company, at Memphis, Tenn., until the 15th day of April next, for the grubbing, clearing, gradation, and masonry of the first 65 miles, from Memphis to Cherryville.

Contractors must give the most undoubted security for the completion of the work at the time, and in the manner specified; and contracts will be let in sections, or for the entire work, as may be deemed best by the Directors.

The Directors reserve the right of rejecting all bids, should none prove satisfactory; and it is desirable that all propositions should be submitted, with the view of preparing the whole work for the iron as soon as possible. Bids of that character and otherwise equally favorable, will have preference.

Maps, plans and specifications may be seen at the office of the company, after the first of April.

E. PEABODY,
Engineer in charge.

Notice To Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND
TEXAS RAIL ROAD COMPANY
Monroe, La., March 8th, 1854.

SEALED PROPOSALS will be received at this Office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty mile, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the entire sections, or any portion thereof, not less than one mile, and those proposing to take stock of the Company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the Company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract. or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,
President.
P. J. TOURNADRE,
Chief Engineer.

7c14

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

JOHN H. HICKS,
90 Beaver street.

H. SAWYER

(of the late firm of SAWYER & HOBBS),
Manufacturer of Transits and Levels,

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 15]

SATURDAY, APRIL 15, 1854.

[WHOLE No. 939, VOL. XXVII.]

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

Ohio and Mississippi Railroad.....	225
The Economy of Railroads, as affected by the Adaptation of Locomotive Power.....	225
The Mode of Laying Track.....	229
Locomotive Governor Williamson.....	230
National Debt of England.....	230
Coinage of United States Mint.....	231
Movement on the Pennsylvania Lines of Pub- lic Works.....	231
Cleveland and Columbus Railroad.....	231
Statistics of the Railroads of Maine.....	231
North and South Railroads.....	231
Effect of an European War upon American Se- curities.....	234
Report of the State Engineer upon the New York Curves.....	234

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, April 15, 1854.

Ohio and Mississippi Railroad.

We wish this company would attune its organs to better harmony. We've very modestly echoed a few notes of its hired musician in this city, where, upon the domestic organ, edited by a person who has been, and probably is still in the employ of the company, falls upon us and gives us a sound beating, charging us with malingering the company, stating falsehood, etc. etc. This strikes us is rather hard treatment for the offence of merely repeating what the agents of the company furnish to other public prints. It strikes us too, that *both* organs, if they play at the same time, should blow the same *stop*. The public who are only interested to know the actual condition of the companies affairs, have a right to demand so much.

It is natural the company should desire that the statements made by the domestic organ, should correspond with facts that are a matter of common notoriety at home. But these facts are hardly brilliant enough to raise the wind in a foreign market. Consequently a new set are fabricated to meet the new exigency. Of this we do not so much complain; but we repeat, we do think it is hard that an outsider cannot quote either statement

without having his motives and his moral character, directly impugned.

Will the company please let us know whether there is any way of getting around the dilemma in which we are placed, otherwise than by our preserving entire silence?

The Economy of Railroads, as Affected by the Adaptation of Locomotive Power—Addressed to the Railroad Interests of New England.

BY ZERAH COLBURN,
Mechanical Engineer.
(Continued from Page 198.)

RELATION BETWEEN COST AND CHARGE OF TRANSPORTATION.

The cost of transportation can only be fully ascertained until after the construction account of the road in use has been closed.

The cost of carrying may be divided into three distinct elements, leaving out, as will be done in this section, all consideration of the interest on the investment.

The first division of the expenses includes those which are independent of the business done, being controlled by the extent, condition and value of the permanent establishment.

The second division includes expenses which are independent of the physical characteristics of the route.

The third division includes expenses which are partly or wholly contingent upon the grades and curves of the road.

It is with respect, principally, to the latter class of expenditures that I shall suggest the adaptation of motive power.

As there is generally a misapprehension of the real elements of the cost of transportation, and of the effects of grades and curves, I shall enter into a consideration of these subjects.

In the first division are included:

Taxes, insurance, repairs due to the natural decay of the track, roadway, bridges, etc., including wash by storms, effects of frosts and thaws, etc.

Repairs of fences, and a large portion of the repairs of buildings.

In the second division are included:

Office and Station expenses,
Agents and Clerks,

Labor in loading and unloading, Porters, Watchmen and Switchmen, Maintenance of Ferries and of Telegraph, All work performed by switching engines, and cars about depots, etc.

All repairs of buildings, and preservation of property contained or used therein, not included in first division.

The principal portion of repairs of all descriptions of cars.

A large part of all other expenses which are influenced by the physical features of the road.

The third division includes all expenses which are due to the increased amount and service of machinery, and increased wear of tracks, consequent upon grades and curves. It includes all extra attendance consequent upon dividing trains to ascend inclines.

To divide these expenses, practically, in the operation of a railroad, and to assign exact proportions to each, would be difficult, if not impossible. Yet reflection can readily discover that such a distinction exists.

The Erie Railroad Company, paid, in the year ending Sept. 30th, 1853, \$735,229 77 for expenses, wholly independent of the features of its line. This sum reached to nearly *one-third* of the whole expenditure, of \$2,407,373 13. Beyond this sum of nearly three-fourths of a million dollars, a large proportion of the other expenses were uninfluenced by either grades or curves.

These remarks are made to illustrate the real influence of the physical elements of railroad routes, inasmuch as the term, "cost of transportation," is often used in an indefinite manner, and, beyond a certain limit, is assumed to be in proportion to the total rise and fall of the route over which such transportation is effected.

On the other hand, grades are sometimes disregarded in their effects upon wear of tracks and machinery, and upon extra running expenses. It is from these facts that the subject requires such elucidation as ordinary experience can afford.

The gradients of some of the principal railroad routes may be here stated, to facilitate reference and comparisons.

The New York and Erie Railroad has the following maximum gradients, as stated in the recent report of that company:

Stations.	Distance apart. miles.	Distance of latter from Pier- mont Pier. miles.	Grade West. feet.	Grade East. feet.
EASTERN DIVISION.				
Piermont to Blauvelt- ville.....	3.46	4.51	50	—
Blauveltville to Suff- erns.....	13.41	17.92	60	59
Sufferns to Chester....	23.22	41.14	50	58
Chester to Otisville....	20.36	61.50	60	56
Otisville to Delaware..	12.69	74.19	—	45
DELAWARE DIVISION.				
Delaware to Deposit...88.47	162.66	15	—	—
Deposit to Gulf Sum- mit.....	7.28	168.94	68	—
Gulf Summit to Sus- quehanna.....	8.24	178.18	—	60
SUSQUEHANNA DIVISION.				
Susquehanna to Corn- ing.....	98.60	276.78	10	5
Corning to Hornells- ville.....	40.79	317.57	10	—
WESTERN DIVISION.				
Hornellsville to Al- mond Summit.....	123 $\frac{1}{4}$	330 $\frac{1}{4}$	50	—
Almond to Andover...4 $\frac{3}{4}$	335	—	40	—
Andover to Phillips- ville.....	16 $\frac{1}{2}$	351 $\frac{1}{2}$	—	40
Phillipsville to Belvi- dere.....	3 $\frac{1}{2}$	355	23	—
Belvidere to Cuba Sum- mit.....	83 $\frac{1}{4}$	363 $\frac{3}{4}$	49	—
Cuba to Olean.....17	380 $\frac{3}{4}$	35	39	—
Olean to Great Valley. 16	396 $\frac{7}{8}$	25	15	—
Great Valley to Dayton Summit.....	25 $\frac{1}{4}$	422	30	40
Dayton Summit to Dun- kirk.....	23	445	35	40
The total rise and fall in 445 miles is 8,056 feet, as follows:				
		Ascent West, in feet.	Descent West, in feet.	
Eastern.....	1,625	1,189		
Delaware.....	930	469		
Susquehanna.....	486	244		
Western.....	1,282	1,840		
Total.....	4,323	3,732		
		Sum of both, in feet.	Average per Mile, in feet.	
Eastern.....	2,814	88		
Delaware.....	1,389	13		
Susquehanna.....	730	5		
Western.....	3,123	24		
Total.....	8,056	18		
The elevations of the track are as follows:				
		Elevation above tide, in feet.	Distance from New York via U. R. R. in miles.	
Sufferns.....	281.86	32		
Chester.....	455.65	55		
Otisville Summit.....	895.78	75 $\frac{1}{2}$		
Delaware Station.....	436.42	88		
Deposit.....	997.17	176 $\frac{1}{2}$		
Sulf Summit.....	1,366.38	184		
Susquehanna.....	906.88	192		
Owego.....	813.65	236 $\frac{1}{2}$		
Elmira.....	854.32	273		
Corning.....	921.08	290 $\frac{1}{2}$		
Hornellsville.....	1,138.87	331 $\frac{1}{2}$		
Almond Summit.....	1,760.17	344 $\frac{1}{2}$		
Andover.....	1,576.25	349		
Belvidere.....	1,369.38	365 $\frac{1}{2}$		
Cuba Summit.....	1,677.42	377 $\frac{1}{2}$		
Olean.....	1,418.52	394 $\frac{1}{2}$		
Great Valley.....	1,390.58	410 $\frac{1}{2}$		
Summit.....	1,595.58	436		
Dunkirk.....	680.00	459		

The curvature is as follows:

Name of Division.	Whole No. of Degrees.	Average Mile per Deg.
Eastern.....	4,490	60
Delaware.....	9,244	88
Susquehanna.....	4,317	35
Western.....	4,201	32
Total.....	22,252	50
		Curved, in feet.
Eastern.....	138,870	250,530
Delaware.....	296,840	248,522
Susquehanna.....	221,095	512,620
Western.....	193,760	487,051
Total.....	850,565	1,498,723

PENNSYLVANIA CENTRAL RAILROAD.

The Pennsylvania Railroad proper, extending from Harrisburg to Pittsburg, has the following grades:

Stations.	Distance of lat- ter from Harrisburg. miles.	Elevation of lat- ter above Harrisburg. feet.	Max. Grade going East. feet.	Max. Grade going West. feet.
Harrisburg to oppo- site Lewistown....	60 $\frac{1}{2}$	175	8	16
Opposite Lewistown to Newton or Ham- ilton.....	83 $\frac{1}{2}$	295	—	—
Newton to Peters- burg.....	104	353	10 $\frac{1}{2}$	21
Petersburg to Altoo- na.....	131	851	—	—
Altoonato Sugar Run Summit.....	144	1800	—	92
Summit to 15 $\frac{1}{2}$ th mile.....	151	1617	53	—
15 $\frac{1}{2}$ th to 159 $\frac{1}{2}$ th mile, 159 $\frac{1}{2}$ 159 $\frac{1}{2}$ th mile to Johns- town.....	173 $\frac{1}{2}$	798	53	—
Johnstown to 195 $\frac{1}{2}$ miles.....	195 $\frac{1}{2}$	634	26 $\frac{1}{2}$	—
195 $\frac{1}{2}$ to 206 miles, Sindorf's Summit, 206	206	843	—	26 $\frac{1}{2}$
Sindorf's to crossing of Loyalhanna....	211	632	53	—
Crossing of Loyal- hanna to Rodger's Summit.....	216	853	—	53
Rodger's to crossing of Sewickly.....	220 $\frac{1}{2}$	668	53	—
Sewickly to Bar- clay's Tunnel....	223	—	—	53
Barclay's to Turtle Creek.....	241 $\frac{1}{2}$	371	53	—
Turtle to Milligan's Summit.....	245	551	—	47 $\frac{1}{2}$
Milligan's to Liber- ty.....	248 $\frac{1}{2}$	546	—	—
Liberty to Pittsburg, 252	252	879	53	—

The canal basin at Harrisburg is 812 feet above tide, and Pittsburg is 699 feet above tide; giving a height of summit equal 2,120 feet at Sugar Run Gap.

Between Harrisburg and Philadelphia, 106 miles, there are maximum grades of 45 feet: Mine Ridge, between Lancaster and Downingtown, is 599 feet above the Delaware; Smith's Summit is 570 feet, and Valley Hill 503 feet, also, above the Delaware.

BALTIMORE AND OHIO ROAD.

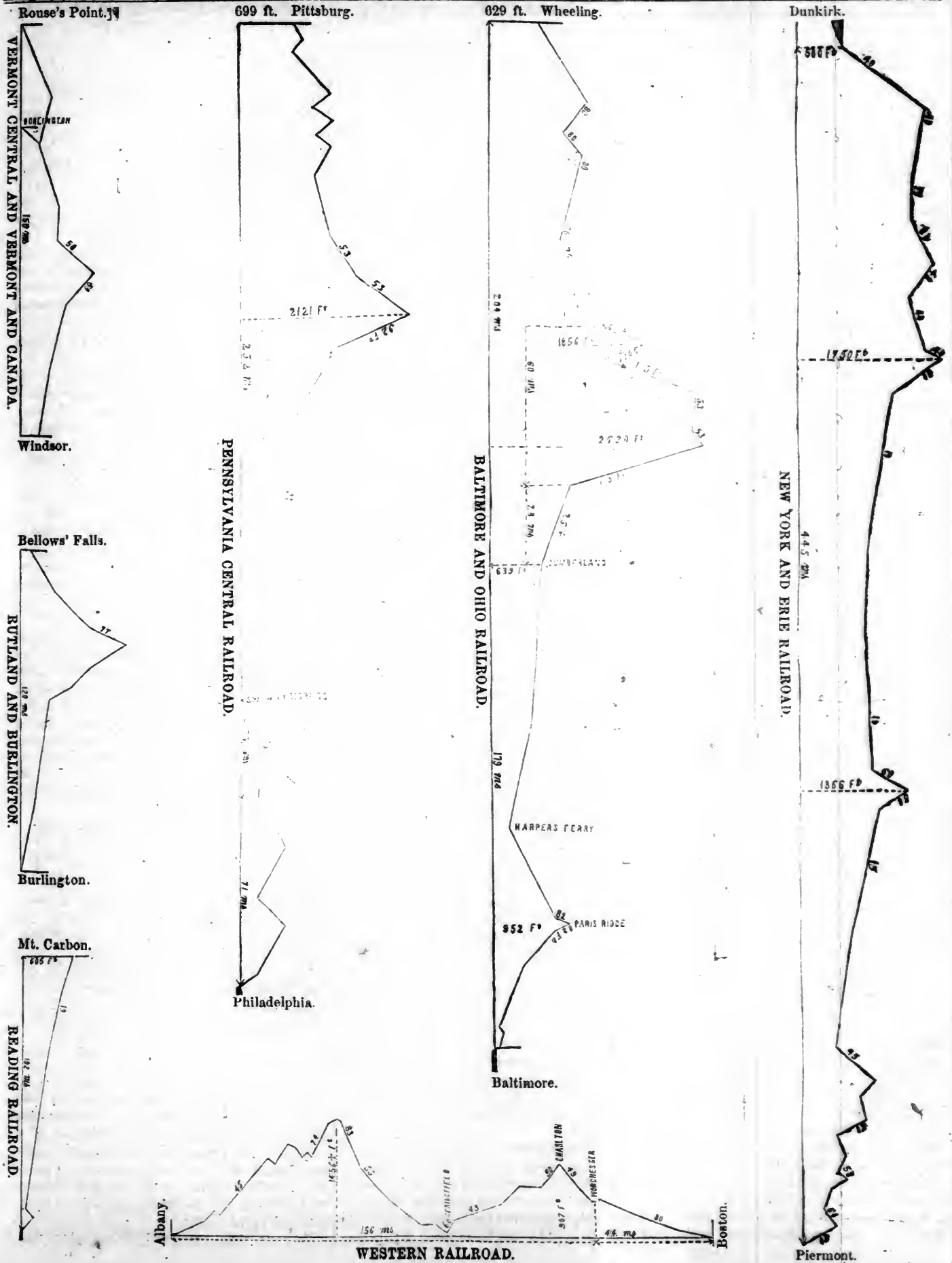
I have not been able to procure an accurate profile of that part of the Baltimore and Ohio Railroad east of Cumberland, but have the fol-
lowing memoranda from the report of G.W. Whis-
ler, Jr., on burning anthracite coal.

Baltimore to Harper's Ferry, 80 miles.

8 miles rise from 30 to 40 feet per mile.	
7 " fall " 30 to 40 " "	
2 " rise at 82 feet per mile.	
2 " fall at 82 " "	
46 " rise and fall from 0 to 30 feet per mile.	
15 " level.	
80 miles total length, with a total rise of 852 feet, and fall of 647 feet.	
15 miles are curved with a less radius than 1000 feet. Total curvature, 31 circles of 360°.	
Harper's Ferry to Cumberland, 98 miles.	
14 miles rise from 30 to 40 feet per mile.	
10 " fall " 30 to 40 " "	
33 " rise and fall 0 to 30 " "	
41 " level.	
98 miles total length, with a total rise of 993 feet, and fall of 634 feet.	
1.6 miles are curved with a less radius than 1000 feet. Total curvature, 29 circles of 360°.	
Cumberland to Wheeling, 200 miles.	
Cumberland is 639 feet above mean tide at Bal- timore.	

Stations.	Distance of lat- ter from Cumberland. miles.	Elevation of lat- ter above mean tide. feet.	Maximum Grade going East. feet.	Maximum Grade going West. feet.
Cumberland to 29th mile, near Pled- mont.....	29	—	—	26 $\frac{1}{2}$
20th mile to Swanton.....	40 $\frac{1}{2}$	2272	—	116
Swanton to Al- tamont.....	44	2620	—	106
Altamont to 48 $\frac{1}{2}$ miles.....	48	2414	53	—
48 miles to You- ghio gheny River.....	54	2376	—	—
Youghio gheny to Cranberry Summit.....	63 $\frac{1}{2}$	2550	40	53
Cranberry to Cheat River. 75 $\frac{1}{2}$	75 $\frac{1}{2}$	1397	116	—
Cheat River to Cassidy's Summit....	80	1856	—	106
Cassidy's to East end of King- wood Tunnel, 82 $\frac{1}{2}$	82 $\frac{1}{2}$	1820	53	—
King wood to Raccoon.....	88 $\frac{1}{2}$	1227	106	—
Raccoon to 91 $\frac{1}{2}$ miles.....	91 $\frac{1}{2}$	1107	40	—
91 $\frac{1}{2}$ to 148 $\frac{3}{4}$ miles.....	148 $\frac{3}{4}$	1042	26 $\frac{1}{2}$	26 $\frac{1}{2}$
148 $\frac{3}{4}$ miles to Glover's Gap. 151	151	1150	—	80
Glover's Gap to 159 miles....	159	925	53	—
159 miles to Board Tree Tunnel.....	162	1102	—	80
Board Tree to 156 $\frac{3}{4}$ miles..	156 $\frac{3}{4}$	885	80	—
156 $\frac{3}{4}$ miles to Welling's Tun- nel.....	170 $\frac{1}{4}$	1167	—	80
Welling's to 175 $\frac{1}{4}$ miles.....	175 $\frac{1}{4}$	978	80	—
175 $\frac{1}{4}$ miles to Ohio River..	189 $\frac{1}{2}$	631	40	—
To Wheeling...200	200	629	—	—

Low water at Wheeling, 592 feet above mean
tide at Baltimore; high water 637 feet above.



The grades of the Pennsylvania Central, and of the Baltimore and Ohio road west of Cumberland, are taken from profiles published by the Engineers of the respective companies.

The Reading Railroad has no ascending grades going from the coal region to the Delaware River, except a single 40 feet grade for a short distance near Philadelphia. The maximum grades going from tide water, are 19 feet per mile. Mount Carbon is 607 ft. above high tide in the Delaware River.

WESTERN RAILROAD.

The Boston and Worcester and Western Railroads, of Massachusetts, have the following grades and elevations:

Stations.	Distance of lat- ter from Boston. miles.	Elevation of lat- ter above Base line of Road in Boston. feet.	Maxi- mum Grade going East feet.	Maxi- mum Grade going West. feet.
Boston to 17th mile.....	17	—	—	30
17th mile to Worcester Summit.....	43	50½	30	30
Summit to Wor- cester Station	44	477	30	—
Worcester to Charlton Summit.....	57¼	907	—	49
Charlton to 64th mile.....	64	—	50	—
64th to 74th mile.....	74	—	26	5
74th to 95¼ miles.....	95¼	—	43	33
95¼ to Spring- field.....	98½	71	60	—
Springfield to 125¼ miles.....	125¼	—	—	36
125¼ miles to Washington Summit.....	138½	1456½	—	83
Summit to Pitts- field.....	150½	—	74	15
Pittsfield to State line.....	161¾	916	44	45
State Line to Canaan Sum- mit.....	164½	954½	—	20
Canaan to Greenbush opposite Al- bany.....	200	26½	40	35

The shortest curves upon the Western road, respectively, of 955 and 882 feet radius, are in a grade descending to the Eastward at the rate of 25 feet per mile.

The Western Railroad has an unusual amount of rise and fall, in proportion to its length. The whole rise and fall, between Worcester and Greenbush is 3,767 feet. Of the the entire length of the road, 22,924 miles, or 15 per cent. are on grades of between 50 and 83 feet rise per mile; while 88,365 miles, or 57 per cent. are inclined above 30 feet per mile. There is a continuous grade of 74 feet per mile, for 5½ miles; one of 79 feet for 4½ miles; and one of 83 feet for 1½ miles.

VERMONT CENTRAL RAILROAD.

The summit of this road, approached on either side by 50 feet grades, is 46½ miles from the Connecticut River at White River junction, 56¼ from Lake Champlain; 678 feet above the surface of the Connecticut River, and 913 feet above the lake. Another summit 7¼ miles from, and 252 feet above the lake, requires a 40 feet grade to

ascend from the East, and one of 50 feet in going from the lake.

Between White River Junction and Burlington, a distance of 102, 84-100 miles, the grades are as follows:

Level.....	40.54 miles.
5 to 20 feet rise,	19.81 "
20 " 30 "	15.93 "
30 " 40 "	12.01 "
40 " 50 "	14.55 "

Total.....102.84 "

The Vermont Central Road extends about 15 miles below White River Junction, making the whole road 118 miles long.

RUTLAND AND BURLINGTON RAILROAD.

The summit of this road, between the Connecti-cut River and Lake Champlain, is at Mount Holly, 85 miles from Burlington and 35 miles from Bellow's Falls. On the Eastern side, the grades are nominally 60 feet per mile, although the late president of the road, Wm. Raymond Lee, Esq., has informed me that he has detected, by instrumental obser-vation, grades of 77 feet rise, near Mount Holly summit. Grades of from 30 to 60 feet occur on other parts of the road.

Assuming the track at Burlington to be 25 feet above the standard or base line of the road, the principal elevations are as follows:

	Distance from Burlington, miles.	Elevation. feet.
Burlington.....	0	25
Vergennes.....	22	100
New Haven.....	27	220
Middlebury.....	35	250
Rutland.....	67	430
Cuttingsville.....	77	900
Mount Holly Summit.....	85	1340
Ludlow.....	92	900
Chester.....	106	460
Bellows Falls.....	120	180

Total rise, from Burlington track to Summit, 1,315 feet; fall from summit to Bellow's Falls, 1,160 feet.

EFFECTS OF "GRADES."

Inclines, or "Grades," as they are usually called, involve the resistance of gravity. The locomotive, which, upon a level has only to overcome the friction of the train, has to overcome its weight, or to lift it, to an extent, on a grade. The gravity of the load is in the same proportion to the whole weight as the height of the grade is to its length.

The consideration of grades requires that their relative resistance be determined, for although the absolute resistance of any incline, is always the same, it may be relatively greater or less in proportion to the total resistances of friction, gravity, concussion and atmosphere encountered in passing it. If the power of one pound could move one thousand pounds on a level road, a grade of about 5¼ feet rise in a mile, would double the resistance. But if one pound could pull but ten pounds on a level it would require a grade of 528 feet rise per mile to double the resistance.

Hence, to consider the effect of grades, the nature and amount of other resistances must be considered also.

First, is the friction of the wheels and axles of the carriages, constant at all velocities, but depending upon the condition as well as the weight of carriages. This friction has been found to be as low as six pounds per ton in some cases, while it might, in another case, be as much as 20 pounds

per ton, if the trucks were not well fitted. An average allowance of about 8 lbs. for each ton of 2,240 lbs. is usually made, for this resistance, by engineers.

Second, is the concussion of the flanges of the wheels against the sides and at the ends of the rails. This resistance depends upon the straightness, evenness, and continuity of the tracks. It is increased by "bad joints," by curves, and by inequalities in the grade of the line. It is believed, also, to be exactly in proportion to the speed. On a good road it has been estimated to be 3½ lbs. per ton of 2,240 lbs., at a speed of 10 miles per hour.

Third, the atmosphere offers a resistance which is believed to be nearly in proportion to the "frontage," or opposing surface, and to increase as the square of the velocity. With the usual frontage of 80 square feet, it is believed to be one-fifth of a pound for an entire train, at one mile per hour.

These allowances can be considered only as approximations for general purposes, on account of the uncertainty of the conditions upon which they are established. But they extend far enough to show approximately the resistance of a train of 100 tons, at 12 miles per hour, to be 12¼ lbs. per ton; and of another train, of 50 tons, at 35 miles an hour, to be 24½ lbs. per ton, or exactly double what it is in the first case supposed. With the slow train the resistances are such that a grade of 28.8 feet rise per mile would involve twice the resistance, requiring twice the power to maintain the given speed. With the fast train, however, the resistance would be doubled only upon a grade 57.6 feet rise per mile.

If 10 pounds be assumed as the average resistance of a ton of 2,000 pounds, at a speed of 10 miles per hour on a level, then each ton (2,000 lbs.) of adhesive weight upon the driving wheels of the locomotive would pull as follows, on different grades; the adhesion of the drivers being estimated at one-fifth of the weight. The gravity of the adhesive weight, and of an equal amount for the other weight of the engine and of the tender is deducted, so that the numbers represent the weight of cars and load drawn.

Level.....	39 tons.
26.4 feet rise.....	18½ "
52.8 "	11 6-10 "
79.2 "	8¼ "
105.6 "	6 2-10 "

The gravity of a ton upon any grade is ascertained by multiplying, for a ton of 2,000 lbs., the rise in feet per mile by .3787. For a ton of 2,240 lbs., multiply the rise in feet by .4242.

Thus, an engine having twenty tons on its driving wheels should, if properly proportioned and in good order, draw—

On a level.....	780 tons.
26.4 feet rise.....	370 "
52.8 "	232 "
79.2 "	165 "
105.6 "	124 "

I have taken grades of 26.4 feet rise, and their resultant products, for illustrations, because the first grade involves double the resistance of a level; the next, three times the resistance, and so on, although an engine would not draw so much as one half on a 26.4 feet rise as it would on a level, from the fact that its own gravity has to be deducted on the incline.

We have, thus, proceeded far enough to find

that, with freight trains running over a good road, at low velocities, the *relative resistance* of grades is very great. A low velocity has been made a condition, and it has also been assumed that the engines are loaded up to their ordinary capacity, both of which conditions are necessary for economical transportation.

It is especially with reference to the "capacity of motive power" that I shall hereafter consider the economical working of grades.

Curves impose a resistance to locomotion, but one that is not susceptible of exact estimation, as in the case of grades. Their resistance depends not only upon their radii, but upon the length of train, character of material of wheels, lateral play of journals, lateral play of wheel flanges, length of cars and of trucks, and especially upon the speed of trains passing through. In the latter respect, the relative position of curves to grades is important to be known, as the occurrence of a bad curve—especially a reversed curve—in a steep grade might require an extravagant expenditure of power in one direction, and be dangerous in the other. A sharp curve at the foot of a steep grade is especially dangerous to descending trains.

In Gillespie's work on Roads, it is stated that upon the Utica and Schenectady road, an ascent of 20 feet per mile is followed by a level curve of 700 feet radius; and that trains ascending the incline at 15 miles per hour, *increase* their speed on the curve; showing a curve of 700 feet radius, at 15 miles per hour, to involve less resistance than a grade of 20 feet per mile.

If it be possible to group the principal rise and fall of a road into a short distance, to be worked by assistant power, there remains an excuse for light engines. The New York and Erie road has a length of 243 miles with no grades exceeding 15 feet per mile in either direction, except for 15 miles, where the rise and fall is at the rate of about 60 feet per mile. There are few roads, however, built over a primary geological formation, which possess such favorable features for so great a distance. The Baltimore and Ohio road, which presents the boldest examples of "grouped gradients," has plenty more of undulating, diffused over its length. The Western road, although it has its grades of above 60 feet grouped in about twenty miles, has grades of 40, 45, 50, 55 and 60 feet in many other places—grades which absorb from two-thirds to three-fourths of the power of the engines. But yet, whilst the grades against the Western business are 57 per cent. steeper on the Baltimore and Ohio than on the Western road, the engines of the former road are adapted to draw as heavy a train as are taken over the 74 feet grades of the Western road. This fact, which will receive further elaboration, is one of the most successful examples of the economical working of grades.

The practical effects of working an undulating line are a division of trains on the grades, thereby requiring more engines, enginemen, and firemen; more conductors and brakemen; more fuel, oil, and waste; producing more wear of tracks and road bed; requiring, for a larger number of engines, additional sidings, engine houses, turn-tables, and a greater length of double track. Frequent trains, running nearly upon the same hours, are also much more subject to accidents. Again,

the undulation of the line may be so much diffused over its extent as to prevent even the advantage of running full trains on comparatively level portions of the road. In such a case as this, especially, should the motive power be of the most efficient character. Two or three ruling grades of from 40 to 50 feet per mile, distributed over a distance of from 50 to 100 miles, will, if the business be not heavy enough to pay the expense of assistant power, limit the trains to one-third the capacity of the engines. The Eastern and Western divisions of the Erie Railroad are cases in point. The former has grades of sixty feet, distributed over its length of 74 miles; the latter has grades of from forty to fifty feet, in regular succession for 128 miles. The engines used on these divisions are no heavier than on the other more level divisions, and the usual trains are therefore from one-third to one-fourth only of a proper load on a level.

Now, if the engines in use on the Eastern and Western divisions were more powerful than the others, in proportion to the increased resistances they have to encounter, the same trains which could be drawn by one ordinary engine on a level, could be taken by such enlarged engines over the grades.

It is the amount and nature of the business of a road, and the manner in which the movement is performed, whether by maximum or minimum trains, that affect the relation between *cost* and *charge* of transportation.

The *charge* for transportation is at present as follows, on different railroads:—

To be continued.

For the American Railroad Journal.

To Railroad Companies on Track-Laying

Among the various railroad improvements brought to notice from time to time, we find many very meritable ones; yet but little attention has been given to track-laying, as no other alterations of material benefit have been made since the first introduction of the T rail into this country, with the exception of a little more care in keeping the ties adjusted together, with some trivial alterations in the chairs and spikes. Other experiments have, however, been made in England and France, and to some extent in this country, such as laying and adjusting ties on stone blocks; and, in some instances, stone have entirely been substituted for the wooden tie. But owing to the immediate and almost entire destruction of both rails and machinery, the latter have, though at the enormous sacrifice of their original cost, been *wholly* abandoned, and wooden ties again resorted to. This we understand is owing entirely to the unyielding solidity of stone, or for the want of a certain temporary elasticity produced in the gravel-bed, by the wooden tie settling away when the train passes; though, from our knowledge of gravel, we are inclined to think that, when once pressed away, it becomes as compact and unyielding on its surface as solid rock, and consequently, after the passing over of a few laden trains, the elastic difference remaining is only the contrast between the nature of stone and wood—the latter not causing the destructive trembling jar attendant upon the former.

Yet, we ask if it is not natural to suppose that ties settle away very unevenly, causing the rail to bend and creep, draw its chairs and spikes, get

out of adjustment, and go to destruction before half the actual service is realized, in spite of all the labor and enormous annual expense to keep the same in order. Yet this destructive unevenness is accurately manifested, only on the application of the weight of a locomotive, or a heavy laden car, which may be readily perceived by the continual lateral wavering of a train in motion, rendering safety entirely out of question at a speed of more than twenty-five miles to the hour.

Again, cars and machinery are constructed necessarily with great accuracy, and calculated only for a track as near to a spirit level as may be; and how is the rapid depreciation of these vehicles accounted for, other than by the liabilities attendant upon the short cramps caused by the uneven yielding of the ties, and the state of the joints of rails occurring every twenty feet?

There is hardly a track in this country on which a locomotive, when running at the rate of thirty miles per hour, will not sway so as to lay all her weight first upon one side then the other at every twenty feet, which it is reasonable to suppose must be occasioned by non-adjustment, and consequently very destructive to all materials.

All this is conscientiously deemed by railroad companies to be a matter of course, expense—and the consequence is, unless a road is doing an enormous business, stocks are found far below par. The major portion of the first cost of a railroad is the rails and equipage, and the contingent expenses thereof is principally confined to the same; and economy therein should be the chief study of those interested. But this, we find, is very much if not entirely neglected under the present imperfect discipline of roads in this country.

In regard to some of the more recently suggested improvements in track laying which has led to these considerations, and which opens a field for investigation, we find that; *first*, elasticity to the tracks of railroads is as indispensable in the vital interests of everything contained in the premises as steam itself. *Secondly*, that a permanent and a spirit level foundation, and beyond the reach of frost, is also indispensable; and, *thirdly*, that a far heavier rail is, or will be, in the end, found more safe, cheap and durable than those now in use, and that, in our opinion, there is none but the endless rail, that is safe under a train at high speed. We have recently investigated an improvement in the continuous rail, by Chuncy Vibbard, superintendent of the New York Central Railroad, which is said, by practical men, to be superior to and rail now in use, and it is said, a portion of the track of the above road is to be laid with the same the coming season. We have also seen some, though rather inaccurate, descriptions of a rubber improvement by some one, intended to be applied between the rail and the foundation in order to give the entire track a uniform elasticity. This plan would require about 720 lbs. of rubber to the mile to give the rail a sufficient yielding to break the shock consequent upon stone or wood foundations. The rubber being so confined in metal caps as to obviate friction or change of shape or elasticity, making it practically safe and permanent whenever it may be laid. We invite the attention of railroad companies to a thorough investigation of some of these devices, and, in fact, to the whole subject, as we deem it one in

which they have deep interests involved, both as corporations and as private individuals. It cannot be denied that the greatest drawback upon our railways as paying investments, results from the rapid depreciation of stock, and any suggestions tending to relieve them from this incubus, should be carefully heeded. B.

Locomotive "Governor Williamson."

(The following article was intended to have accompanied a drawing of the above engine, which appeared in last paper, but was accidentally omitted. We now invite attention both to the article and to the drawing:)

LOCOMOTIVE "GOV. WILLIAMSON."

Early in July last we noticed the advent of a locomotive, of superior design and finish, upon the New Jersey Railroad. This engine was built by Messrs. Danforth, Cooke & Co., of Paterson, N. J. We are now enabled to present our readers with the fine lithographic drawing which accompanies our present issue, showing the exterior appearance of this engine. This drawing is from the establishment of Messrs. Bien and Sterner, 90 Fulton street.

The Locomotive "Gov. Williamson," is one of the new series of heavy express engines, now adopted by the New Jersey Railroad, for running the Philadelphia trains. In all the additions which have been made to the motive power of this road, during the last three years, it has been a settled purpose to secure the highest possible efficiency, durability and beauty. As an example of each and all of these qualities, the "Gov. Williamson" is a rare combination.

There have been but few engines made in this country which have received more liberal proportions of heating surface and boiler room than the subject under our notice. For a 15 inch cylinder, 20 inch stroke, and 6 feet driving wheel, this engine has a boiler 45 inches in diameter in the waist, and containing 129 two inch tubes, 11 feet, 6 inches long. The steam room, obtained by these dimensions of boiler shell is increased by the elevated crown of the firebox, and the two steam domes. The furnace is 4 feet 2 inches long on the grate, 3 feet 4 inches wide, and 4 feet 6 inches deep. This gives about 777 square feet of tube surface, 78½ square feet of interior firebox surface, and 13½ square feet of grate area.

The steam pipes, ports, etc., are of ample size, the latter being for induction 14 by 1½ inches, and for eduction, 14 by 2½ inches.

For durability every reasonable requisite is attained both in the quality and in the finish and mode of connection of the material. It is pleasing to notice such secure and substantial frames, spring-suspensions, trucks, rockers, valve motions, boiler braces and stays, etc., as the Paterson engines afford, and especially gratifying to see such examples of locomotive construction so well appreciated and patronized in these times, when orders are so likely to be influenced by the sole consideration of price.

In beauty of form and elegance of proportion, the engraving speaks for itself. In color, polish and decoration the engine is in keeping with the other qualities which we have designated.

Messrs. Danforth, Cooke, & Co., commenced the erection of capacious Locomotive shops in August 1852, and completed and delivered their

first locomotive on the 17th of March, 1853. Since that time 30 engines have been turned out.

Of this number of engines, 9 were inside connected, or "crank" engines, built mostly for the Erie Road, and 21 were outside connected. Seven of these engines are running on the New Jersey, Camden and Amboy, and Morris and Essex Roads, and seven upon the New York and Erie road.

Among the recent productions of this firm we notice a very fine engine, the "Poughkeepsie," upon the Hudson River road. This engine bears every evidence of the progress of improvement in locomotive building; having level cylinders, trucks with outside and inside journals, etc. We notice one detail of this engine which, although simple, is of much value. The bridge which encircles the main valve is forged solid with the valve spindle, the latter being coupled, just outside of the stuffing box, to the valve rod, by a key-socket. This prevents the "stripping of the thread" of the valve stem, which often gives so much annoyance in running. We believe Mr. Harvey Rice, of the Erie road, first adopted this improvement in the engines designed by him and built by Mess. Danforth & Co.

Mr. John Cooke, the superintendent and engineer of these works formerly occupied a like post in the large establishment of Messrs. Rogers Ketchum & Grosvenor.

The tools and machinery of these shops being of the best kind, and the experience of the proprietors being ample, we believe they will continue to sustain a high reputation for the manufacture of Locomotives.

The War in Europe.

The unwillingness manifested by Great Britain to involve herself in a war with Russia, is undoubtedly owing to the recollection of what previous wars have cost her. Her immense national debt of over £800,000,000, or about \$4,000,000,000, has been created almost entirely by foreign wars, waged chiefly on the continent of Europe, to maintain a certain status, similar to what she now seeks to maintain in the case of Turkey, in seeking to redress some imaginary wrong or affront, or in asserting some prescriptive or assumed right. It is now seen that in most of these wars she drove a losing bargain, no matter what the apparent immediate success; that wars settle nothing; that force is not principle, and that the moment the pressure ceases to be applied, the result of all the previous labor goes with it.

The national debt of England is of recent origin. In 1702 it was only £16,000,000. It did not increase materially till the breaking out of the Revolutionary war of this country in 1775. It was not till the commencement of the wars growing out of the French Revolution that it began to roll up at a fearful rate. In 23 years, commencing in 1794 and ending in 1817, the amount of debt created by loans equalled £770,000,000, or nearly \$32,000,000 per annum, or about \$160,000,000 of our currency! In the years 1814, 15, and 16, the annual amount added to the national debt was £93,000,000, or £465,000,000, or \$1,395,000,000 in three years! Yet this was at a period in which England was poor compared with her present wealth. At that period her vast manufacturing interest was in its very infancy. Steam had begun to be applied only to a few branches of her national industry. Her production of iron was not one-

twentieth its present amount. The whole production of pig iron in the United Kingdom, in 1796, was only 124,879 tons. The increase of her manufactures in cotton, may be measured by the increased production of the raw material in the United States. A steam marine did not even exist in the idea. Railroads were even unthought of. The wealth of England has increased in a greater ratio, probably, than have the various branches of her national industry. Compare her increase of strength for the past forty years, with all the new elements of power and wealth which that period has evolved, and it will then be seen what a tremendous force she is now capable of exerting.

But her increased strength has not whetted her appetite for war. She is more disinclined than ever to use it for such purpose. *Cui bono?* is the question now asked of every new proposition. She takes counsel from her interests, not her passions. The few millions now asked for are grudgingly and hesitatingly voted. In 1796 a loan of £18,000,000, or \$90,000,000, was subscribed in sixteen hours, to put down Republicanism in France! and \$360,000,000 a year for several years in succession were freely voted for the same object.

How different the prevailing sentiment now! The bad blood between the two countries seems to have been all shed in the terrific wars that have been waged between them. They are now united in the closest bonds of commercial affinity, and both claim to have similar objects of ambition, as far as the political relations of Europe are concerned. The two countries undoubtedly feel, that it is in the pursuits of peace that they can realize their greatest achievements. Such certainly is the conviction of the people of England. Fifty years ago no European nation had outgrown the idea that the use of wealth was the power it gave to attack and oppress neighboring and rival states. During this period wealth has acquired a new value and significance. It now represents railroads, steamships, enormous industrial establishments, employing, and clothing, and feeding whole communities. It is now looked upon as the great conservator of the peace of society instead of furnishing the means for disturbing it. The richest nations are now the most pacific. The Emperor Nicholas undoubtedly presumed a great deal upon the unwillingness of England to submit to the immense sacrifice which a war must cause.

Some two months since, and before an English soldier had left its shores, one of the leading English journals estimated that the fear of a war had cost that country more than \$100,000,000 in the paralysis that it had caused upon all the operations of business and trade. Russia, on the other hand, is the freebooter, all of whose property is on his back, and who can lose little, while he hopes to gain a great deal by disturbing the peace of society.

The present rate of interest paid on the funded debt is only 3 and 3¼ per cent. A much larger rate, however, was originally paid. In 1692 the Government offered 8 to 10 per cent. for a loan of £1,000,000, yet could obtain only three-fourths the amount required. Most of the early loans were negotiated at high rates of interest. Subsequently, the practice was, when a loan of £10,000,000 was called for, to issue stock to the lenders to the amount of £12,000,000, or £18,000,000—the

excess being in the nature of a *premium*—so that, although the stock bore only 4 per cent. interest, a much larger rate was actually paid. Our railroad companies can thus refer to an *illustrious* authority for selling their securities *under par*.—These, too, in turn, could set the English people a still better example, of applying the money borrowed to a good use, instead of firing it away in gunpowder, injuring themselves as much as their enemies. It would be difficult to point to any really useful monument (laying 'glory' aside) that the national debt of England has erected.

United States Mint.

The following table will show the coinage at the Mint of the United States, Philadelphia, for the three months of 1854:

	Jan. & Feb.	March.	Total.
Double Eagles, \$6,222,940	\$2,260,260		\$8,483,200
Eagles.....	240,120		240,120
Half-Eagles...	245,735		245,735
Quarter Eagles	81,580	204,955	286,535
Dollars.....	55,808	182,814	238,622

Total Gold...	\$6,360,328	\$3,133,884	\$9,494,212
Half Dollars...	341,000	116,000	457,000
Quarters.....	609,000	566,000	1,175,000
Dimes.....	117,000	18,000	135,000

Total Silver...	\$1,067,000	\$700,000	\$1,767,000
Copper.....	3,024	6,738	9,762
Gold, Silver and Copper	\$7,430,352	\$3,840,622	\$11,270,974
Gold Bars....	368,883	626,000	994,883

Total.....	\$7,799,335	\$4,466,622	\$12,265,957
In 1853.....	7,948,579	5,865,189	13,813,768

Decrease.... \$149,343 \$1,398,576 \$1,547,910
The deposits of precious metal for the first quarter of the year were:

	1853.	Gold.	Silver.
January.....		\$4,962,097	\$14,000
February.....		3,548,523	13,000
March.....		7,533,752	70,000

Total.....	\$16,044,372	\$97,000	
------------	--------------	----------	--

	1854.	Gold.	Silver.
January.....		\$4,215,579	\$108,000
February.....		2,514,000	1,166,000
March.....		3,982,000	147,500

Total..... \$10,711,579 \$1,421,500
Showing for the three months of this year a decrease of \$5,332,793 in the deposits of gold, and an increase of \$1,323,940 in the deposits of silver.

Movement on the Pennsylvania Lines of Public Works.

The Philadelphia Ledger gives the following statement of the amount of merchandise transported from that city to Pittsburgh by the Pennsylvania Railroad and Pennsylvania and Ohio Line, for twelve days of the month of March:

	Penn. Railroad.	Penn. & Ohio Line.
March 6th.....	1,001,705	194,780
" 7th.....	947,543	127,384
" 8th.....	907,009	82,184
" 9th.....	905,122	108,436
" 10th.....	718,202	68,426
" 11th.....	760,140	104,596
" 12th.....	900,514	177,156
" 13th.....	763,083	97,984
" 14th.....	759,266	345,507
" 15th.....	780,086	211,595
" 16th.....	715,100	218,652
" 17th.....	659,196	160,075

Total..... 9,816,916 lbs. 1,896,775 lbs.

It is stated that in addition to this Messrs. Harris & Leech shipped during the same time, 1,920

tons goods, making the aggregate by canal and railroad, 7777 tons, or 15,553,691 lbs. of through freight to Pittsburgh in twelve days, or a fraction over 648 tons per day. The Pennsylvania Railroad Company shipped westward, from the 6th to the 18th, 622 tons of local freight. This swells the amount which passed over the Philadelphia and Columbia Railroad to 8,439 tons, or more than 703 tons per day.

Cleveland and Columbus Railroad.

The following is a statement of the operations of this road, for the year ending Dec, 31.

Received from passengers.....	\$632,640 86
" From freight.....	496,040 37
" From mail, \$34,735 35; express, \$23,335 32.....	58,120 67
From rents, \$806 44; dividends, \$4,265.....	5,071 44

Total.....	\$1 191,873 28
The expenses for repairs, transportation, interest, &c., were.....	\$580,776 16

Surplus.....	\$611,097 12
--------------	--------------

The annexed statement shows the general account of the road;

Construction.....	\$3,196,545 15
Construction, second track.....	90,891 02
Cars and engines.....	545,912 51
	\$3,833,348 68

Real estate.....	34,119 96
------------------	-----------

Cleveland City and Delaware Co. Bonds	45,000 00
---------------------------------------	-----------

Stock of this Company.....	149,710 00
----------------------------	------------

Columbus and Xenia Railroad Stock.....	5,050 00
--	----------

Cleveland and Cincinnati Telegraph Stock	3,000 00
--	----------

Steamboat Stock.....	54,000 00
----------------------	-----------

Loan to Stockholders Bellefontaine and Indiana Railroad Co..	47,500 00
--	-----------

Loan to Stockholders Indianapolis and Bellefontaine Railroad Co.....	54,000 00
--	-----------

Loan to Cleveland and Mahoning Railroad Co.....	12,000 00
---	-----------

Bills receivable.....	116,542 88
-----------------------	------------

Individual and other accounts.....	6,073 28
------------------------------------	----------

	526,996 12
--	------------

	\$4,860,344 80
--	----------------

Capital stock.....	3,933,652 00
--------------------	--------------

Mortgage bonds.....	67,000 00
---------------------	-----------

Other Convertible Bd's	8,000 00
------------------------	----------

Franklin County Bd's.	50,000 00
-----------------------	-----------

Bills payable and other liabilities.....	8,599 84
--	----------

Borrowed from earnings.....	293,092 96
-----------------------------	------------

	\$4,360,344 80
--	----------------

The dividends of this Road have been 28 per cent, in 26 months.	
---	--

The Lake in the Great Desert.

Mr. William P. Blake, who recently accompanied the party of Lieut. J. G. Parke across the desert lying between the San Bernardino mountain and the Colorado river, was enabled, in the capacity of geologist, to make—it is said—the only scientific survey ever attempted of that region. He says that the fact of the ancient existence of an immense inland lake in that section of the country, is established by unmistakable signs of shells and sand beaches, extending for many miles along the Valley which was traversed by the party. Mr. Blake states that the eastern borders of this vast lake reached some distance to the eastward of the Colorado river. During his journey he saw great quantities of old sea drift silicified wood and marine fossils, all highly polished by the action of the drifting sand.

Statistics of Maine Railroads for the year ending Dec. 31, 1853.

ANDROSCOGGIN AND KENNEBEC RAILROAD.

Length of line—55 miles.	
Weight of Rail—63 lbs per yard.	
Capital paid in.....	\$824,181 80
Cost of Road.....	2,030,140 38
Amount of indebtedness.....	1,049,549 00
Due the Corporation.....	15,589 37
Number of passengers in 1853.....	110,784
Received from passengers.....	\$79,305 51
" " freight.....	68,176 41
" " other sources.....	6,594 09

Total receipts in 1853.....	\$154,076 01
Miles run by passenger trains.....	69,285
" Freight ".....	34,100
Number of Stockholders.....	1419
" residing in Maine.....	1294
Dividends in 1853, none.	

KENNEBEC AND PORTLAND RAILROAD.

Length of line—72 1/2 miles.	
Weight of Rail—50 lbs per yard.	
Stock paid in.....	\$1,073,673 99
Whole cost of Road.....	2,520,981 80
Amount of indebtedness.....	1,439,694 48
Due Corporation.....	93,081 40
Number of passengers in 1853.....	241,671
" through ".....	34,506
" way ".....	207,165
Received from passengers.....	\$134,432 60
" " freight.....	84,628 71
" " other sources.....	7,941 79

Total receipts in 1853.....	\$177,008 69
Miles run by passenger trains.....	109,084
" freight ".....	49,318
" other trains.....	830
Number of Stockholders.....	817
Dividends in 1853, none.	

North and South Railways.

The Cleveland papers, contain the proceedings of a railroad meeting held in that City on the 29th all, in favour of the Evansville, Indianapolis and Cleveland straight line railroad, Mr. Smith, President of the Company addressed the meeting, and the following resolutions were unanimously adopted, this road when constructed will be an extension of the Eastern lines from Indianapolis to Evansville on the Ohio river, about 150 miles, completing the through line from Cleveland on Lake Erie, to Evansville on the Ohio river of about 430, upon the same gauge, and being a part of the Central line to be extended from Evansville, by Paducah to Memphis, connecting the North with the South.

Arthur Hughes introduced the following resolutions which, being seconded by H. V. Willson were unanimously adopted;

"Resolved, That the construction of the Evansville, Indianapolis and Cleveland straight Line Railroad, and the line of road from Terre Haute to St. Louis, forming with the roads already built, a through line from Cleveland by Indianapolis to Evansville on the Ohio River, and also St. Louis on the Mississippi river, are works of high and paramount importance to the business and commerce of the City of Cleveland and the railroads centering there.

"Resolved, That the contemplated extension of the great through line from Evansville by Henderson, Smithland and Paducah to Memphis, Tenn., to connect there with lines to New Orleans, Arkansas and Texas, making through Central line in the valley of the Mississippi from New Orleans by Evansville, Indianapolis and Cleveland between the north and south, is a work of great national importance.

"Resolved, That the Companies and individuals engaged in the extension of this great line are entitled to our cordial co-operation and support.

"Resolved, That the thanks of this meeting are due and are hereby tendered to the Hon. Oliver

H. Smith for his able eloquent exposition of the merits and claims of this great Railroad enterprise.

"On motion, the meeting adjourned."

S. J. ANDREWS, Chairman.

GEO. A. BENEDICT, Secretary.

American Railroad Journal.

Saturday, April 15, 1854.

Back Numbers of the Journal.

Those who wish back numbers of the JOURNAL for binding are requested to order them at once, as we shall be able to supply them but a few weeks longer.

We can furnish BOUND VOLUMES for any or all years complete since 1831—price \$5—per year.

Our RAILWAY MAP in sheets will be sent by mail to any address on the receipt of \$1.00—price on rollers \$2.00.

We have a few copies of Mr. JOHNSON'S valuable work on the Northern route to the Pacific—price by mail \$1—with maps.

Probable Effect of an European War upon American Securities.

An European War being certain, one of the most interesting problems involved, as far as this country is concerned, is its probable effect upon the intrinsic and marketable value of our securities, particularly those issued on account of railroads, and works of a similar character.

From the intimate relations which subsist between the United States and all the commercial nations of Europe, each is, to a certain degree, necessarily affected by the condition of the other. If one be prosperous, all share in this prosperity. If the contrary be the fact, all suffer. At the present day, no nation, however independent its action, and however free from political and diplomatic entanglements, can escape the effect of the conduct or condition of its neighbor. Commercially, they belong to one community. If a paralysis strike a particular branch of industry of one of the members, it falls upon a corresponding branch of that of another. Should cotton spinning in Great Britain cease, the production of the raw material in this country would be largely curtailed. If European nations become too poor to purchase our staples, their previous value is the measure of our loss. Our people, therefore, are to be affected by a war in the same manner as those of France or England, only in a vastly less degree.

But the effect of a war will extend beyond the mere influence it exerts upon the price of our staples. An opinion adverse to one of our more important interests, may do us as much harm as would the loss of one of our leading crops.—Should a war create a distrust as to the value of European securities, and depress their market value, a similar sentiment, by necessary sympathy, would cross the Atlantic, and exert a similar effect upon the securities of this country. There may be no necessary reason for such coincidence, and no satisfactory explanation for it. The price of English consols has certainly nothing to do with the value of Erie or New York Central stocks, yet the quotations of the latter dance attendance upon the former with as much certainty as the shadow does the substance.

The first shock that European securities receive

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.

	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,150,278	254,743	113,520	none	88
Androscoggin and Kennebec.. "	55	809,878	1,016,500	2,064,458	140,561	80,053	none	80
Kennebec and Portland..... "	72	952,621	291,80	2,614,067	168,114	100,552	none	41
Port, Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	98
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	30
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	108
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	37
Northern	82	3,016,634	.....	328,782	163,075	5	50	50
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	6	83	83
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	108
Portsmouth and Concord .. "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	12
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	26
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	10
Vermont and Canada	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	ent.	97
Western Vermont..... "	51	3,022,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell	28	1,830,000	.....	1,995,249	388,108	130,881	7	91
Boston and Maine..... "	83	4,076,974	150,000	4,092,927	659,001	338,215	7	101
Boston and Providence..... "	53	3,160,390	390,000	3,546,214	469,656	227,434	6	82
Boston and Worcester..... "	69	4,500,000	425,000	4,845,967	758,819	331,296	7	100
Cape Cod branch..... "	28	421,295	171,800	633,906	60,743	30,056	2	40
Connecticut River..... "	52	1,591,100	193,600	1,801,946	229,004	72,028	5	55
Eastern	75	2,850,000	500,000	3,120,891	488,793	241,017	7	84
Fall River..... "	42	1,050,000	none.	1,050,000	229,445	99,589	8	90
Fitchburg	66	3,540,000	112,305	3,623,073	574,574	232,787	6	89
New Bedford and Taunton... "	20	500,000	none.	520,475	164,230	43,950	7	117
Norfolk County	26	547,015	819,743	1,245,927	67,251	23,415	none	68
Old Colony	45	1,964,070	282,300	2,293,534	374,897	122,816	none	96
Taunton Branch..... "	12	250,000	none.	307,186	137,406	24,399	8	.....
Vermont and Massachusetts.. "	77	2,140,536	1,001,500	3,203,333	218,679	18,648	none	16
Worcester and Nashua..... "	45	1,134,000	171,210	1,321,945	162,109	66,900	4	62
Western	155	5,150,000	5,319,520	9,953,759	1,525,224	746,736	7	97
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	69
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	123
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	95
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	.....	Recently opened.	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	54
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	.....	Recently opened.	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	.....	Recently opened.	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna..... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	70
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	63
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	49
Long Island	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	106
Ogdensburgh (Northern).... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	19
Oswego and Syracuse..... "	35	350,000	201,500	607,803	90,616	43,609	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	.....	Recently opened.	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,787	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	.....	Recently opened.	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	.....	Recently opened.	.....	83
Troy and Boston..... "	39	430,936	700,000	1,043,357	.....	Recently opened.	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	181
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	.....	Recently opened.	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,827	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	73
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	76

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	62
Washington branch..... "	88	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	115
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	83½
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	89
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	115
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton. "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	287,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine. "	83	.....	.....	.....	Recently opened.	.....	.....	87
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru. "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Terre Haute and Indianapolis. "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	121
Michigan Southern and Ind. N. Mich.	315	.....	8,741,564	7,276,616	1,200,922	586,929	17	118½
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	104½
Pacific..... Mo.	38	.....	non	In progress	Recently opened.	.....	.....	.....

ed, was consequently followed by a corresponding decline of those of the United States, in obedience to what seems to be an unvarying law. We may always calculate a certain result in this country to be due to a real or assumed condition of affairs in Europe. But in the present case, there are other reasons than those named, why this country should feel the effects of an European war. For several years past our people have been in the habit of borrowing large sums from abroad for the prosecution of our public works. It has been foreign capital that has enabled our people to accomplish no small part of the immense results that have been achieved. If the whole, or a considerable portion of this supply be cut off, the entire burden of the construction of our public works will be thrown upon our own people. This fact must draw large sums from other investments, and create a general stringency, the effect of which must be to reduce the market value of all our securities.

The prospect of war has already produced the results we have described. It has almost entirely checked the flow of European capital to this country—imposing upon our own people the burden of providing themselves the whole cost of our public works. A depressed share and bond market is the necessary result.

The degree of the depression of the market value of the securities of this country will depend, to a very considerable extent, upon the degree of the fluctuations in Europe. But as the causes that will produce, for a time, similar results, are different, our own market must recover its tone so soon as it is seen that the real value of our securities are not impaired, and so soon as our people adapt themselves to the altered state of affairs. The market now yields to a sentiment borrowed from abroad, and to a condition of things in this country, which must work its own cure. An European war certainly will not diminish the earnings of our railroads. Thus far it has added largely to their earnings, by the increased price created for many of our more important staples, which is rapidly drawing them from the interior to the seaports. The internal trade of the country was never so active as at the present time. Our railroads were never before so successful. The earnings of the entire investment in the United States are at least 25 per cent. greater than at a corresponding period the past year. With an equal ease in the money market, it may be confidently stated, that quotations would at the present time rule from five to ten per cent. higher than last year. The investment is worth such an advance were its value to be measured by the amount of income.

We cannot, at so early a period, estimate the influence of an European war upon this country. There seems to be no probability, however, that this country will, in any way, become a party to it. Our people, true to their money-loving instincts, will think it a good time, while the rest of Christendom is at war, to do the work of the world, and charge their own price for it. It may turn out that commerce can only be safely carried on through the medium of American bottoms. Should the war become general, provisions of all kinds must command a high price. The only staple, the price of which would be injuriously affected would be cotton, so that on the whole

were this country not indebted to Europe, and had we not been accustomed to rely upon European capital to carry forward our works, it seems probable that the first effect of a war would apparently be favorable. It would increase the value of most of our products. It would give additional employment and higher wages, to many of our more important interests, which would nearly balance the injury that others would suffer. It would in the end result in sending a large amount of capital into the country, as the stability of our institutions, the prosperity of our people, the intrinsic value of our investments, would contrast most favorably with what the old country could show. Such must be the case so soon as we become acclimated to the new state of things, and so soon as the favorable contrast referred to, can be properly appreciated. Whether peace or war be the state of Europe, the greater value of investment in this country must be seen and acknowledged, and must continue to attract to it, steadily increasing amounts of foreign capital.

While, therefore, we think it very probable that a rapid decline of the securities of this country may follow a similar decline in Europe, this fact does not in the slightest degree invalidate their value. Should foreigners see stocks quoted in our market at a lower figure than cost, there is no occasion for distrust or alarm, nor is there any reason to suppose that they have paid more than the securities they hold are worth. The depression will be temporary. The state of Europe has not affected their value in the slightest degree. The railroad investment in this country was never worth so much as at this instant. We have regarded the stringency which has prevailed for the past nine months as calculated to produce the most beneficial results. Had the money market continued easy, our people under the flush and excitement of success, would have rushed wild into visionary projects. Upon such, an effectual quietus has been put. Under the present state of the market, rival, or useless, roads will not be built. The roads that are constructed will, consequently, become all the more valuable. A stringency in our money market, therefore, should assure, instead of frightening, the holder of stocks or bonds. A depression in prices merely indicates what is to him, a wholesome state of things; not that his investment is the less valuable, but in fact more so.

Under such circumstances, to return securities to this country for sale, would be the greatest folly. Such a course pursued to a considerable extent would defeat the object of returning them. It would only serve to depress still more their value. As their intrinsic value is entirely independent of their market value, the two will harmonize in our own markets, so soon as the present causes of the depression, which are accidental and temporary in their character, shall cease to operate.

Consolidated.

The Fall River Railroad Company have voted to unite with the Old Colony Railroad, by a vote of 2667 yeas, to 2442 nays.

New York and Erie Railroad.

Wm. J. McAlpine, Esq., has resigned the offices of Assistant President and Chief Engineer of this Railroad.

Report of the State Engineer upon the State Canals.

(Continued from Page 187.)

IV.—THE COST AND CHARGES OF TRANSPORT.

This subject was considered at some length in my last annual report. The views therein presented will be incorporated in the present examination.

An investigation of the comparative advantages of the several channels of communication between the seaboard and the interior, requires an examination into the cost and charges of transport by the various modes of land and water conveyance.

The charges cannot be relied upon in this investigation, because they fluctuate on the various routes, and on different articles conveyed—competition reducing them to a minimum, and monopoly raising them to a maximum.

The cost, however, furnishes a more reliable basis for comparison, as the elements upon which it depends are usually, affected alike on the different routes.

These elements consist of loading, conveying, discharging, warehousing, insurance, and, in artificial channels, the necessary expenses of construction and maintenance.

The cost of loading and discharging depends upon the price of labor, and the facilities afforded; and the cost of insurance upon the character of the navigation.

The cost of conveyance upon the ocean is constant; but the charges are the least from that port at which is concentrated the largest amount of trade, and which possesses a favorable climate, and the greatest advantages for reaching the open sea.

New York, possessing these advantages, and those of concentrating at its harbor, through the influence of the great internal channels of commerce, the trade of the most extended fertile district of the interior of the country, has thus become the chief commercial centre of this continent.

The chain of Western Lakes terminating on the borders of this State, furnishes a transport second only to that of the ocean.

The duration of navigation upon them is limited in consequence of the closing of the harbors during the winter season.

The Hudson affords an example of the best description of river navigation, in consequence, of the uniformity of the flow and the smoothness and depth of its waters, allowing the use of either sail or steam vessels, and of light hulls; thereby increasing the proportion of the weight of the cargo to the whole weight moved.

The Mississippi, and its larger branches, have the advantage of a long route and a current of from three to six miles an hour in the direction of the greatest tonnage. The fluctuations of their waters and obstructions of their channels, the higher price of labor, the necessity of employing steam vessels exclusively, and the hazards of the navigation, increase the cost of transportation on these waters.

The cost of movement upon a canal depends upon the relative sectional areas of the boat and of the canal, upon the actual size of the two, and upon the elevation to be overcome.

The suspension of navigation upon the Northern water lines, increase the cost of transportation upon them, as the loss of time and the interest upon the capital invested is charged upon the business done during the limited portion of the year, while they are navigable.

The cost of movement upon a railroad depends upon the amount of the curvature, the inclination of its gradients, and the elevation to be overcome, and its limited capacity in comparison with its cost.

The cost of transport on artificial works is increased by the tax necessary to be levied to give a remuneration for the capital invested, and also to pay the current expenses of operating and maintaining the work.

The other circumstances constituting the ex-

pense of these modes of transport, will be treated of in a subsequent part of this report.

Having thus given the characteristics of the different modes of transport, it becomes necessary to state the actual cost of each, for the purpose of making a practical application to the several channels of trade between the interior and the sea coast.

In arriving at these general results, it will not be necessary to regard those fluctuations of trade and commerce, tending to increase or diminish the cost of transport, which are of only a temporary character.

The following table furnishes the distance travelled by sailing vessels, and the ordinary charges to England, France, and the West Indies and South America, by which it will be seen, as has been previously remarked, that the charges from New York to the principal importing ports of the world, are less than from any other American city. The tables furnish the charges, and the cost may be assumed at two-thirds of their charges:—

Table of Charges.

From	To Liverpool.			To Havre.			To Havana.			To Rio Janeiro.		
	Miles.	Per ton.		Miles.	Per ton.		Miles.	Per ton.		Miles.	Per ton.	
		Voy- age.	Per Mile.		Voy- age.	Per Mile.		Voy- age.	Per Mile.		Voy- age.	Per Mile.
Quebec....	2910	\$11 00	8.75	3130	....	....	1950	....	6010	....	....	....
Boston....	3020	5 25	1.74	3000	\$5 00	1.67	1480	\$4 00	2.70	5310	\$4 00	0.75
New York..	3150	5 00	1.60	3381	4 50	1.35	1250	3 00	2.40	5240	4 00	0.76
Philadelp'a.	3295	5 50	1.70	3385	5 00	1.47	1220	4 00	3.27	5000	5 00	1.00
Baltimore..	3530	5 75	1.60	3620	6 00	1.65	1215	5 00	4.11	5000	6 00	1.20
Richmond..	3395	6 00	1.70	3485	6 00	1.72	1170	5 50	4.70	5000	6 00	1.20
N. Orleans..	4755	7 50	1.60	4845	7 50	1.54	595	4 00	6.72	6555	7 00	1.06

The rates of freight specified may be considered, (they are as far as can be ascertained,) a fair average freight of vessel's capacity for the past three years. To Rio Janeiro the freights are low proportionately, as the return freights are generally good.

Table of the cost of Transport per ton per mile.

Ocean, long voyage.....	1 Mill
" short ".....	2 to 4 "
Lakes, long voyage.....	2 "
" short ".....	3 to 8 "
Rivers, Hudson and of similar charac'r	2.5 "
" St. Lawrence and Mississippi	8 "
" tributaries of ".....	5 to 10 "
Canals, Erie enlargement.....	4 "
" other large but shorter.....	5 to 6 "
" ordinary size.....	5 "
" " with great lockage	6 to 8 "
Railroads transporting coal.....	6 to 10 "
" not for coal, favorable lines and grades.....	12.5 "
" not for coal, steep grades, &c..	15 to 25 "

Applying these rates to the transportation of freight between the Eastern end of Lake Erie and the Atlantic ports, gives the cost for the several routes as follows:—

- 1st. By Welland canal, Lake Ontario, and Oswego and Erie canals enlarged, and Hudson river*..... \$2 43
- 2d. By Erie canal enlarged and Hudson river to New York..... 2 52
- 3d. By the Canadian canals and the St. Lawrence to Quebec..... 2 58
- 4th. By the Welland canal, Lake Ontario, the Oswego and Erie canals and Hudson river to New York..... 2 94
- 5th. By the Erie canal and the Hudson riv.

er to New York.....	3 16
6th. By the Welland canal, Lake Ontario, St. Lawrence, proposed Caughnawaga canal, Champlain Lake and canal, and the Hudson river to New York.....	3 43
7th. By the New York Central Railroad and the Hudson river.....	6 19
8th. By the Welland canal, Lake Ontario, and Odensburg and Massachusetts Railroads.....	8 02
9th. By the New York and Erie Railroad to New York.....	8 43

It appears therefore that after the Erie Canal is enlarged, it will be the cheapest channel of trade between Lake Erie and the Atlantic; but there is now a difference in the cost of transportation, in favor of the route by the Canadian Canals to Quebec.

Applying the foregoing rates to the several routes between different points on the Ohio, and Mississippi, and the seaboard, gives the following results:—

The cost per ton from New York by the Erie Canal, Lake Erie to Cleveland, and the Ohio canals to Beaver, is \$4.77.

The same from New York to Cleveland, and the Ohio canal to Portsmouth, is \$5.97; or by way of Beaver and the Ohio river, \$5.85.

The same from New York to Toledo and the Ohio canal to Cincinnati, is \$5.82.

The same from New York to Toledo and the Indiana canal to Evansville, is \$6.99.

The cost from New York, by the Erie canal and the great lakes, to Chicago, thence to Peru, and the Illinois and Mississippi rivers to St. Louis, is \$7.09, and to Cairo is \$7.61.

The cost per ton from the capes of the Delaware through the Delaware and Chesapeake, and the Pennsylvania canals, Portage railroad and Ohio river to Beaver, is \$4.59; to Portsmouth, \$5.67; to Cincinnati, \$5.98; to Evansville, \$6.96; to Cairo, \$7.54.

The same from the capes of the Delaware by Philadelphia, the Union canal and to Beaver, as before, is \$4.81; to Portsmouth, \$5.39; to Cincinnati, \$5.70; to Evansville, \$6.68; to Cairo, \$7.26.

The cost per ton from the capes of Virginia to Baltimore, and thence by the Baltimore and Ohio railroad to Wheeling, is \$6.99.

The cost per ton from the capes of Virginia to Richmond, thence by the James River canal and the Kanawha, and Ohio rivers to Portsmouth, is \$4.11; Cincinnati, \$4.42; Evansville, \$5.40; Cairo, \$5.98.

The cost per ton from St. Louis to New Orleans, including the extra cost of drayage and shipment at New Orleans, is \$5.89.

From the above statement it will be seen that the Pennsylvania canals reach the Ohio river at Beaver and Portsmouth 46 cents per ton cheaper than the New York and Ohio canals—Cincinnati, Evansville and Cairo, 12 cents cheaper.

The Virginia canal, if completed, would reach the Ohio river at Portsmouth \$1.74 per ton cheaper than the New York and Ohio canals; and Cincinnati, Evansville and Cairo, \$1.40 cheaper.†

The dividing line of trade between the Pennsylvania and New York canals, is 46 miles north of Beaver and Portsmouth, and 12 miles north of Cincinnati and Evansville; but when the enlargement of the Erie canal is completed, the dividing line of trade, in accordance with the same principles,

will be extended to the Ohio, and for a distance of 30 miles up that river from Beaver (say to Pittsburgh,) and will embrace all of the trade below that point, until it is intercepted by that which will descend to New Orleans.

The dividing line of trade between New Orleans and the New York canals, is now above the mouth of the Illinois river, but when the Erie canal is enlarged with the advantages of the New York market, and the facility of foreign shipment therefrom, it will be extended to the Mississippi, at least as far down as the mouth of the Ohio.

The completion of the enlargement of the Erie canal will reduce the expense of transportation about seventy-five cents per ton, which will increase the area of the drainage of its trade as far as that sum will transport by land or water, and will also increase the amount of trade within the present drainage by permitting the exportation of many articles of large bulk, and small value, which are restrained at the present time, by the cost of transportation. This extension, as will be seen by the application of the rates given in the preceding table, is equal to two hundred and fifty miles on a river similar to the Ohio; one hundred and fifty on an ordinary canal; fifty miles on a railroad; and five to seven miles on common roads where these distances are not met by competing lines, and one half of those distances where they are so met.

The accompanying map shows the routes of the channels of trade which have been above discussed, and also the districts affording the trade of the several channels. The last annual report and its accompanying tables furnish full statistics of this trade.

The foregoing tables show the relative cost of transport by each route, allowing on each, a sum which will pay the interest on the expenditure which has been made to construct the artificial works on them. They do not include the tolls which are charged to reimburse the cost of the works, nor the charges which are necessary to be paid to the forwarders.

If such tolls and charges are made upon the same basis upon each route, the expense of transportation would be in the same ratio as the cost, charges given in the preceding tables, while the actual charges would probably be in each case, about double the cost charges.

The annexed table marked C shows the charges on the principal water and railroad lines, according to the last published rates.

V.—THE COMPARATIVE COST, CAPACITY AND REVENUE OF THE ERIE CANAL AND THE PARALLEL RAILROADS, AND THE COST AND CHARGES OF TRANSPORTATION THEREON.

The cost of the original Erie Canal was \$7,143,789 86, and its estimated cost when enlarged, including the cost of the original canal, is about thirty-five millions seven hundred thousand dollars.

The cost of the Erie Canal, with the equipment necessary to perform its business corresponding to that of the Railroads, is, for the original Canal, eleven millions of dollars, and for the enlarged Canal, similarly equipped, would be forty-six millions of dollars.

The cost of the New York Central Railroad, including its equipment, was twenty-two millions of dollars, and of the New York and Erie, thirty-five millions.

The capacity of the Erie Canal as originally constructed, was equal to one and a half millions of tons carried through, and when enlarged, it will be equal to seven millions of tons. The tonnage of last year moved upon all the Canals, was 4,247,853 tons; but the reports from the collectors of tolls do not show how much of this tonnage was moved on the Erie Canal, nor how much of it passed through the whole length.

The tonnage of freight moved on the New York Central Railroad, the last year, was about 360,000 tons, and on the New York and Erie, was 631,039 tons.

The amount of through freight carried upon

these two roads during the last year was less than one hundred and twenty thousand tons.

The tolls, at the present rates due to the capacity of the Erie Canal, as originally constructed, would be two and a half millions of dollars, and adding the charges of the forwarders, its revenue would be six millions of dollars per annum.

The tolls due to the capacity of the enlarged Canal, when performing its complement of business, and at the present rate of tolls, would be ten millions of dollars, and by adding the charges of the forwarders, its revenue would be nearly twice that sum.

The capacity of both of these roads, with double tracks, and fully equipped, and in operation the whole year, while doing a passenger business, is equal to that of a canal of the original size of the Erie, or one and a half millions of tons per annum.

The cost of transportation on the Erie Canal, including its repairs and maintenance, and the expenses of the forwarders is five mills per ton per mile.

The cost of transportation of freight on the Central Railroad, including items of expense, corresponding to those above stated, was nineteen mills per ton per mile, and on the New York and Erie, was thirteen mills.

The charges for the transportation of all the freight on the Canals in 1853, including the tolls paid to the States, averaged one cent. and one mill per ton per mile.

The charges for the transportation of all freight on the Central Railroad, averaged three cents and four mills per ton per mile, and on the New York and Erie averaged two cents and four mills.*

The subject of internal improvements of this state cannot be properly examined without considering the canals and railroads as parts of a single system, and not, as has been erroneously supposed, as two systems antagonistic to each other.

It has been asserted that the revenue of the canals has been stationary or diminishing for several years past, and that this is owing to the competition of the trunk lines of railroads of this state. This alleged diminution of revenue on the canal has been contrasted with the increased receipts upon the railroad lines mentioned, and the opinion expressed that the competition of the latter would reduce the revenue of the canals or render it stationary by diverting a portion of its business.

For the purpose of showing the incorrectness of these opinions and statements, it is necessary to compare the nature and amount of business done by these roads with that of the canals, and to ascertain the effect of the former upon the latter.

The first error is in assuming to make a comparison between the receipts of a railroad company and the tolls which are collected on the canals by the state, as the former embrace the expenses necessary for keeping the works and machinery in repair, to pay the interest on the capital invested, and to reimburse the principal, and also the whole expenses and profit charged upon the business done, while the latter embrace only the charges necessary to keep the works in repair and the payment of the interest and the principal expended upon their construction, and wholly omit the charges of the forwarders for the movement of the traffic.

The charges thus omitted embrace more than half of the whole cost of transportation upon the canal.

The second error is made by including in the comparison the sum collected by the railroads for the conveyance of passengers, while existing circumstances prevent any of this portion of the business from seeking the canals.

This item forms the largest amount of the receipts of the railroads in question.

The third error is the assumption that the

* There were one hundred and thirty thousand tons of lumber, and sixty-five thousand tons of coal, carried on the New York and Erie Railroad in 1853, at a charge of one and a third cents per ton per mile, which reduced the average charge below that of the Central.

* To the cost of the movement, in each of the above cases, has been added a price per ton which would on a movement of two millions of tons per annum, pay the annual cost of maintenance, and interest at 7 per cent on the cost of the artificial works through which the several routes pass. In the case of the enlargement of the Erie canal, the movement is taken at four millions of tons, in consequence of its greater capacity.

† The Legislature of Virginia, at its last session, decided to abandon the water line across the mountains, and a railroad is now being built, instead of the canal. This increases the cost of transportation by that route, and prevents its consideration as a competitor with the New York canals.

freighting business done by the railroads has been diverted from the canals, when by an examination of that business it will be seen,

1st. That the charges of railroad transportation being necessarily much higher than those of the canal, by taking the receipts instead of the tonnage, the comparison made is fallacious.

2nd. That a large portion of this freighting business was the transportation of articles which would not have offered itself to the canal had there been no parallel railroads.

3rd. That many of these articles being perishable could not be carried on the canals without serious loss to the owners.

4th. That the largest portion of the freighting business done by the railroads in question, is during that portion of the year when the canals are closed by frost.

5th. That the largest portion of the freighting business is the local business of the roads, which could not reach the canals without in many cases increasing the cost of transport beyond the value of the article.

And finally, that the very roads in question and their tributaries (excepting the Northern) bring a larger amount of freight to the canal than they convey of its appropriate business to market.

These several positions will be sustained by the following statements:

First. The total sum paid for transportation on the canals in 1852 is ascertained to be about \$6,400,000, which must be considered as the actual receipts of the canals in making a comparison with those of the railroads. The part of this sum collected for tolls was \$3,118,244, or less than one half of the whole of the receipts.

If this business had been performed on either of the two roads in question at their present charges, it would have cost the people over thirteen millions of dollars for its transportation.

The rate of the tolls were materially reduced in 1851, and again in 1852. In the last mentioned year the reduction was from twenty-five to forty per cent. on some of the leading articles, amounting to over three hundred thousand dollars.

The tonnage of the canals for the last ten years shows an increase in their business in each successive year, which would not be inferred from a statement of the tolls merely.

Second. The receipts from passengers on the Northern, Central, and New York and Erie Railroads in 1853 exceeded four millions of dollars, and were nearly as large in 1852. In 1851 they were about three and a half millions of dollars. The sums exceeded the amount received for the transportation of freight during that period.

Third. It has been previously stated that the charges for the transportation of freight carried on the New York and Erie Railroad were more than double, and of the Central more than three times those charged for the freight carried on the canal.

The number of tons carried on the canals in 1853, was 4,247,843, moved an average distance of about 200 miles, while the tonnage of the railroads referred to was 1,200,000 tons, moved an average distance of less than 100 miles.

Tables of the tonnage and value of all the articles transported on the Erie Canal and the Central Railroad from 1848 to 1852, show the distribution of the appropriate business upon the canal and upon the railroad, where they are contiguous and parallel.

The abstract of these tables was given in the last report as follows:

Of the articles of fur and peltry, live stock, pork in the hog, cheese, butter, wool, hides, peas and beans, dried fruit, cotton, hemp, grass and clover seed, hops, domestic spirits, leather and furniture, domestic woollens and cottons, and oysters and clams, there were transported upon the canals for the four years named, 311,518 tons, and upon the railroads, 131,871 tons—a proportion of 2.36 to 1, while the proportion of the whole tonnage is as 32 to 1.

The value of the first named quantity was \$68,

191,776, and that of the latter, \$32,783,161, showing a value of that carried on the canals of \$219.86 per ton, and that upon the railroads of \$248.60 per ton.

Of the articles, boards and scantling, shingles, timber, staves, wood, lard, lard oil, tallow, flour, wheat, rye, corn, corn meal, barley, oats, other grain, bran and ship stuffs, potatoes, beer, linseed oil, oil cake, starch, agricultural implements, iron, machines, and salt, there were transported upon the canals for the four years named, 9,172,995 tons, and upon the railroads, 84,614 tons—a proportion of 108.4 to 1, while the proportion for the whole tonnage is as 32 to 1.

The value of the first named quantity was \$165,720,693, and that of the latter, \$2,983,837, showing a value per ton of that carried upon the canals of \$18.06, and that carried upon the railroads of \$35.26.

Of all the other articles named in the table, there were transported by the canals, 2,357,902 tons, and upon the railroads, 142,444 tons; having values of \$215,330,638 and \$28,203,109, or \$91.32 and \$196.61 per ton respectively.

By careful inspection of the table referred to, it appears that the following causes transferred the carriage of freight to railroads running parallel to and adjoining the State canals, even during the time the former was subject to the payment of the same tolls as were charged upon the canals.

1st. The entire suspension of navigation for a period averaging about five months in each year.

2d. The fluctuating price and demand in market for such articles as butter, cheese, live cattle, sheep and hogs, which also require the most speedy means of transit to prevent the loss of weight, quality and value, while undergoing transportation.

3d. The transportation of articles of such value and great bulk as fur and peltry, wool, hops, furniture, and domestic woollens and cottons, for which the railroad is better adapted than the canal, by reason of the much greater proportion of room to tonnage in the freight car than in a canal boat,* and the less time occupied by railroad trains in bringing these commodities (which are easily handled) to market; an object, in itself, sufficient to induce the consumer or manufacturer to pay the extra cost of railroad transportation.

4th. Western merchants who obtain the whole of their stock in New York, can afford to pay the extra cost of railroad transportation on light merchandise, and thereby compete with those who purchase in nearer but more expensive markets. The cheaper mode of transport, canal navigation, at the same time affords the means of delivering heavy goods at a less expense than by other modes, but occupies a longer time.

In addition to these causes, it may be added that the most convincing proof of the performance of the respective duties of the two great channels of trade, as above stated, is shown by the average value of the articles transported upon each; that upon the canals being for the four years before named \$48.68 per ton, and upon the railroads \$227.41.

Thus the conclusions are arrived at, that those products and articles which are now profitably transported over the railroads, could not, in most instances, be moved upon the canal without serious loss to the owner or producer, and that the diversion of this business from our navigable channels has served to augment the legitimate business of the Erie Canal.

An inspection of table R, in the appendix of last year's report, shows the tons of all articles delivered at tide-water, by canals and railroads, during the years 1848 to 1851, inclusive, and fully sustains the views expressed in the foregoing pages.

The following is a classified statement of the freighting business done on the New York Central and the New York and Erie Railroads, for the

* The average capacity of a freight car designed for carrying eight tons, is 259.75 cubic feet per ton, and of the present largest class canal boats, intending to carry ninety tons, is 59.6 cubic feet per ton, and for boats on the enlarged canal, is 82.4 cubic feet per ton.

months of August and September, 1853. The reports of the several companies consolidated under the name of the New York Central do not furnish the means of extending the comparison for the whole year:—

	New York and Erie.	New York and Central.
	Tons.	Tons.
The product of the forest,	25,559	2,438
The product of animals,	19,632	25,728
Vegetable food,	14,001	18,587
Other agricultural products,	1,701	8,464
Manufactures,	14,746	6,285
Merchandise,	12,656	12,846
Other articles, miscellaneous,	36,059†	3,846
Total tons,	124,854	73,140
Equivalent tons moved one mile,	19,202,049	10,861,290
Average movement of each ton, miles,	154	148
Whole length of road, miles,	446	300

The above table exhibits the cause of the reduced average rate of charges for transportation on the New York and Erie below that of the Central, in the fact of the former road carrying so large a proportion of the product of the forest and mines, necessarily at a low rate, and thus reducing the average.

Thus it appears that all of the heavy articles and those not requiring a speedy transit, were carried on the canal, when a choice between the two was afforded; that these articles were carried to the canal by the railroads when it was accessible, and that they were only carried on the railroads from districts inaccessible to the canals, and then frequently at rates so near the cost of transport as to afford but little or no profit to the railroad company.

The tables accompanying the last annual Report furnish the means of ascertaining the proportions of local freight and its character, carried by the three trunk lines of railroads in this State in 1852.

	Freight carried in 1852.		
	Whole.	Local.	Through.
Northern Railroad,...	181,806	67,646	114,160
New York Central,...	311,000	279,713	81,287
New York and Erie,...	456,462	409,615	46,841

Total of Cent'l & Erie, 767,462 689,328 46,841

The local freight which was carried on the Central and Erie Railroads in 1852, was 90 per cent. of the whole tonnage.

The returns of the Erie and Central Railroads for 1853, show the following result:

	Tonnage for 1853.		
	Whole.	Local.	Through.
New York Central,...	360,000	284,950	75,050
New York & Erie,...	630,039	554,934	75,005

The local tonnage of the above roads is thus shown to be 85 per cent. of the whole.

The local freight on the Northern road was but thirty per cent. of the whole tonnage.

The character of the local and through freight on the Northern road is essentially different from that on the Central and on the Erie. The products of the forest were wholly local. The products of animals was one-third local. Agricultural products and merchandise were nearly all through. Manufactures and other articles were about equally divided between local and through.

This road connects with the network of the New England roads at Lake Champlain, and as there is a large deficiency of agricultural products in the interior of that district for home consumption, she receives her imports of such articles chiefly through the Northern Railroad, which accounts for the large through transportation of those articles over that road.

On the New York and Erie Railroad the products of the forest, and manufactures, and miscellaneous articles were almost wholly local. The products

* Chiefly Coal.

of agriculture and of animals, were four-fifths local, and merchandise was nearly three-fourths local.

VI. ANALYSIS OF THE PRESENT BUSINESS OF THE CANALS.

The annexed table D, furnishes a comparative statement of the tonnage and tolls of all and each of the canals, of that arriving and that leaving tide-water, of the tonnage shipped from the western termini; of that from this and the western states, the tonnage and tolls of the several classes, and of some of the principal articles of each class transported.

This table has been made by taking the tonnage and tolls of all the canals as a standard, and stating the proportions which each of the canals, shipments, classes, and articles named bear to the amount of all the canals. A glance at the tables, as thus arranged, is sufficient to furnish the reader with a tolerably correct idea of the relative business done upon each canal, at the chief localities, and in the transportation of each of the classes and articles carried.

The following deductions from these tables will serve to present some of the more striking points in the business performed:

First—That while the tonnage upon the Erie canal is but little more than one-half of the total tonnage of the canals, the receipts for tolls are three-fourths of the whole receipts.

Second—That while the tonnage of the Oswego and Champlain canals forms nearly one-third of the whole tonnage, the receipts for tolls on both are sixteen per cent. of the whole; and while that of the Chemung, Genesee Valley and Cayuga canals forms one-ninth of the whole tonnage, the receipts for tolls on them are eight per cent of the whole.

Third—That the tonnage arriving at tide-water is nearly three-fifths of the whole; that leaving tide-water is about one-seventh; and that shipped elsewhere is about three-tenths of the whole tonnage.

Fourth—That the tonnage shipped at Lake Erie is nearly one-fifth, at Oswego nearly one-eighth, and at Whitehall one-twelfth of the whole tonnage.

Fifth—That the tonnage from the western states forms one-third, and that from this state two-thirds of the whole tonnage carried.

In this classification of the articles transported the following deductions are made from the table:—

First—That the tonnage of the products of the forest is four-tenths; of vegetable food one-fourth; of merchandise and other articles each one-eighth; while the receipts for tolls from the first are but one-fifth, from the second four-tenths, from the third nearly one-fourth, and from the fourth but one-twenty-fifth of the whole.

The tonnage of manufactures being five per cent and the tolls four per cent, and the tonnage and tolls of the products of animals being each but two per cent of the whole.

Second—That the tonnage of lumber is about one-fourth of the whole, and the receipts for tolls one-eighth; that the receipts for flour, wheat, and corn is about one-fourth, while the tolls are over one-third.

Third—That timber, salt and railroad iron form each four per cent of the tonnage, while the tolls of the two former are two, and of the latter one per cent of the whole.

The foregoing statements and deductions, have been made from the report of tolls, trade and tonnage as prepared by the Auditor.

The tonnage and tolls due to the movement on each of the canals cannot be ascertained from these reports, as they only show the tonnage cleared at each collector's office, and the whole tolls collected thereon, whether the articles are conveyed on one or more of the canals.

Thus the tonnage of lumber shipped at Buffalo in 1852 was 81,102 tons, and the tolls collected thereon were \$59,344. If this was all white pine, carried on boats, the amount of the tolls shows that it had a total movement nearly equal to that

of one ton moved twenty millions of miles, or nearly equal to an average movement of 56,000 tons from Buffalo to tide-water.

The tonnage of lumber shipped at Oswego is 147,086 tons, and the tolls collected thereon were \$64,800, which shows a total movement equal to that of one ton moved over twenty-one millions of miles, which for the length of that canal (38 miles) would be equal to an average movement of nearly 570,000 tons from Oswego to Syracuse, which is absurd, and should be 106,000 tons to tide-water. Three-fourths of the movement of this tonnage, and of the tolls, is therefore evidently due to the Erie canal, and one-fourth only to the Oswego.

The tonnage and tolls on up freight, on the other hand, are credited in these reports from the Auditor to the Erie Canal, when a portion of the movement and of the tolls is due to the lateral canals.

The up tonnage being less than one-fourth of the down, renders the tables given by the Auditor unfavorable to the tonnage of the Erie canal.

The annexed table (E) has been prepared from the reports of the business done in 1851 and 1852; and shows the tonnage, tolls, and total movement of each article and class of freight on all the canals.

The report of the Auditor, as before stated, does not furnish the means of showing a similar statement for each of the canals. The whole movement in 1853 was equal to seven hundred millions of tons moved one mile, or an average movement of one hundred and sixty-five miles for each ton.

The average movement of the tonnage on the Erie Canal, excluding that of the lateral canals, is probably nearly 300 miles for each ton.

The comparative movement of each class, compared with the whole movement, was as follows:

Products of the forest, 34 per cent; agricultural products, 37 per cent; merchandise, 16 per cent; manufactures, 5 per cent; miscellaneous articles, 8 per cent.

The comparative movement of some of the principal articles embraced in these classes, is as follows:

First—Of the forest. Boards and scantling, 24 per cent of the whole movement of all articles on all the canals; staves, 5 per cent; timber, 5 per cent.

Second—Of the products of animals. Pork, 1 per cent; beef, 6-10 of one per cent; butter, cheese, and hides, each 1-10 per cent of the whole amount.

Third—Of vegetable food. Flour, 14 per cent; wheat, 11 per cent; corn, 15 per cent; and barley, 2 per cent.

Fourth—Of manufactures. Salt, 2 per cent; pig-iron and domestic spirits, each 8-10 of one per cent; castings, 6-10; bloom iron, furniture, and leather, each 1-10 of one per cent of the whole movement.

Fifth—Merchandise, 10½ per cent, and railroad iron, 6 per cent of the whole.

Unclassified articles. Coal, 4 per cent; stone, lime, and clay, 2 per cent; and live cattle, sheep, and hogs, 5-1000 of one per cent of the whole movement.

By reference to the tonnage tables, given by the Auditor, it will be seen how widely the proportions given by them differ from those now presented, of the total movements of these classes.

To be continued.

Panama Railroad.

At the late annual meeting of the Panama Railroad Company for the election of Directors, the following gentlemen were made members of the Board for the ensuing year:—Messrs. David Hoadley, W. H. Aspinwall, H. Chauncey, E. Bartlett, C. W. Lawrence, T. W. Ludlow, E. J. Woolsey, G. Kemble, J. B. Varnum, G. B. Lamar, H. A. Coit, W. Whitewright, Jr., and S. W. Comstock.

Railroad and Steamboat Accidents.

The following are the number of railroad and steamboat accidents, with the number of killed and wounded in each month, which have occurred in the United States from the 1st of January, 1853, to the present time. Only those accidents are enumerated which have been attended with loss of life and jury to persons:—

	Railroads.			Steamboats.		
	Accidents.	Killed.	Wounded.	Accidents.	Killed.	Wounded.
January.....	12	25	40	4	66	33
February.....	6	6	11	1	120	—
March.....	14	24	57	3	30	17
April.....	4	25	54	3	58	21
May.....	8	54	48	—	—	—
June.....	5	5	19	4	19	17
July.....	11	8	22	1	7	2
August.....	14	35	94	2	2	5
September.....	18	13	35	3	8	14
October.....	19	14	34	4	18	23
November.....	12	11	32	3	18	10
December.....	8	7	37	2	13	16
Total in 1853.....	138	227	483	31	359	158
1854.						
January.....	21	10	26	8	139	20
February.....	20	12	37	5	54	24
March.....	11	13	78	4	148	23
Total, 14½ months..	190	262	624	48	691	225

North Missouri Railroad.

The following gentlemen have been elected Directors of the North Missouri Railroad for the current year: Col. John O'Fallon, Thos. T. January, James T. Sweringen, Gerard B. Allen, A. Krekel, Calvin Case, Lewis Bissell, John D. Coalter, Robert M. Renick, John Hartnett, Andrew Harper, Carlos S. Greeley, Isaac A. Sturgeon.

Maryland.

BOARD OF PUBLIC WORKS.

The Commissioners of Public Works of the State of Maryland met at noon yesterday at Barnum's Hotel, in this city, when the following gentlemen were present: Moor N. Galls, Charles R. Stewart, Dr. Nelson, and Samuel Chamberlain.

The Board organized by electing Charles R. Stewart President, and then proceeded to nominate and elect Directors on the part of the State in the several Railroad Companies, in which the State holds an interest, with the following result:

Baltimore and Susquehanna Railroad.—Samuel H. Taggart, Zenus Barnum, John P. Kennedy, Nicholas H. Nelson, and Wm. Hutchins.

Baltimore and Ohio Railroad.—George Brown, Wm. Price, Dr. Howard Kennedy, Lawrence J. Brengle, Isaac C. Anderson, John Johnson, Henry A. Thompson, John S. Gittings, George Vickers, and Joseph S. Cleveland.

Annapolis and Elk Ridge Railroad.—Thos. G. Pratt, Benjamin E. Gannt, and Robert Lemon.

The Board then adjourned.

LOCOMOTIVE ENGINES.

A. & W. Denmead & Son,
BALTIMORE, MD.

HAVING THEIR IRON FOUNDRY & MACHINE SHOP in complete operation, are prepared to execute, faithfully and promptly, orders for Locomotive or Stationary Steam Engines, Woolen, Cotton, Flour, Rice, Sugar, Grist or Saw Mills, Machinery for cutting all kinds of Gearing, Hydraulic, Tobacco, and other Presses, Car and Locomotive patent Ring-Wheels, warranted, Bridge and Mill Castings, of every description, Gas and Water Pipes, all sizes, warranted, Railroad Wheels, with best figured axle, furnished and fit up for use, complete. Estimates for Work, in any part of the United States, furnished at short notice. sp.14-15

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—specular red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

Ogdensburg, N. Y., April, 1853.

G. FARISH,
15, Spru*

Cast Iron Chilled Slip Tires for Engine Driving Wheels.

THE undersigned, principal Agent for the above improvement, offers it, with the right of use, to Railroad Companies and others. The cost of these Tires is less than one-third that of wrought iron, the cost of renewing one-quarter; and the adhesion, strength, and durability equally as great, as will be proved to the satisfaction of any party. Over two hundred locomotives of the heaviest class, (25 to 30 tons,) upon the Baltimore and Ohio Road, are shod with cast iron, with an acknowledged saving over wrought iron equal to \$30,000 per annum. Address
15, Lf. ZERAH COLBURN, Paterson, N. J.

Chambers' Wrought Iron Car Wheels and Axles.

THE advantages of these wheels, in connection with their comparative cheapness, are their strength, lightness, and durability, being wholly of wrought iron, and the set of four wheels and two axles weighing only about one ton. They are now used on the London and Northwestern and other principal lines of English Railways, carrying greater weights than other wheels, say 12 to 15 tons, and in no instance has one given way. Samples, testimonials, &c. may be seen on application to the manufacturer's agents,

NAYLOR & CO.,
99 & 101 John street
164

New York, 12th April, 1854.

Notice to Contractors.

Office of the Milwaukee and Horicon R. R. Co.,
Milwaukee, Wis., March 15th, 1854.

PROPOSALS will be received at this office till the first day of May next for the construction of the second division of the Milwaukee and Horicon Railroad, from Horicon to Berlin a distance of forty-two miles or sections thereof.

Maps, profiles and specifications will be ready for the examination of bidders on and after the tenth day of April next.

JOHN B. SMITH,
Pres't M. & H. R. R. Co.

Railroad Car Works.

THE undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Head Cars, also Baggage Barrows and Freight Trucks.
F. HUNGERFORD & CO.
Mayville, Ky., Sept. 22, 1853.

Notice to Capitalists.

THE GREENVILLE AND COLUMBIA RAILROAD COMPANY

Now offers for sale their Coupon Bonds, redeemable in ten years, bearing interest at seven per cent, per annum, payable semi-annually, secured by mortgage of the entire Road, being the first lien upon it.

For a full understanding of the purposes, value of the property, and prospects of the Company, the following statement is made. It is proposed to issue Coupon Bonds, to the amount of three hundred thousand dollars which with those already issued will make the Bond debt \$800,000. The mortgage of the Road bearing date the eighteenth instant, is to cover these Bonds, as well those issued, as those to be issued, to the amount of \$800,000, and no more.

The Road was finished on the 9th December last, is well equipped, and in full and successful operation. The entire length of the Road, including its Branches, is 164 miles, and cost as follows

Surveying and Engineering.

neering,.....	\$ 66,881 34
Right of way.....	10,441 89
Graduation,.....	474,787 69
Masonry,.....	323,50 00
Trestle Bridging,....	88,351 69
Broad River Bridge,...	37,571 33
Saluda Lower Bridge,	6,530 78
Saluda Upper Bridge,	8,416 48
Timber for Tracks,...	158,181 23
Iron Rails,.....	575,235 59
Spikes and Chairs,...	50,891 30
Superstructure and Track Laying,....	94,921 42

Real Estate,.....	\$ 22,754 90
Depots and Water Stations,.....	44,745 52
Workshop Building,...	17,125 54
Machinery for Workshop,.....	16,702 19

Locomotive Engines,...	\$119,176 48
Passenger and Freight Cars,.....	130,000 00

Accounts for Materials, Work, &c., entering into construction, not yet fully ascertained, but supposed to be about,.....	\$1,955,065 37
	100,000 00

Capital Stock paid in, \$1,100,029 49	
Assessment on Stock paid in,.....	131,937 26

\$1,231,966 75

The Earnings of the Road for the last three months in an unfinished condition were as follows:

October—From Freight,...	\$12,761 13
From Passengers	8,321 17
From Mail,.....	700 00

November—From Freight, \$	9,764 41
From Passenger's	8,403 35
From Mail,...	800 00

December—From Freight,...	\$12,205 26
From Passenger's	9,034 00
From Mail,....	900 00

For three Months,..... \$62,889 32

The whole expenses of the Road, it is believed, will not exceed \$11,000 per month, or 50 per cent, on the earnings. The Road, for the greater part, is well constructed—of good materiel and heavy iron, and could not now be made and furnished as it is for less than \$3,000,000.

By order of the Directors,
THOMAS C. PERRIN, President.

January 18th, 1854.

N. B. The Bonds can be had by applying to Mr. Jacob Cohen, of Charleston; Mr. J. P. Southern, of Columbia, or to me at Abbeville Court House. Bids for these Bonds are requested.

Railroad Iron.

1,300 TONS superior quality Yorkshire rails 56 pounds T pattern can be immediately delivered at New York, Savannah, or New Orleans.

For sale by

NAYLOR & CO.

New York, April 1st, 1854.

Brass Tubes for Locomotive and Marine Boilers.

THE undersigned having been appointed Agent for the highest respectable manufacturers Messrs. Allen, Everitt & Son of Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to

JOHN H. HICKS,
90 Beaver str.

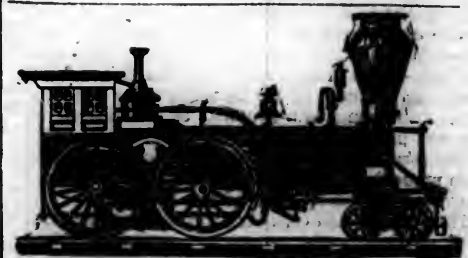
March 1854.

Notice to Contractors.

Proposals will be received for all the heavy work on the Blue Ridge Rail Road, South Carolina; Blue Ridge Rail Road, Georgia; Tennessee River Rail Road, North Carolina; Knoxville and Charleston Rail Road Tennessee. The above lines of rail-way are consolidated and under the management of one Company, Extending from Anderson South Carolina, via Clayton, Georgia, Franklin North Carolina, to Knoxville Tennessee, a distance of 194 miles. That part of the road from Anderson South Carolina, to the Turniptop Mountain, a distance of 40 miles is principally earth excavation, of about equal quantities of cut and fill, with several bridges. From the Turniptop Mountain to the Rabun Gap, a distance of 24 miles, the work is very heavy, there being on the line one tunnel of 5800 feet, one of 1400 feet, and one of 400 feet in length; a suspension bridge across the Chatanga River 500 feet long, with some very heavy earth and rock cuts. The rock in the Tunnels is gneiss stratified. From the Rabun Gap to twenty miles below Franklin, a distance of 50 miles, the line follows down the Tennessee River; the class of work is principally side hill excavation, some of which is rock; their will also be several bridges. From the point 20 miles below Franklin to Hardens, a distance of 35 miles, the line follows the Tennessee River the entire distance, causing heavy side rock excavations. On this portion of the line will be several expensive bridges, and a tunnel of about 1000 feet. From Hardens to Knoxville, a distance of 45 miles, the line follows the river about eight miles, then leaves it, running across the Chilhowa mountains almost a north line to Knoxville; this portion of the road is heavy work, with about equal quantities of cut and fill, an expensive bridge 1000 feet long and 45 feet high, crossing the Holston River at Knoxville. The character of the rock from Knoxville to Hardens is limestone, and from Hardens to Franklin gneiss rock stratified, and from Franklin to Anderson, stratified sandstone and gneiss rock. The character of the earth is sandy and clay loam. The line for the whole distance runs through high table lands, well settled, remarkable for its health, good water and ample resources for subsistence. The above line of rail-way offers great inducements to experienced contractors. The undersigned will be prepared to receive proposals and enter into contracts for the graduation, bridging, tunneling and masonry for the heavy portion of the line, from and after the 1st day of May next, at Knoxville Tennessee, Franklin North Carolina, and Pendleton South Carolina, and will continue at such places, until the same is under contract. Profiles and maps of approximate location can be seen at each of the above places after the 1st day of May. Proposals are asked with cash payments, also eighty per cent cash and twenty per cent in the Capital Stocks or Bonds of the Company. All communications prior to may 1st must be addressed at Pendleton South Carolina.

4,13

ANSON BANGS & Co.



ZERAH COLBURN,
CIVIL AND MECHANICAL ENGINEER.

OFFERS his services to Railroad Companies and others, in designing and constructing Locomotive Engines of superior adaptation and efficiency.

Refers to CHAS. MINOT, Supt. N. Y. and Erie Railroad; WM. RAYMOND LEE, Pres't, Ogdensburg railroad; G. W. WHISTLER, Esq., Vice Pres't. New Haven railroad; ROGERS, KETCHUM & GROSVENOR, Paterson, N. J., O. M. HYDE, Esq., Detroit.

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.
WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their **SYSTEM OF LOCOMOTIVE ENGINES** in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture *Five different kinds of Engines* and several classes or sizes of each kind.

Particular attention paid to the *strength of the machine in the plan and workmanship of all the details.* Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowling Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
 ILLINOIS CENTRAL RAILROAD.
 Vandalia, Ill.

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of
Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
 64 Courtland st., N. Y.

New York and Erie R. R.**PASSENGER TRAINS**

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the B. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAY EXPRESS, at 12½ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAY PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.
 These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.
CHAS. MINOT, Supt.

Railroad Iron.

2000 TONS Railroad Iron, weighing about 53 lbs. per yard, "Erie" pattern of G. L. and Crowsney's manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by **P. CROUTEAU, Jr., SANFORD & CO.,** December 4, 1852. No. 51 New street.

Travelling Agent Wanted.

A PERSON is wanted to travel throughout the United States, as Agent for one of the most respectable manufacturing establishments in this country. He must be a man of easy, good address, industry, perseverance, cheerful temperament, a competent salesman, possessing a practical knowledge of machinery, iron and steel, and able to produce the best testimonials as to integrity and general good character. One who has acted in the capacity of master mechanic and superintendent of a railroad machine shop would be preferred. Permanent employ and liberal compensation will be given. It will be a needless waste of time for any one to apply who is not fully qualified to suit the wants stated. He is not wanted to learn, but must have already learned to act his part. Address **EDART NORI**, Post Office, New York. ap12-8t*

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors' Compasses Manufactured on the most improved principle and of the Best Quality by **THOMAS HUNT,** No. 63 Fulton Street, New York.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

Sept. 7.

BOORMAN, JOHNSTON & CO.,
 90 Broadway, New York.

MANUFACTURERS' AGENCY

FOR

RAILROAD FURNISHING,

Office 18 Dearborn St., Chicago, Ill.

E. R. T. ARMSTRONG, Agent,

KEEPS constantly on hand Railroad Spikes, Burden's make, Railroad Wrought Iron Chairs, superior quality, Ames' manufacture of Locomotive Tires, Cranks, &c. Washburn, Pond & Co.'s Car Wheels, of best Salisbury and Stirling Iron, mixed under direction of Mr. Washburn, and warranted.

Orders invited for Locomotive and Car Rolled or Hammered Axles—Locomotive Lamps—Superior Pumps, for Stations, Switch Stands, Levers, and Targets—Locomotive Drivers and Cylinders—Boxes and Pedestals—Screw Cutters and Drilling Machines—Frog's Heads and Heel Blocks—Screw Presses, for forcing Wheels and Axles.

Oils of a superior quality, made expressly for railroads, and free from gums.

Refer to—Illinois Central railroad, Ohio and Mississippi river railroad, Michigan Southern railroad, Galena and Chicago Union railroad, Milwaukee and Mississippi river railroad, Little Miami railroad, Cincinnati, Hamilton and Dayton railroad, Central Ohio railroad.

14.6mo's.

S. SEYMOUR & O. GENERAL RAILROAD

SA. AGENCY, Office, Metropolitan Bank Building, No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R.R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS, at 11 years.

LOUISVILLE AND NASHVILLE R. R. STOCK.

BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Notice to Contractors.**PACIFIC RAILROAD OF MISSOURI.**

SEALED proposals will be received by the undersigned, at their office in the city of St. Louis, until six o'clock, P. M., of the 15th day of May next, for the Grading, Masonry, etc., of the first division of the South-west Branch of the Pacific Railroad, extending from Franklin Depot, the present terminus of the road, some 40 miles West of St. Louis, to the crossing of the Gasconade River, a distance of about 78 miles. The line will be divided into sections of about one mile each, and proposals may be made for one or more sections. The line, plans, profiles, specifications, form of contract, etc., will be ready for inspection on and after the first day of May next. The work to be let is quite heavy, situated in a healthy country, and is easy of access.

The undersigned reserve to themselves to reject all proposals that are not satisfactory.

A. S. DIVEN & CO.

March 24th, 1854.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,
 287 Broadway, corner Reade-st.

3rd*10 Under the Irving House, New York.

THE**New Yorker Handels-Zeitung**

A GERMAN Commercial Paper, containing Prices Current, Market Reports, Exchange and Stock Rates, Shipping List and Correspondence from all parts of the world, appears twice a week in two separate editions, viz: one for home circulation, published each Wednesday and Saturday morning; the other for circulation in Europe,—the only German Paper published in the United States admitted to the German States—appears before the departure of each mail steamer for Europe. Terms:—The paper, per annum, at New York, \$5, for Germany, full Postage included, \$11, and for all other parts of Europe, the U. S. Postage inclus., \$8. Advertisements taken at liberal terms.

Howland, Burgess & Smith,

MANUFACTURERS of PURE SPERM OIL for Railroad Engines and Lamps, of Refined Whale Oil now so generally used for car wheels.—Works, New Bedford Mass.—Store, Albany, N. Y.

Orders (directed to either place) respectfully solicited from Superintendents.—All Oil warranted pure and perfectly satisfactory.

Pneumatic Pile Driving.**FOUNDATIONS FOR BRIDGES, PIERS &c.**

BY THE PNEUMATIC process hollow cylindrical piles or tubes from eight inches to ten feet diameter can be driven through sand, mud, clay or other material to any required depth. The complete success which has attended the operations of this process shows it to be eminently practicable in, and much the best method known for, the construction of railroad bridges across deep and rapid rivers where permanent foundations of great strength are necessary, and have to be secured at great depth.

Applications for license for the use of the invention in any part of the United States may be made to H. V. POOR, Esq., Editor of the *American Railroad Journal*, 9 Spruce street; or for contracts for pile driving, or licenses as above to

CHARLES PONTEZ,
 New York.

March 25th, 1854.

To Contractors.**PACIFIC RAILROAD OF MISSOURI**

THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.

Thos. S. O'SULLIVAN, Chief Eng.

Pacific R. R. Office, St. Louis, Feb. 1854.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57 1/2 lbs. per yard, to be shipped from Wales in June and August, for this port—for sale by
BOORMAN, JOHNSTON & CO.,
60 Broadway, New York.
June 9, 1853.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to
THOS. CHAMBERS, President,
September, 1850.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.

VOSE, PERKINS & CO.,
9 South William St.

New York, June 1, 1851.

Knox & Shain,

MANUFACTURERS OF
LEVELS, TRANSITS AND SURVEYING
COMPASSES.

No 72 Dock at first door south of Walnut, west side
PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
157 Broadway, New York.

CHARLES B. STUART, EDWARD W. SERRELL,
DANIEL MARSH, SAMUEL McELROY.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West,
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
Feb. 18. 1m.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

Railroad Iron Via Quebec.

JOHN ANDERSON & CO.
COMMISSION MERCHANTS,
SHIPPING AGENTS AND BROKERS,
Quebec and Montreal.

PARTICULAR attention given to the Transhipment of Iron, &c., in Transit for the Western Lake Ports, and to the Shipment of Rails in Great Britain.
Quebec, Dec. 2, 1853.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery, for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3 1/2 to 6 1/2 inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.



They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
17 Burling Slip, New York.

February 15, 1850.

SHANAHAN & LOEBER,

 181 William-st,
(1st floor—Up Stairs.)
NEW-YORK.


MANUFACTURERS OF

THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
Chains, Scales, Levelling Rods, &c. 1y10

Notice to Contractors.

MEMPHIS & OHIO RAILROAD.

SEALED proposals will be received at the office of the Memphis and Ohio Railroad Company, at Memphis, Tenn., until the 15th day of April next, for the grubbing, clearing, gradation, and masonry of the first 65 miles, from Memphis to Cherryville.

Contractors must give the most undoubted security for the completion of the work at the time, and in the manner specified; and contracts will be let in sections, or for the entire work, as may be deemed best by the Directors.

The Directors reserve the right of rejecting all bids, should none prove satisfactory; and it is desirable that all propositions should be submitted, with the view of preparing the whole work for the iron as soon as possible. Bids of that character and otherwise equally favorable, will have preference.

Maps, plans and specifications may be seen at the office of the company, after the first of April.

E. PEABODY,
Engineer in charge.

Notice To Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND
TEXAS RAIL ROAD COMPANY
Monroe, La., March 8th, 1854.

SEALED PROPOSALS will be received at this office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty mile, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the entire sections, or any portion thereof, not less than one mile, and those proposing to take stock of the Company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the Company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract; or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,
President.
P. J. TOURNADRE,
Chief Engineer.

7c14

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 66 lbs. per yard now in bond and for sale by

2d Feb'y.

JOHN H. HICKS,
90 Beaver street.

H. SAWYER

(of the late firm of SAWYER & HOBBY),
Manufacturer of Transits and Levels.

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 16]

SATURDAY, APRIL 22, 1854.

[WHOLE No. 940, VOL. XXVII.

The *Mechanical Engineering* department of this paper will be under the charge of Mr. ZERAH COLBURN.

PRINCIPAL CONTENTS.

The Economy of Railroads, as affected by the Adaptation of Locomotive Power.....	241
Journal of Railroad Law,.....	245
Newport and Louisville Railroad,.....	246
Michigan Southern and Northern Indiana Railroad,.....	246
Lands granted for Railroads and other uses,.....	247
Lake Superior Copper Mines,.....	247
Milwaukee and Mississippi Railroad,.....	247
County Subscriptions to Railroads in Tennessee,.....	247
Stock and Money Market,.....	248
Duty on Railroad Iron,.....	249
Railroads in Brooklyn,.....	250
State Engineers' Report,.....	251
Locomotive "Empire State,".....	252

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, April 22, 1854.

The Economy of Railroads, as Affected by the Adaptation of Locomotive Power—Addressed to the Railroad Interests, of New England.

BY ZERAH COLBURN,
Mechanical Engineer.
(Continued from Page 229.)

CHARGES FOR THROUGH-FREIGHT PER TON OF 2,000

LES. PER MILE.

Classification.

First class includes all articles of extra value or hazard, or articles of extra bulk in proportion to their weight, furs, furniture, and carriages, musical instruments, baskets, etc., are of this class.

Second class includes articles less hazardous, bulky or valuable than those included in first class. Boots and shoes, books and stationery, dry goods, etc., are of this class.

Third class includes articles compactly boxed or rolled, easily handled, and of considerable weight in proportion to their bulk. Hardware, metals in cases or boxes, butter and cheese; dry goods in original packages, etc., are usually of this class.

Fourth class, includes heavy castings or forgings, provisions, earthen, minerals, fuel, etc.

Flour and grain, coal, lumber, iron ore, etc.

when offering in large quantities, are generally carried at special rates.

Name of road.	1st Class.	2d Class.	3d Class.	4th Class.
N. Y. and Erie, summer,	4.26	3.14	2.34	1.7
" " " winter,	4.69	3.45	2.57	1.87
Balt. and Ohio, summer,	3.95	3.10	2.64	2.11
" " " winter,	4.74	3.95	3.42	2.64
(Coal and iron not included)				
Rutland and Burlington,	5.00	4.67	3.17	
Burlington to Boston } via Rutland railroad, }	4.28	3.21	2.14	
Vermont Central,	5.57	4.43	3.67	2.15
Rouse's Point to Boston } via Vt. Cen. railroad, }	3.83	2.99	2.23	1.88
Western railroad,	3.5	2.5	2.0	1.6
Hudson River railroad,	4.17	3.47	2.77	2.08

Receipts from freight per ton per mile for 1853.

New York and Erie railroad.....	2.5 cents.
Western railroad.....	2.8 "
Baltimore and Ohio.....	1.8 "
(Equal to 3.2 cents for general freight and 1.01 cents for coal.)	

The Reading road carries coal for about $1\frac{3}{4}$ cents per ton of 2240 lbs. per mile. The charge from Mount Carbon to Richmond, 95 miles, being usually \$1.60 cents per ton. The Baltimore and Ohio road are carrying coal at \$2.25 per ton for 180 miles, and at \$2.50 per ton for 207 miles; less than $1\frac{1}{4}$ cents per ton per mile.

The cost of carrying depends upon the capacity of trains, as much as upon any other circumstance. This leads us directly to the question "how much can be carried in a train?"

This question can be answered only from a knowledge of the capacity of the motive power and the resistance it has to overcome.

The resistances are constant, at the same speeds upon all roads of equal grade and alignment, and kept in an equal state of repair. We have shown that the physical features of the New England roads are generally as severe as those of the principal roads in New York, Pennsylvania and Maryland, with but few exceptions.

We have shown how the resistances are effected by grades. In New England the motive power is generally of one class, without regard to grades. The Western road with its 83 feet grades adopts the motive power used on the 30 feet grades of the Worcester road; and the 40 feet grades of the Fitchburg road, while the capacity of the engines, in general use, even for level roads, in New Eng-

land, is far less than on equally favorable roads in the states of New York, Pennsylvania and Maryland. The only objection against the concentration of power is the want of a large business to employ it. But look at the Western road. Its extent of business and capacity of motive power is exemplified in the following table.

Table of Movement of Freight.

Year.	Tons of freight moved each way, equal to miles run.	Per cent of Eastern bound freight moved.	Per cent of Western bound freight moved.	Miles run by freight trains.
1847.....	28,037,628	75	25	518,772
1848.....	24,656,129	70	30	454,272
1849.....	25,307,146	70	30	460,941
1850.....	25,206,308	72	28	453,111
1851.....	23,304,050	71.4	28.6	459,923
1852.....	23,724,070	69	31	510,468
1853.....	29,153,554	66.7	33.3	589,314

Table of Number and Capacity of Trains.

Year.	Through trips each way, equal to miles run.	Through trips each way, daily, for 313 days.	Average weight of East bound freight, pr. train, tons.	Do. of West bound do. per train, tons.
1847....	1,646	5.26	81.9	27.3
1848....	1,456	4.65	76.00	32.6
1849....	1,477	4.71	76.86	32.94
1850....	1,456	4.65	80.07	31.13
1851....	1,472	4.70	72.44	29.02
1852....	1,636	5.23	64.13	28.81
1853....	1,888	6.00	64.00	32.

Here is an average of six through trips each way, daily, to do the freighting offering upon the Western road. How would it pay to run six passenger trains each way? It must be admitted that the business is irregular, but in dull times it would be better to have a few large engines in ordinary, than at other times to have a disproportionate number of small engines overtaxed with their work, and thereby depreciated in a corresponding ratio.

The subject of the concentration of power has been before presented to New England railroad managers, but its consideration has either been declined, or incorrect inferences have been drawn in regard to it.

A committee of the stockholders of the Boston

Of the 296 bars of 60 lb. iron, 1 was bent by a landslide, (could be straightened) 285 were split, showing imperfect manufacture. 9 were crushed.

295 Total.

Of the 111 bars of light rails, 3 were rendered useless, 47 were by land slides and accidents, 61 were unfit for main line but fit for sidings.

111 Total.

The following table, from the last Report of the Reading Railroad Company, shows the per centage of wear of different kinds of iron for a series of years.

Old 52 lb. English rail, light track;		
Average of 1848 and 49.....	1 4-10	per cent.
" 1850.....	1 3-10	"
" 1851.....	2 6-10	"
" 1852.....	3 2-10	"
" 1853.....	4 5-10	"
Old 45 lb. English rail, light track,		
Average of '48 and '49.....	1 3-10	per cent.
" 1850.....	1 4-10	"
" 1851.....	1 9-10	"
" 1852.....	2 1-10	"
" 1853.....	3 6-10	"

All the rails named below are in the heavy, or down gauge, used only by loaded coal trains.

Old 60 lb. English rail, average 48 and 49, 6 2-10		
1850.....	8 3-10	1852..... 12
1851.....	9 4-83	1853..... 12 7-10

American rail "Phoenix" pattern,		
60 lbs. per yard, average '48 and '49 7-10 per ct.		
1850.....	4 8-10	per cent. 1852..... 5 9-10* "
1851.....	6 3-10	" 1853..... 6 3-10* "

American rail "Danville" pattern, 60 lbs. per yard		
1851	1 7-10	per cent.
1852	6 1-10	"
1853	8 2-10	"

Several inferior patterns called "Erie,"		
1850.....	14 8-10	per cent. 1852..... 14 2-10 per ct.
1851.....	17 8-10	" 1853..... 17 3-10 "

The "Erie" pattern is of English manufacture. Winslow compound rail, 1852 3 4-10 per cent. 1853 14 2-10 "

Another important cause of the destruction of iron is the unnecessary speed at which freight trains are often run. The New England engine is proportioned and adapted for a higher speed than the Baltimore engine, and if enlarged in size, with its present proportions, would be still more destructive to the iron. The New England engines, being proportioned more for speed than power, are less able to control their trains on descending grades, and thereby run, often times, at excessive speeds, say 40 or 50 miles per hour. It is the great power of the Baltimore engines that enables them to ascend grades faster and descend slower than the New England engines.

With rails of from 60 to 70 lbs. per yard, made, as they should be, from American iron, and with six or eight-driver engines at moderate speeds, the wear of rails might be very much reduced, even with engines of thirty-two tons weight. It is in the province of the motive power department to provide for the distribution of weight and to limit the speeds of freight trains, both of which requisites would prolong the life of railroad iron and superstructure.

In speaking of the condition of the tracks of the Reading road which had then borne the transport of 1,800,000 tons of coal, the committee of

investigation, (John Davis, Robert Schuyler, Amos Binney and Wm. Raymond Lee,) say as follows:

"Trains of great weight, making in the aggregate an immense tonnage, have been drawn over these rails by engines of great weight and power at a speed of fourteen miles an hour, and the rails, even the lightest, are yet in a good condition. The weight, to be transported will be greater by far than that to be borne on any other railroad in the country, and the wear and tear of the road, otherwise expensive by reason of its numerous bridges, will be in proportion to its business. But we entertain the opinion that by the use of engines of uniform and great weight, and of trains of a maximum length, and by having an ample supply of engines and coal wagons, the company will be able to reduce the speed of its trains to less than eight miles per hour, and that this reduction of speed will compensate in a great degree for the wear occasioned by the greater weight of the trains."

The wear of heavy engines upon their own parts depends far more upon the number of those parts and the miles run than upon their size.

This principle is well sustained by the experience of the Baltimore and Ohio company at the time of their adoption of the present class of heavy engines. The twenty-first annual report of that company, for the year 1846, says:

"The whole amount charged to repairs of engines for the past year is, \$74,139 51—from which must be deducted \$3,119 23—for increase in stock of materials and duplicate parts or machinery—and the net amount, showing the actual outlay for the maintenance of the engines, is \$71,020 23. This is greater than the corresponding amount for the preceding year by \$14,969 06—and the increase is sufficiently accounted for by the addition to the number of the engines and the work done by them. The average number at work during the year 1846 was equivalent to 53½ of the fourth class, and during the year 1847 was equivalent to 74. Consequently the number of engines is greater by 39 per cent. The duty in tons and passengers carried one mile is also greater by 65 per cent, while the increase in repairs is but 27 per cent. During the past year the "improvements" in the engines were about equal in value to those which took place during the previous year and amounted to some \$10,500."

The cost of repairs per mile and per ton per mile has been nearly as follows for the several classes:

Class.	Cents per mile run.	Cent per mile per ton drawn.
1st.....	11.97	.1696
2d.....	7.18	.1512
3d.....	7.22	.3506
4th.....	8.07	.3573
General average for all classes,	8.78	.2505

In this exhibit, the second class engine appears to have the advantage of the first, which, in its turn, has greatly the advantage of the third and fourth. The comparison is not, however, a fair one, as between the first and second. As the only two second class engines in the service have been but a year at work, while the 13 first class engines have been an average of not less than two years upon the road, and have labored under some imperfections, in their smaller parts, which have now been remedied. But for these circumstances, and also, in a measure, the state of the road upon which the engines have run, and to the fact that the first class engines have been worked much harder than the second, it is not doubted that the economy of the first class, in repairs, would have been considerably greater than that of the second.

The general average cost of repairs and re-

newals of all classes of engines, upon both roads, has been 10.14 cents per mile, and .3097 of a cent per ton per mile. In the preceding fiscal year, ending Sept. 30th, 1846, the general result upon the Main Stem was 8.4 cents per mile run, and .3270 of a cent per mile per ton carried, against 8.78 cents and .2505 cents in the year just ended; the increase of cost per mile run being but 4½ per cent., and the decrease of the cost of the real duty performed being 23½ per cent. This comparison simply shows how much more rapidly the useful effect of the motive power increases than the cost of obtaining that increase."

The following was the classification of engines then adopted, as found in the report for 1846.

The whole number of engines belonging to the company is, at this date, 49; divided into four classes, according to their weight and power—there are of the

Class.	Tons.	Wheels.	Rated at.
1st.	23	8 all drivers, 13,	39 of 4th class.
2d.	16½	8, 6, all drivers, 2,	4 "
3d.	16	8, 4 drivers, 12,	18 "
4th.	10	6, 4, 2 and 4 do,	22, 22 "

The principal cause for increased wear by adding more wheels to an engine, to effect a proper distribution of weight, would be the increased number of tires. But as the Baltimore and Ohio company had commenced the use of cast iron, chilled slip tires, this item of cost was at once measurably reduced. This improvement is now estimated by the master of machinery to save the road \$30,000 yearly on a stock of about 200 locomotives.

It will be seen, however, by the comparison made between the Baltimore and Ohio and the Western railroad engines, that the average cost of each of the former was but little greater in 1852 and 1853 than for the latter. The Baltimore engines now weigh about 27 tons, and are adapted to burn coal, which involves increased expense for repairs. Since 1846, also, these engines have commenced work on the high summits of the Alleghanies and on the 116 feet grades. The expense for engine repairs on this road, in 1853, was made much greater than usual owing to causes of an extraordinary nature.

The next important inquiry is into the consumption of fuel of engines of each class.

The consumption of fuel by any engine depends upon the amount of water that can be evaporated in its boiler by a given quantity of fuel, and also upon the proportion of steam generated to that economically expended. In theory the consumption of fuel would be exactly in proportion to the expenditure of steam of a given pressure. That is, one engine having cylinders of twice the capacity of another, and working under the same pressure, would consume twice the fuel. But in practice this is far from being a correct result. There are numerous and important sources of loss of fuel, which must remain proportionate to the number of engines rather than to their size.

The amount of fuel consumed in getting up steam, in waiting at stations; the amount lost by leakages, or by dissipation under the grate bars or which is dissipated without effect when the door is opened for firing, or which may be dissipated from an imperfect draught, and more than all, the fuel lost by injudicious firing, all are nearly in proportion to the number of engines, without regard to their size. This conclusion is strikingly confirmed in practice, upon the Baltimore and Ohio road, as the following communication will show

* Including new iron laid during the year.

OFFICE MASTER OF MACHINERY,
Baltimore and Ohio Railroad Co.
February 15, 1854.

ZERAH COLBURN, Esq., Engineer,

SIR,—Yours of the 8th inst. came duly to hand, and in reply to your inquiry, would state, that after a series of experiments, with different locomotive engines, on our road, we find, that the "practical proportion of the consumption of fuel, and water, follows the expenditure of steam" in the following proportion.—The engines working under similar circumstances of steam pressure, &c.:

"Engine No 72," with 20x22 inch. cylinder, requires 885–1000 of a pound of coal per gallon of water.

"Engine No. 102," with 19x22 inch cylinder, requires 1 3-100 pounds of coal per gallon of water.

"Engine No. 76," with 17x22 inch. cylinder, requires 1 3-100 pounds of coal per gallon of water.

We have no practical means of testing whether an "Engine of a given cylinder capacity, will consume twice the amount of wood and water, of another of half the capacity, under similar circumstances." But my impression is, from the above result, that the larger cylinder would use less than double the amount of wood and water.

Very truly yours,

S. J. HAYES,

Master of Machinery.

Beyond the greater efficiency of fuel in generating steam in a large than in a small boiler, there is an increased effect derived from using steam of a given pressure in a large engine, compared with a smaller one. This comes from the fact that the resistance of the pipes, ports and blast openings, is relatively less, but principally because the condensation of steam in the cylinders and the loss by priming is relatively much less.

Notwithstanding the fact that theory would indicate a consumption of fuel proportionate to the power exerted, it is probable in practice that one engine exerting twice the power of another, could be run with not above fifty per cent. more fuel. This I should state as a general result, in view of the best means of information, and as applicable to the present construction and method of working engines.

It is interesting to trace the gradual reduction in the cost of carrying coal over the Reading Road, consequent upon the adoption of heavy engines, and the running of maximum trains at slow speed.

The cost per ton carried in 1844 was 41 8-10 cents., but the engineer, in view of the recent adoption of first class (first class then) engines, said "the greatly increased power of the new engines (their load exceeding the average of 1843, 218 tons) combined with the expected economy in the use of iron cars, (both of which were placed on the road late in the season,) will reduce the cost of transporting coal during the coming year to between 35 and 38 cents per ton."

That these anticipations were realized is seen in the next report. In 1845 the expense was 37 1-10 cents per ton, a reduction of 4 7-10 cents. over the previous year. The engineer then said "This decrease in cost of hauling, of 4 7-10 cents. per ton, (or \$38,271 11 on the years business,) has been chiefly effected by the addition of the first class engines put upon the road during the past year,

and the very satisfactory working of these excellent machines. Their power, economy of repairs, ease to the track, and general efficiency have fully equalled the anticipations which induced their order and purchase. By their use, the average load of the past year has been 295 tons of coal, for all engines, an increase of 101 tons of coal per train, compared with the business of 1844."

In view of these flattering results a belief was expressed that the working of the engines would show a still further reduction in the coming year to 33 cents per ton. In 1846, however, a heavy rise in labor and on wood, occurred, sufficient of itself to increase the cost of hauling two cents. per ton; while from increased cost of car repairs, and other charges wholly independent of the size or weight of the engines, the cost was 38 and 89-100th cents. per ton. Had there been no rise in fuel and materials, nor in labor, this would not have exceeded 36 1/2 cents, a reduction on the cost of the previous year. One important cause of the increase, however, was a temporary suspension of business during the season, caused by a severe freshet; and also the falling off in the demand for coal at a later period in the season.

In 1847, an increase of the cost of fuel, labor and materials, with an unusual expense for contingencies, raised the cost to 45 84-100 cent. per ton.

The same causes continuing in 1848, the cost was 45 1/2 cents per ton. In 1849, under nearly the same circumstances, the cost was 43 5/8 cents per ton. The expenses of coal cars this year were very heavy.

In 1850, without any sensible change in the character of motive power, but under still higher prices for fuel and labor than before, the cost was 41 cents. per ton.

In 1852, under about the same circumstances as in 1850, but by a considerable use of anthracite fuel, the cost was reduced to 35. 36 cents. per ton.

In 1853, with average trains of greater weight than in any previous year, viz., 392 tons of coal, and with the use of anthracite the cost was 32. 49 cents per ton. With lighter engines, burning wood; the cost was 38. 97 cents. per ton.

The power of the engines of the Reading road appears to have been increased about 30 per cent. since 1846. The amount of wood, oil and waste consumed, and labor employed is less in amount, now than then, but is about 30 per cent. higher in price. The Repairs of engines cost at least 50 per cent more now than then, chiefly by reason of a great increase in the prices of labor and materials, and to the effects of burning anthracite coal, probably less than 10 per cent. of the increased cost being due to the increased size.

Here we see that the Reading Railroad, having grades the most favorable possible for its immense business, has been gradually increasing the capacity of its engines ever since it commenced business. It is now using engines of over 60,000 lbs. weight, carrying in many cases loads of 900 or 1000 tons weight, and averaging nearly 400 tons of coal per train throughout the year.

The Baltimore and Ohio road have been doing the same thing. Although the average load of their coal trains was only about 100 tons, in 1853, (limited by adverse grades) yet from the cheapness of their fuel, their economy of making repairs, and from having no "drawbacks," "dumpages,"

"premiums," or other outside charges to pay, they are carrying coal for less, per ton per mile, than the Reading road, with all its advantages of grades.

That the Western road can yet practice an important means of economy, by improving the construction of its engines, there cannot appear a reasonable doubt.

The means of increasing the capacity of its engines are by throwing overboard the truck frame and substituting driving wheels in place; by which the power of the engines would be increased and a better distribution of the weight effected. The boiler and cylinders should be enlarged, and the wheels reduced in size; by which more power would be had, and at a lower speed. And in doing this the railroad managers of New England must come boldly up and adopt the improvements which more enterprising managers than themselves have made. There is a popular sentiment which demands improvement, and it is certain that every real improvement will be adopted in practice, no matter who is jealous, or prejudiced, or adversely interested.

It is undeniable that important improvements have been made in locomotives, not only since their first adoption, but within the last few years. It is equally undeniable that New England companies have been the slowest to adopt them; and have not recognised many of them, even yet. It is undeniable also, that the general interests and the railroad interests of New England suffer from the absence of these improvements, by which the efficiency of motive power is diminished, and the relative cost thereby increased.

The Western road has, I believe, renounced the purchase of the inside connected engine. It is a good move, but one which many other roads never had to make, while most others out of New England, made it long ago. This arrangement at one time might reasonably claim to possess intrinsic merits. But its demerits are now obvious enough; and yet, a few railroad men are still impressed with a belief that it is the best because it has been sustained longest in New England. The crank engine is a heavier, more clumsy and unsafe, and a less efficient and economical plan than the outside connection. But its worst feature has always been that it imposed limits to any sensible increase of the capacity of the engine, and that it prevented a proper coupling of the wheels. The Baltimore and Ohio Company well know, at least their principal officers do, that their 20 inch cylinder engines, built by themselves, are much more economical and efficient than any of their others. (These 20 inch cylinder engines, I have not made the subjects of comparison, however, with the equipment of the Western road.) But where could room be found with the inside connection for a 20 inch cylinder and 22 inch stroke? Which pair of wheels could it attach to the piston? The engine would not be practicable upon the narrow gauge.

I might have shown, in most minute detail, all of the advantages of powerful engines, especially upon undulating roads. But, besides that my own engagements do not now permit of my elaborating this principle to the extent which I have already done, in many of my previous articles; and which I shall yet do in another connection, when I have the time properly to address

myself to the task,—besides this, I am conscious that the larger part of my readers appreciate these advantages already. I do not look upon what I propose for Massachusetts roads as an experiment, for it has had the confirmation of years' of intelligent experience. I only contend for an application. I would not propose the identical engine now used by any road; but the fundamental principles embraced in the system of motive power of the Baltimore and Ohio, and the Reading Roads, have proved their value enough to command the attention of managers in New England.

The great principle to be preserved is the adaptation of power. This requires a practical sense of the resistance of grades, such as railroad men do not always possess. They have not perhaps, troubled themselves with first principles, and when they see the engine start a monstrous train, equal to its full power, on a level, they will not understand that but one half as much could be carried up a grade of 22 or 25 feet per mile, or a rate of inclination hardly perceptible to the eye. But so it is. Let us see what would be required in the way of motive power to take a train of 711 tons on a level and up different grades, say to 60 feet; the performance on each grade to be with the same steam pressure and at the same velocity.

Grade.	Resistance, lbs.	Cylinder, inches.	Stroke, inches.	Driver inches.
Level.	7,111	16	20	54
20 feet,	12,800	18	22	43
40 "	18,800	21	24	42
60 "	24,900	24	26	41

For trains of less than 711 tons, on a level, or on descending grades; the Reading company use an engine nearly as powerful as is designated for a 20 feet grade. This they do in order to have a surplus of power under all circumstances, and to enable them to work steam expansively. But allowing a 16 inch cylinder, 20 inch stroke and $4\frac{1}{2}$ feet wheel for a level road. An engine to pull the same load on a 60 feet grade only, would require to be of 24 inch cylinder, 26 inches stroke and but 44 inch wheel! To what an extreme would the principle lead us. Is it proper then to stick to the light engine for even an 83 feet grade? Is it proper to surrender a portion of our load at every increased rise, and to draw little more than the weight of engine and tender up the steeper grades.

Adapt the engines. Remember that as the load diminishes the gravity increases, and that when the whole load of perhaps 100 tons is barely moved up the grade, the eight tons upon the engine truck, neither adds to the useful power of the engine, nor is it any part of the productive load. It is so much drag, equal to one half of a loaded car.

Adapt the engines. If a 21 inch cylinder and 24 inch stroke be admissible upon an engine, remember there is the same reason for adopting it on a 40 feet grade, that exists for the use of a 16 by 20 inch cylinder on a level.

It is an important step to know the limit of size of an engine upon the narrow gauge. For a freight engine a cylinder of 21 by 24 inches is easily attained; so is a boiler of 54 inches diameter and 14 feet long; a grate 48 inches wide and 7 feet long, if necessary. Engines of 35 tons weight are perfectly practicable if there is necessity for their use and as to the latter point there certainly is necessity, if they have proportionate resistances to encounter.

To show how engines of a size, greater than those in present use, can be made, is nothing very difficult for any mechanic. I think, however, that I have shown why they should be so made, in some cases, and if so I have attained my object in the present essay.

Journal of Railroad Law.

RAILROAD SUBSCRIPTIONS.

When will they be rescinded as having been fraudulently procured? When the false statement or the suppression of truth of which the aggrieved shareholder complains is of such a character as to materially concern the intrinsic character of the road to which they relate. It is not every misrepresentation or concealment which will be sufficient to annul a subscription. Redress in such cases may be often found by holding the managers of companies to a strict accountability.

The case of *Pulsford vs. Richards*, 19th Eng. Law and Chanc. Reports, p. 381, was an application to the Court of Chancery based upon the following facts.

Upon the establishment of the West Flanders Railway Company, a person named Chantnell, who had been instrumental in forming the company and in procuring grants in reference to the same from the Belgian government, obtained from the directors an agreement to pay him a large percentage upon the capital of the company, had allotted to him 4000 shares of stock, and guaranteed to him £500 a year as a permanent salary, as general superintendent of the road. The directors also allotted to themselves 20,000 shares of the company's stock, and 10,000 shares for themselves and the shareholders of the Sambre and Mense Railway, of which they were also the directors. In the public Prospectus of the company inviting subscriptions, these facts were suppressed, although it was stated that the directors had reserved a commission of £3 per cent on the capital, as a mode of reimbursing themselves for their time, trouble and outlays.

The petitioner in this case prayed the court that he might be relieved of the shares of the West Flanders Railway Co., for which he had subscribed and be re-paid the amount of his deposit money and calls.

But the Master of the Rolls held that the omission in stating facts complained of in the case in question was not of such a nature as should entitle the stock subscribers to be relieved in accordance with their petition.

The Master observed, in substance, that Mr. Chatnell's duties must have been performed by some one, superintending the expenditures of money; ascertaining the owners of land and negotiations relating to the road with the government and with individuals were very essential and important duties. Mr. Chantnell seems to have been peculiarly fitted for the duties which he undertook to perform. It was the duty of the directors to procure some such agent at a fair compensation for his services. No evidence had been produced to show what was a fair compensation for services like those of Mr. Chantnell would be. But suppose the remuneration allowed to him to be exorbitant, silence in respect to it would not be a good reason for annulling stock subscriptions.

It was not a suppression of the facts which affected the intrinsic value of the undertaking. That would depend upon the population and business of the

country traversed by the road—the difficulties of construction—the cost of the land required and the like.

The extravagance of railway directors is a question between them and the stockholders, to be adjusted at their settlement of mutual accounts, but does not furnish adequate ground for annulling contracts with shareholders. Both before and after the establishment of a line, directors must contract in relation to it at fair and honorable prices, or they become individually responsible. If indeed the directors had permanently encumbered the road, for example, by a rental to the Belgian government the case would have been different. But certain expenses are incitable in the formation of companies. The bill was dismissed with costs.

MERCHANDIZE NOT LUGGAGE.

In the lately issued volume of the English Exchange Reports is contained the case of the *Great Northern Railway Company, Appellants, vs. Shepherd, Appellee*, which in part indeed, is only a reiteration of the settled doctrine of our own Courts, but which yet presents some novel points, appertaining to the Law of Common Carriers.

The plaintiff below brought an action to recover damages amounting to about £40 for the loss of ivory knife-handles, books, carpet-bag, &c. He was a cutler living in Sheffield, and with his wife, bought third class tickets of the Great Northern Railway Company from that place to London. When there he purchased a quantity of knife-handles to be used in his business, and returned on the same day. His goods were contained in a deal box, in two brown paper parcels, all marked with his address. Each third class passenger was allowed 56 lbs. of luggage. The plaintiff on entering the return train placed his box in the luggage car, and the other articles under his seat in the passenger car, and in so disposing of his property received no help from the porters of the train. At Bedford it was necessary to change cars, and to wait an hour for another train. On this occasion too, the plaintiff, below, took the sole charge of his goods without receiving any aid whatever from the employees of the Company. There was no guard to give warning in case of interfering trains, and consequently a collision took place, by which the plaintiff, below, was injured, and it became necessary to transfer him to another car. While changing his car, he spoke to the Railway porter about his box, &c., and was informed that they should all be duly cared for. The box was found, but the other articles were not.

Several questions were upon the appeal submitted to the Court.

1st. It being conceded that most of the articles lost were to be used by their owner in the manufacture of cutlery, and were not personal luggage, was the Company liable for their value?

2d. Was not the Company exonerated from liability by the fact that the luggage or goods of the plaintiff, below, exceeded 112 lbs., the weight limited in England by law?

3d. Were not the goods to be regarded as retained by their owner in his own custody and possession?

4th. Was not a new contract made with the owner of the goods at the moment of changing cars after a collision?

The Appellate decided,

1st. That if a passenger so packs his merchandise, that it passes for mere luggage, and the carrier has no notice that it is merchandise, he is not responsible for its loss. The contrary is true if the carrier knows what the true character of the goods is, and consents to receive and transport them. And luggage is only what is ordinarily carried for traveling purposes, with perhaps a book or two for amusement or presents.

The American Courts have substantially decided in like manner. See 26 vol. American Railroad Journal, p. 515, ib 765, ib 299, ib 68. Also 9 Wendell's Reports 85; Orange County Bank vs. Brown.

2d. That where the limited amount of luggage for each Railway passenger is 56 lbs. and a husband and wife are traveling in company under circumstances to which that limitation is applicable, the baggage of either party may exceed that amount, provided the luggage of the two together does not in the aggregate weigh over 112 lbs. It would, indeed, be often inconvenient to sort out and carry separately the traveling conveniences of such, usually confidential companions.

3d. Although the luggage of a passenger is not delivered to any servant of the Company, the law regards it as being in the custody of the Company, and holds them accountable for the same. The passenger pays for the safe transportation of himself and luggage.

4th. In the case above stated, no new special contract was made between the parties at the time of changing cars, but the Railway porter simply recognized the general liability of the Company.

North Missouri Railroad.

The following gentlemen have been elected Directors of the North Missouri Railroad for the current year: Col. John O'Fallon, Thos. T. January, James T. Swearingen, Gerard B. Allen, A. Krekel, Calvin Case, Lewis Bissell, John D. Coalter, Robert M. Renick, John Hartnett, Andrew Harper, Carlos S. Greeley, Isaac A. Sturgeon.

Newport and Louisville Branch Railroad.

At the last session of the Kentucky Legislature, an act was passed to incorporate the Newport and Louisville Branch Railroad Company. This is a very important enterprise. Newport and Covington are towns in Kentucky, lying opposite to Cincinnati, through one or the other of which, all roads approaching Cincinnati from the South, must pass. It is a singular fact that although Cincinnati is the radiating point for a vast web of railroads, connecting her with the East with the Lakes, with Indiana, and with St. Louis and Chicago, she has no southern connections through Kentucky, except the Covington and Lexington Railroad, which is in progress. And this is the more surprising as the intercourse between Cincinnati and Louisville is immense, giving now full employment to two regular daily lines of steam packet boats of the largest class, besides numerous transient boats; and the vast travel from points still further south, would also be thrown into this channel if a railroad was in existence—especially during the season of low water.

Two or three years ago, a charter was granted for a railroad from Covington to Louisville, but the organization of the company, as well as the location of the road, were considered objectionable by the capitalists both of Louisville and Cincinnati, and the stock has not been taken.

The Newport road, chartered last winter is to connect with the Louisville and Frankfort Railroad, at or near Eminence, about thirty miles from Louisville, and to run thence to Newport, about 70 miles, making the whole distance about 100 miles. This is about the length of the other road—the Newport road having the advantage, if it be one, of having only seventy miles to make.

There is no railroad in the United States, made or projected, which offers better prospects for profitable investment than this. It will be laid upon the shortest and best route, between two populous and flourishing cities, having a vast and rapidly increasing commercial and social intercourse with each other, and being in the direct line of an immense stream of trade and travel, from points beyond those cities. The distance between Louisville and Cincinnati is a Thermopylae which few travelers find it convenient to avoid in passing through the West, from North to South.

At Louisville, this road will have the advantage of the entrance into the heart of the city, and the use of extensive depot-grounds, in consequence of its connection with the Louisville and Frankfort Railroad—an advantage worth several hundred thousand dollars; and at Newport it will, through the liberality of property owners, have the right of way and depot grounds ceded to it on the most easy terms. The depot will be on the bank of the Ohio, immediately opposite to that of the Little Miami Railroad, which is also on the river bank, within the business part of the city, and near the steamboat landing. The connection with the Little Miami Road, which inevitably follows the making of the road, must be of obvious advantage, that being the oldest railroad in Ohio, well made, in fine order, with valuable connections prosperous business, and high credit, while even that road will be fortunate in a connection which will probably more than double its business.

We are happy to be able to say that this valuable road, is in hands which will not allow the enterprise to sleep. J. H.

Michigan Southern and Indiana Northern Railroad.

We give below the circular of this Company stating the determination of the directors to issue a certain amount of *New Stock* for the purpose of providing means for the prosecution of the unfinished works of the company. Of the propriety of raising money by a sale of stock in preference to sale of bonds, the directors are the best judges. There is no question that the course adopted will readily produce the amount required. The route of the above road is second to none in the United States, connecting as it does, by the shortest line, the southern shores of Lake Erie and Michigan, around which travel going east or west must always pass. A prolongation of this line in the same general direction, to the Mississippi river on the one hand, and the Atlantic on the other, may be regarded as identical with the axis of the commercial system of this country; the focal point toward which every part of it tends.

Office of the Michigan Southern and Northern Indiana Rail-Road Companies, }
No. 18 WILLIAM-STREET. New York April 6th 1854

SIR, We hand you herewith a copy of Resolutions adopted by these Companies, providing for an increase of stock for the purpose of completing the Goshen line and the Jackson Branch, and for

a distribution of the same among the stockholders.

As this increase has not been heretofore contemplated, and as it deviates from the plan originally adopted by these Companies for the construction of these lines, it is proper briefly to explain the reasons for it.

Acting upon the policy long since settled by the Board of Directors, and steadily adhered to, that no Convertible Bonds should be issued for the construction of the work under their charge, they had proposed to provide the means for the completion of the lines now in progress, by an issue of stock for a portion of the cost, and of Mortgage Bonds for the remainder.

The stock was accordingly issued and distributed among the stockholders last season; and the Bonds were prepared for sale whenever the Company should require the proceeds. In the meantime the entire work has been put under contract; the Iron and Equipment all purchased, and every preparation made for bringing the lines into use by the close of the current year.

The present moment, however, is very unfavorable for realizing from sales of the Mortgage Bonds; and the Directors feel that the prices which those securities would now command in the market are not such as the interests of the shareholders would justify them in accepting. They have, therefore, determined to make a further issue of stock to the amount of 25 per cent. upon the existing stock, and to distribute the same *pro rata* among the stockholders at par, in the manner and on the terms specified in the annexed resolutions.

All the stockholders of both Companies, including the holders of "Construction Stock," are entitled to their proportion of this new issue,—the last payment for which (as will be perceived by the resolution) falls due on the 1st July next,—interest at 7 per cent. per annum being allowed to that time on instalments paid, after which date the stock will be entitled to full dividends.

Stockholders residing in Europe or elsewhere out of the United States, will be allowed thirty days additional time to make payment of the first instalment; but the entire payment must be completed by the day stated. Agents are requested to notify their correspondents accordingly.

Believing this arrangement to be one which will promote the best interests of the Companies, and of the shareholders, the Directors invite their cordial co-operation in carrying it into effect.

We avail ourselves of this opportunity to congratulate the stockholders upon the very great increase in the business of the roads, as indicated by the earnings for the first quarter of the present year, which amount to \$331,417 against \$196,234 for the corresponding period last year,—an increase nearly equal to 70 per cent.

The total earnings for 1853 were \$1,573,180. Should an increase proportionate to that above stated, be maintained for the remainder of this year, the total earnings for 1854 from the completed portions of the roads, will reach an amount considerably exceeding \$2,000,000. In any event, we feel sure that the net earnings from our line will be ample to redeem all the promises of profit which we have held out to the stockholders.

JOHN B. JERVIS, President.

EDWIN C. LITCHFIELD, Treasurer.

[RESOLUTION REFERRED TO IN PRECEDING CIRCULAR.]

At a Meeting of the Directors of the Michigan Southern and Northern Indiana Rail-Road Companies, held at their Office in New-York, the 4th day of April, 1854, it was.

RESOLVED, That a new issue, of stock be made, equal to 25 per cent. upon the amount of all existing stock of the Michigan Southern and Northern Indiana Rail-Road Companies; that the same be issued in the proportions of three shares of Northern Indiana to one share of Michigan Southern Rail-Road stock; that the same be distributed equally among all the stockholders of both Companies who shall be such on the morning of the first day of May next, in proportion to the amount of stock then held by them respectively; that said stock be issued to the stockholders at par, and the

payment for the same required to be made at the Office of the Company, in the City of New-York, as follows: 25 per cent. on the 10th day of June; and the balance on the 1st day of July next; with liberty to any stockholder to pay faster or in full previous to said dates; that interest upon said payments be allowed at the rate of seven per cent. per annum until the 1st day of July; on and after which date stockholders who have paid as aforesaid will receive certificates of said stock, which will be thereafter entitled to receive full dividends equal to any of the existing stock. Stockholders who do not signify their intention to take their proportion of stock by making the payments thereon as required, will be deemed to have forfeited their right to the same. Parties entitled to fractions of a share will be allowed to make the same full.

RESOLVED, That the President and Treasurer cause a Circular to be issued to the stockholders, informing them of the proposed issue of new stock, and the terms thereof, as specified in the preceding Resolution, and such public notice to be given of the same as they may deem proper.

Railway Extension of the Trade of Montreal.

The sagacity of those citizens of Portland and Montreal, who first undertook the construction of the existing railway between these cities, is now beginning to be appreciated. Added to the several lines of Canadian Atlantic Steamers, this road gives to our city the advantage of a seaport during the whole that season in which nature seemed to our ancestors to set an icy seal, impossible to be opened, on the operations of commerce, and the other larger intercommunications of mankind. But while we begin to form some idea of the truth, we shall not measure accurately the whole of the benefits to be derived from this great basis of trade, till the dependant lines of railway have been pushed backwards, not only to the extremity or our own borders, but to the feet of the Rocky Mountains. Even then some gorge must be sought out—some "notch" or waterworn track discovered, by which a passage may be opened to the locomotive from the eastern to the western slopes of the Great Western range, before our career towards the setting sun will be accomplished. In short, between the enterprise of our own railway potentates and those of our neighbors in the Western States, Montreal must shortly be a principal stage on the high road between the Atlantic and the Pacific, and practically the warehouse for a vast Atlantic seaport, whose wharves will not be confined to the beaches of one city, but will be divided among the three cities of Quebec, Montreal and Portland.

The special circumstance that brings the subject under our notice, and, through our mediation to the notice of our readers, is the reception by us of a manuscript report, not yet printed, but just presented by Mr. Walter Shanly, well known as a Canadian Engineer, to the Directors of the Port Huron and Lake Michigan Railroad Company. The object of this Company, it may be shortly stated, is to cross the State of Michigan in a line which shall be the extension of our own Grand Trunk, westward from its termination at Port Sarnia. It may not be uninteresting to Canadians, who feel pride in believing their countrymen equal to any enterprise, to learn at once, that not only the survey for this project has been made by a fellow countryman, but that the whole work has been contracted for by the Canadian firm of Holton, McPherson, Galt and Gzowski.

The whole distance thus brought into the most direct communication with this city is westward to Prairie du Chien, nine hundred and fifty-eight miles, eastward to Portland two hundred and ninety; in all twelve hundred and forty-eight. The distance is thus divided, viz: Prairie du Chien to Milwaukee, 160 miles; Milwaukee per steamer to Grand Haven, 85 miles; Grand Haven to Port Sarnia, 202 miles; Port Sarnia to Toronto, 168 miles; Montreal to Portland, 290; or to Quebec 180.

The great success of the existing roads through Michigan—not the result of a trade built up after

many years exertion—but springing, spontaneously from beneath the locomotive, shows the wonderful adaptation of those fruitful regions to almost unlimited progress, and the imperative necessity for the seaboard to be connected with them to order to partake in its own degree of their prosperity. We regard this extension of our main arterial communication on the other side of Lake Huron, as essentially a Montreal road, as if it were to be construction where its terminus could be reached in a quarter of an hour's drive from the French Church.—*Montreal Herald.*

Public Lands of the United States

In the minority report of the Committee on public Lands, made a few days ago to Congress, it is set forth that an official statement from the Commissioner of Public Lands shows that there have been granted to the States and Territories named up to June 30th, 1853, for Railroads, Internal Improvements, Schools and Deaf and Dumb Asylums, and to States for seats of government, Public Buildings, Corporation, &c., as follows:

Railroads, &c.	Acres.	Public Buildings	Acres.
To Ohio.....	1,971,530	8,883,617	
To Indiana.....	2,283,219	1,792,526	
To Illinois.....	4,096,848	2,146,444	
To Michigan...	2,363,477	6,974,116	
To Wisconsin...	1,561,464	1,351,630	
To Iowa.....	2,336,302	121,878	
To Missouri...	3,472,391	3,589,751	
To Arkansas...	3,623,827	8,865,154	
To Louisiana...	1,332,124	11,864,180	
To Mississippi...	2,097,754	2,514,175	
To Alabama...	1,867,232	240,643	
To Florida....	1,475,507	5,803,394	
To California...	7,265,404	....
To Minnesota...	6,429,244	....
To Oregon.....	12,186,987	....
To New Mexico	7,493,120	....
To Utah.....	6,681,707	....

13 States, 4 Territories, &c.,	68,913,937	54,148,514
For Railroads, Internal Improvements, &c.,	....	68,913,937

Amount sold up to same date... 113,062,451

Amount of grants over the sales. 19,865,005
Add grants for military services. 24,841,980

Amount 44,707,075

Amount of grants and sales.... Acres 252,001,787

Had the lands, says the Report, granted to the States and Territories—123,062,451 acres, been sold at Government price, it would have amounted to \$153,848,054. Of this sum Virginia was entitled to millions of dollars.

In one case only of grants to railroads, that of the Illinois Central Railroad, the report shows this Company have received 2,751,711 acres, which, at government price, would amount to \$4,689,639.

Lake Superior Copper Mines.

The *Lake Superior Journal* publishes several particulars with regard to the mines in that district, including a statement of copper, iron and silver ores received at Sault Ste. Marie, during the past year, from which we find that the enormous quantity of 1,351 tons 326 pounds was taken from the Cliff mine alone, while the average yield is about 30 tons.

Of 34 Lake Superior copper mines we find that the proprietorship average in shares from six to one hundred thousand dollars. The amount of paid up capital averages about 12 per cent of that sum. The value of the Boston and Pittsburg mine is estimated at by far the largest figure, viz: \$870,000, while the lowest is the Iron City mine, stated to be worth \$30,000. The total value of all the mines is put down at \$7,033,300.

The whole amount paid in on the 34 mines of the Lake Superior Copper region, enumerated a-

bore, is equal to \$2,120,000. The total value of these mines, is equal to \$7,033,300. The amount of copper received from all the mines, up to the opening of navigation in 1854 is estimated at 14,000 tons, equal in value to \$4,620,000. The product of the Lake Superior district for the year 1854 will exceed 3,600 tons, which, at the present price of copper, will amount to nearly \$2,000,000, or one-third as much as the product of all the English mines.

Milwaukee and Mississippi Railroad.

The earnings of this road continued to show a most gratifying result. The earnings for the first quarter of the year are as follows, viz:—

1854.	1853.
January....\$23,224 29	January....\$10,801 25
February... 26,192 33	February... 8,930 86
March..... 20,698 61	March..... 8,143 35
Total....\$70,115 23	Total.....\$27,875 46

The above exhibits an increase of over 150 per cent. and that, too, when only eighteen miles have been added to the length of the road.

In reference to the future, we copy the following from a statement of the Superintendent and Chief Engineer, recently published in the *Milwaukee Sentinel*.

"I have thought it proper to say that the road will be in operation to Madison about the first of June, and that the gross receipts for the year 1854, are estimated at \$400,000; and allowing 40 per cent. of the same for the expenses of operating the road, leaves an account of dividends, on a capital of, about \$2,000,000, \$240,000, equal to 12 per cent.

The following are the monthly estimates of business, which give the above result:

January, 1854,.....	\$23,224 29
February,.....	26,192 33
March,.....	20,698 61
April,.....	22,000 00
May,.....	25,000 00
June,.....	27,000 00
July,.....	27,000 00
August,.....	30,000 00
September,.....	60,000 00
October,.....	60,000 00
November,.....	44,000 00
December,.....	34,884 77

Total,.....\$400,000 00

It is hardly necessary to add that if this result is attained, (of which I have not the least doubt, if the crops are a fair average) on a road of which 80 miles is in operation for half the year, and 96 for the remaining half, for the first year's business; that it should be in the highest degree satisfactory. Besides that it should settle beyond a doubt that the stock of the M. & M. road will be a ten per cent. stock, under all circumstances and at all times.

EDWARD H. BRODHEAD,
Engineer and Sup't

Tennessee.

COUNTY SUBSCRIPTIONS TO RAILROADS.

The following is a copy of a law, recently passed in Tennessee, regulating the subscription of counties to railroads. It is entitled an act to prevent oppressive county taxes for railroad purposes.

Be it enacted by the General Assembly of the State of Tennessee, That it shall not be lawful for any county in this State, which may have heretofore, or which may hereafter subscribe stock to a railroad company or companies, under any law authorizing such subscription, in the aggregate amounting to more than one-fifteenth of the value of the taxable property of such county; and every subscription of stock made by any county in the State, and every county bond issued in violation of the provisions of this act, is hereby declared null and void as to so much as shall be an excess

of the limit above stated. Provided, that no county in this State, under any existing law, shall subscribe in the whole exceeding one million of dollars, in its corporate name and character, to a railroad company or companies, Provided, that this act shall in no way effect the validity of any county railroad subscription heretofore made, which may exceed the limit prescribed in this act.—Passed Feb. 23d, 1854.

American Railroad Journal.

Saturday, April 22, 1854.

Stock and Money Market.

The share market is not materially changed since our last. The prices have recovered somewhat from the lowest point of their previous depression, but the market is still very heavy. Transactions in bonds are limited to first class securities. Nothing can be done to advantage with new loans. The market is still too much under the influence of the news from Europe, to indicate the real value of our own securities.

The earnings of our railroads continue to be very large. The returns of the earnings of fifteen roads for the month of March, show the following aggregate:—

Statement of earnings of railroads for March, as far as heard from:

	1854.	1853.
New York and Erie,.....	476,316	371,491
Michigan Southern,.....	149,395	87,144
New York and New Haven,....	68,130	60,555
Cleveland and Toledo,.....	70,784	44,855
Rock Island and Chicago,....	74,700	New.
Pennsylvania Central,.....	486,184	310,955
New York Central,.....	416,849	321,511
Ohio and Pennsylvania,.....	81,150	36,743
Cleveland and Pittsburgh,....	37,790	31,670
Macon and Western,.....	34,356	26,592
Milwaukee and Mississippi,...	20,698	8,143
Hudson River,.....	174,240	119,803
Louisville and Frankfort,....	22,504	16,989
Muscooke,.....	13,555	3,061
Indianapolis and Cincinnati,...	26,248	New.
	\$2,152,899	1,442,520
	1,442,520	

\$710,379
or nearly 50 per cent.

The above result shows the railroad interest of the country to be in a very healthy condition, and that a very active internal trade exists.

Galena and Chicago Railroad.

This Company have just declared an extraordinary dividend of 20 per cent., payable in stock, and are about making an additional issue to the amount of 25 per cent., for the purpose of providing means for the works of the Company in progress. These issues will bring up the capital amount to \$4,200,000, as follows:—

Account of outstanding stock, June 1st, 1854.....	\$2,800,000
Add proposed increase of 25 per cent.	700,000
	\$3,500,000
Add 20 per cent. dividend.	700,000
	\$4,200,000

This issuing of new stock, in preference to the sale of bonds, for the purpose of raising money, is certainly a very proper course. We are by no means so clear as to the propriety of dealing extraordinary dividends by a Company whose works are in progress. It may turn out that such dividend was paid from capital instead of earnings.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	83
Androscoggin and Kennebec... "	55	824,863	1,043,540	2,036,140	177,003	80,053	none	80
Kennebec and Portland... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth... "	51	1,355,500	123,884	1,459,384	208,669	6	98	
York and Cumberland,.....	20	285,747	341,100	713,605	28,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	80
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	108
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	37
Northern	82	3,016,634	.....	.....	328,782	163,075	5	50
Manchester and Lawrence....	24	717,543	.....	.....	.....	.....	6	83
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	108½
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan.....	26	.....	.....	673,500	.....	.....	none	124
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	26
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	94
Vermont Central.....	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	104
Vermont and Canada.....	47	1,500,000	.....	1,500,000	Leased to the Vt. Cent.	.....	cent.	97½
Western Vermont.....	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	90
Boston and Maine.....	83	4,076,974	150,000	4,111,345	803,024	418,358	8	102½
Boston and Providence.....	55	3,160,000	402,326	3,579,041	509,326	226,639	6½	82½
Boston and Worcester.....	69	4,500,000	590,541	4,850,754	887,219	413,289	7	100
Cape Cod branch.....	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River.....	52	1,591,110	286,363	1,802,244	258,220	102,098	4	55
Eastern.....	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	84
Fall River.....	42	1,050,000	6,208	1,050,000	294,183	126,589	8	95
Fitchburg.....	67	3,540,000	191,500	3,716,870	626,659	214,633	6	88
New Bedford and Taunton....	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	68
Old Colony.....	45	1,064,070	295,038	2,293,534	374,897	122,866	none	94
Taunton Branch.....	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts..	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	164
Worcester and Nashua.....	46	1,140,000	194,445	1,342,593	182,398	81,807	5	62
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	97½
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	69
Providence and Worcester...	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	639,529	294,269	10	122
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill..	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven....	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	95
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven..	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	54
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line.....	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F..	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira.....	47	425,509	582,400	987,627	76,760	39,360	none	68
Cayuga and Susquehanna....	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)...	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	70½
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	63
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	51
Long Island.....	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central.....	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	106½
Ogdensburg (Northern).....	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	194
Oswego and Syracuse.....	35	350,000	201,500	607,803	90,616	43,609	.....	70
Plattsburg and Montreal....	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga....	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.....	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington....	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,677	Recently opened.	.....	.....	33
Troy and Boston.....	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	96
Camden and Amboy..... N. J.	65	1,600,000	.....	4,327,499	1,888,385	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey.....	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central.....	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster...	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading....	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	73
Philad., Wilmington and Balt.	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	76½

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn. 250	9,768,155	5,000,000	13,000,000	1,943,827	617,625	....	97
Philadelphia and Trenton....	" 30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	" 47	.....	.....	.....	.....	.....	.....	102 1/2
Baltimore and Ohio.....	Md. 381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	62
Washington branch.....	" 38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna..	" 57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....	Va. 65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	" 27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	" 64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	" 73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..	" 22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	" 76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	" 62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	" 107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	" 73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac....	" 32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh....	N. C. 161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina.	S. C. 110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia....	" 140	1,004,231	500,000	In prog.	.....	.....	.....	125
South Carolina.....	" 242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	.....
Wilmington and Manchester.	" 191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia Central.....	Ga. 211	4,000,000	1,214	.....	934,424	456,468	7 1/2	.....
Georgia.....	" 101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Macon and Western.....	" 71	.....	.....	In prog.	59,590	21,731	.....	.....
Muscogee.....	" 50	586,887	150,000	743,525	129,395	71,535	8	.....
South Western.....	Ala. 55	.....	.....	In prog.	.....	.....	.....	.....
Alabama and Tennessee River	" 93	776,259	400,000	In prog.	.....	.....	.....	.....
Memphis and Charleston....	" 33	879,868	.....	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	" 88	688,611	.....	1,330,960	173,542	76,079	8	.....
Montgomery and West Point.	Miss. 60	.....	.....	.....	.....	.....	.....	.....
Southern.....	Terin. 80	835,000	541,000	In prog.	.....	.....	.....	.....
East Tennessee and Georgia.	" 125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..	Ky. 38	1,430,150	900,000	In prog.	.....	.....	.....	63
Covington and Lexington....	" 29	357,218	.....	584,902	87,421	44,250	.....	80
Frankfort and Lexington....	" 65	.....	.....	.....	.....	.....	.....	.....
Louisville and Frankfort....	" 100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	83 1/2
Maysville and Lexington....	Ohio. 147	2,000,000	1,600,000	.....	.....	.....	.....	89
Cleveland and Pittsburgh....	" 95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Toledo.....	" 135	3,027,000	408,200	3,655,000	777,793	483,454	12	115
Cleveland and Columbus....	" 46	.....	.....	2,000,000	.....	.....	.....	65
Columbus, Piqua and Indiana.	" 61	.....	.....	.....	.....	.....	.....	.....
Columbus and Lake Erie.....	" 60	2,100,000	500,000	2,650,653	321,793	200,967	.....	102 1/2
Cincinnati, Ham. and Dayton	" 40	.....	.....	In prog.	.....	.....	.....	62
Cincinnati and Marietta....	" 36	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Western.....	" 20	.....	.....	In prog.	.....	.....	.....	.....
Dayton and Michigan.....	" 36	.....	.....	.....	.....	.....	.....	56
Eaton and Hamilton.....	" 31	.....	.....	.....	.....	.....	.....	.....
Greenville and Miami.....	" 37	.....	.....	In prog.	.....	.....	.....	.....
Hillsboro.....	" 84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Little Miami.....	" 167	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mansfield and Sandusky....	" 57	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77 1/2
Mad River and Lake Erie....	" 187	1,750,700	2,450,000	In prog.	.....	.....	.....	79
Ohio Central.....	" 125	.....	.....	In prog.	.....	.....	.....	.....
Ohio and Mississippi.....	" 44	750,000	300,000	.....	.....	.....	.....	.....
Ohio and Pennsylvania.....	" 54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Ohio and Indiana.....	Ind. 31	.....	.....	In prog.	237,506	.....	.....	.....
Scioto and Hocking Valley..	" 131	.....	.....	.....	.....	.....	.....	77 1/2
Columbus and Xenia.....	" 83	.....	.....	.....	.....	.....	.....	.....
Evansville and Illinois.....	" 90	1,128,486	1,289,000	1,869,932	.....	.....	.....	90
Indianapolis and Bellefontaine	" 62	.....	.....	.....	.....	.....	.....	76
Indianapolis and Cincinnati.	" 159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Lafayette and Indianapolis..	" 72	632,387	663,100	1,353,019	105,944	71,446	4	108
Madison, Indianapolis & Peru	Ill. 135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Terre Haute and Indianapolis	" 92	.....	500,000	In prog.	473,548	286,152	.....	121
Rock Island and Chicago....	" 315	3,741,564	7,276,616	1,200,922	586,929	.....	17	118 1/2
Chicago and Mississippi.....	" 282	3,977,563	8,618,505	1,145,598	582,816	.....	8	104 1/2
Galena and Chicago.....	Mo. 38	.....	non	In progress	.....	.....	.....	.....
Michigan Southern and Ind. N.	" 38	.....	.....	.....	.....	.....	.....	.....
Michigan Central.....	" 38	.....	.....	.....	.....	.....	.....	.....
Pacific.....	" 38	.....	.....	.....	.....	.....	.....	.....

Such things are bad in principle, and bad in practice, and are calculated to engender a spirit of speculation and extravagance exceedingly prejudicial to the interests of railroads and to the public good.

The Galena and Chicago Railroad has been one of the most profitable and best conducted roads of the West. But as it enjoys no monopoly of route, it can for the future earn only a *reasonable* income upon its cost. It is unwise to raise public expectation to a pitch that cannot be sustained.

To Railroad Companies and Contractors.

SECOND hand engines for sale in good running order and condition.

2 engines, 10 in. X 20 in. cylinder, 4 drivers 54 inch diameter, about 16 tons weight.

2 engines, 10 in. X 18 in. cylinder, 2 drivers 54 inch diameter, weight about 14 tons.

For terms, &c. apply to

CLARK & JESUP,
General Railroad Agents,
38 Exchange Place.

4t16

HEAVY FORGINGS.

(ALGER'S FORGE)
ALGER & REED, Proprietors,

MANUFACTURERS OF
STEAM BOAT WORK,
Shafting, Cranks, Cross Heads, Beam Straps, Connecting Rods, Piston Rods, Crank Pins, &c.

RAILROAD WORK,
Cranks, Truck and Car Axles, Connecting Rods and Frames.

SHIP WORK.

Anchors, Knees, Trusses, Davits, Toggles, &c., &c.
Also—Sugar Mill Shafts, Shapes, and all kinds of Forged Work.
CYRUS ALGER, Jr.,
EDWARD REED,
BOSTON.

Duty on Railroad Iron.

A proposition is now before congress, which we hope will be successful, for the removal of the duty on railroad iron.

The object of the duty is two fold; revenue and protection.

We think it can be easily shown that the removal of the duty will not interfere with either of these objects; and that the effect of railroads being to add very largely to the commerce, consequently to the public revenue, of the country, and to increase enormously the consumption of iron, they should be exempt from taxation themselves, in int of what they accomplish.

For a few years past the revenues from *customs* have increased beyond precedent, or expectation. This increase is due *directly* to the construction of railroads. Build a railroad through any portion of the country, and you at once increase the means and disposition of the people to add to their comforts and luxuries. The people of Ohio have undoubtedly more than *doubled* their consumption of *duty* paying goods within the past five years. Railroads have created a market for their products. A corresponding *import* trade has been the consequence. Railroads have filled the Treasury of the Government, as well as the pockets of the people. If the object, in relation to railroads be *revenue*, then their construction should be encouraged in every possible manner. Largely as the duties which they pay add to the public income, the amount which they are the means of adding *indirectly*, are often, in a very short period, ten fold greater. As before stated, therefore, were revenue the object, the first care of government should be

to remove every obstacle and impediment to their construction.

Such being the influence of railroads as far as the revenues of the country are concerned, the asking a remission of duty, is simply asking for justice. If they have been the means of increasing the receipts of government by an amount ten times greater than the duty paid on the rails imported, clearly they are entitled to receive them duty free. Such would be fair dealing; and such concessions are matters of common occurrence, in the ordinary operations of business. The right of the question therefore is favor in favor of the remission of the duty; and if revenue be the object, government should take the most effectual means of increasing it, which is the removal of all burdens upon the construction of railroads.

The question of protection can be as readily disposed of. A railroad that requires 10,000 tons of rails in its construction, will in less than five years create a demand for 30,000 tons of iron for other objects. The iron maker can well forego the less advantage for the greater. In fact he cannot so well fortify his own interests as encouraging these works, by removing whatever obstacles exist to their construction, among which is the present duty. He has only to see what railroads have done for him to be convinced of this. They have within a year or two past, doubled the annual consumption, and by creating a demand far in advance of the supply, have nearly doubled the price of all kinds of iron. Without railroads, the iron interest in this country would now be where it was three years ago, in a state of apparently ruinous depression. Shall the instrument of the mighty change which has been effected, be punished for the good it has done? Shall it continue to be crippled and its usefulness impaired; or shall it be allowed a freedom of expansion in obedience to the wants of the country, elevating every interest, material, moral and social.

There were imported into this country in 1852, from Great Britain alone, 439,893 tons of iron of all kinds. This amount has been very largely increased the past year, under a duty much larger than any manufacturer would ask, for protection. The amount imported in 1853 probably exceeded 600,000 tons. The import for 1854 will probably be equally great. If we have to import such an immense quantity, what objection can there be in making certain varieties duty free, provided the duty be retained upon a much larger amount than our domestic establishments can produce. If the duty be taken from railroad iron, and the foreign article only used, a large quantity would still have to be imported. Our makers in such case would have more than they could do—in branches of manufacture where the present duty secures to them a very large profit. Could it be urged that the removal of the duty on rails would reduce the make of iron in this country, we admit the fact might be urged as a specious argument against such a step. But as it would still leave our own establishments with an overflowing business, the argument for protection falls completely to the ground.

The question of protection, therefore, is not involved in the suspension, for a limited time at least, of the duty. For several years to come, we must continue to import a much larger amount of iron, than that used for rails. Our domestic estab-

lishments will have ample employment in the manufacture of the protected article. In addition to these considerations, the manufacturer must have sufficient protection in the high price which prevails, and must continue to prevail, for an indefinite period. It is the opinion of well-informed parties, who have selected proper locations for their works, that they have nothing to fear from foreign competition with, or without, protection. It is certain that the British manufacturer has lost in a great degree the advantage which he once possessed; in having an abundance of cheap labor. The enormous emigration from Great Britain to the United States is rapidly equalizing the value of labor in the two countries, while Australia is producing the same effect in the former country in unsettling the minds of the laboring classes and in creating a spirit of speculation and adventure which is incompatible with a life of patient industry in the same kind of employment, that California exerted over the public mind of the United States. We see no reason why iron cannot be produced in suitable localities in the United States as cheaply as in Great Britain. Cheap food, the low cost of the raw material, and freedom from taxation, certainly ought, and we think do, off-set the advantage that the Englishman possesses in cheaper labor, and greater abundance of capital. So that whatever may be the absolute price of iron for the future, the cost of production in the two countries will not essentially differ.

The effect of the construction of railroads has been to advance the price of iron nearly 100 per cent. By the present mode of valuation, the duties are consequently double. This advance alone is all the domestic manufacturer needs for protection. If railroads have had such an effect, why not remit the duty till the price shall fall again. They have secured the manufacturer greater protection than ever asked from the government. They have effected similar results for Government as far as revenue is concerned. They have been the means of paying into the Treasury an amount five fold greater the duty on rails. A case for interference in their favor by the remission of duty is thus made out, beyond cavil, to our mind.

Planting themselves on themselves on the broad ground of the justice and the expediency of the thing, railroad companies are entitled to import all articles used in construction duty free. But there is another reason why Government should interfere for their relief at the present time. The late rise in the price of rails have enormously increased the cost of their roads, while the threatened war in Europe has served to check almost entirely the flow of capital from that country to our own. This has thrown the cost of our roads upon our own people. The great demand created for money in consequence, has carried the rate of interest to a very high figure, and has exerted an equal influence in depressing the value of our securities. If Government remit the duty on all iron imported from and after the first day of July, 1853, the companies to be benefitted will not still be placed in as favorable a position as roads whose means were provided, and whose rails were purchased before that time. The amount saved on iron over present prices is equal to at least \$30 per ton, while the price of securities at the two periods show an almost equal disparity. Such

facts takes away any charge of partiality in favor of the companies whose roads are now in progress.

Brooklyn City Railroad Co.

The contract for the construction of the Brooklyn City Railroads was awarded about the 1st inst to Mr. Wm. O'BRIEN, who, we are happy to announce, is pushing the work forward with all the despatch the weather and the season will permit, and will have two miles of double track laid in Flushing Avenue, by the first of next week.

The contract of Mr. O'BRIEN, is for ten and one-half miles of double track railway, being in all twenty one miles of track, to be laid by 29th June. From Fulton Ferry their will be one main line through Fulton Street having branches through Sands street, Myrtle Avenue, Fulton Avenue, and Court Street, to Hamilton Avenue. A line is also to be constructed through Front Street, from Fulton Ferry to Flushing Avenue where it intersects with the line through Sands Street. This contract was let by the Company for about seventy thousand dollars or a little over six thousand dollars per mile.

The charter of the Company authorizes them to lay down about forty miles of track and we understand it is their purpose to extend their track ultimately to all portions of the suburbs, from the various ferries; but the present contract, we believe, includes only those lines we have indicated above. These will furnish four lines to various parts of East Brooklyn, over two miles from the Ferry.

The Company have sufficient means to complete the work in the best manner and place upon it the proper Equipment; and, judging from the immense business at present transacted by the various lines of Stages the enterprise, will be a highly remunerating one. The proprietorship of the Stage lines is absorbed in that of the railways and while the stock will be merely transferred, competition will be avoided.

We are glad to see Brooklyn following suit in this matter of City Railways with so much energy as we look upon this mode of conveyance as much the safest, most comfortable, and expeditions for crowded Streets of any we have seen experimented upon.

For instance, two horses will haul, on a rail, twice or three times the number of passengers they can in a Stage over the pavements, thus getting rid of one half to two thirds the number of horses and vehicles. And, again, where Streets are crowded, the railways have an advantage over Stages, in point of safety from the fact that the Cars must keep on the track, and pedestrians know that if they get clear of the track, in such cases, they are clear of danger; while they must run for dear life from curbstone to curbstone in order to be secure from danger of being run over by Stages.

The Brooklyn City Railway Company are putting down the grooved rail and we understand contemplate having double tracks on each line. This will avoid much detention and add greatly to the earnings of the roads, by the inducements it will offer to citizens of New York to take residences in Brooklyn and suburbs, where they can breathe pure air, at least, a portion of the time.

Mr. O'BRIEN, is a contractor of great energy and has now over four hundred men on the work,

which as denoted above, he is obligated to have done by the first of July next.

Report of the State Engineer upon the State Canals.

(Continued from Page 237.)

VII. A COMPARISON OF THE PRESENT BUSINESS OF THE CANALS WITH THAT OF FORMER YEARS.

The annual reports of the tolls, trade and tonnage of the canals furnish much information on this subject, though it is to be regretted that they have not been prepared so as to show the movements of trade on each of the canals separately, and also of each class of articles on each canal.

These reports are very voluminous, and are distributed through many volumes, and the figures are very large, so that it is troublesome to compare the details of the business of one year with that of several others.

For the convenience of those who desire to follow out these examinations for a series of years, the annexed table has been arranged, which does not repeat the quantities furnished in the reports, but in place thereof shows the comparative business of 1843 to 1853 inclusive; that of 1848 being used as the standard for the comparison. It exhibits the entire business of all the canals, and that of each separately; that arriving at, and that leaving tide water; that shipped at the lakes, and also each article and class of articles.

The rates of tolls were not changed from 1847 to 1849. In 1850 the tolls on pork and its products, corn, barley, iron, salt and merchandize were reduced. In 1851 the tolls on beef, cheese, hides, flour, wheat and railroadiron were reduced. In 1852 the tolls on lumber, pork, bacon, lard, tallow, cheese, butter, cotton, iron, merchandize and railroad iron were reduced.

The famine in Europe created so great a demand for breadstuffs, that the trade of 1847 was increased beyond that of the following year, for this reason the comparison has been made between the years 1843 to 1847, and the years 1848 to 1853.

The examination of the table shows;

First.—That the tonnage and the tolls of all the canals, and also of the Erie, and, with two slight exceptions, of the Champlain, increased year by year from 1843 to 1847; and that while the tonnage increased year by year from 1848 to 1853, the tolls remained about stationary.

Second.—That the tonnage and the tolls of the Oswego canal increased rapidly to 1847, and also to 1850, and then, while the tonnage continued to increase rapidly, the tolls fell off.

Third.—That the tonnage arriving at tide water increased year by year to 1847, and also from 1848 to 1853; and that the tonnage leaving tide water increased to 1848, fell off in 1849, and has rapidly increased since.

Fourth.—That the tonnage shipped at Lake Erie has increased to 1847, (the increase was 80 per cent. in 1847, while a falling off of 25 per cent. took place in 1848,) and has increased year by year from 1848 to 1853.

Fifth.—That the tonnage shipped at Oswego has increased nearly five times up to 1848, and has regularly increased every year since, being six times more in 1853 than in 1843.

Sixth.—That the tonnage shipped at Whitehall has increased to 1846; that it fell off one-half in 1847, increased in 1848, and has continued to increase since, except in 1851, when it fell off largely.

The comparison of tonnage and tolls of the different classes of articles transported shows:

First.—That of the products of the forest. The tonnage has increased year by year to 1847 while the tolls increased to 1846, fell off in 1846, increased in 1847. The tonnage remained stationary in 1847, 8, and 9, and has since uniformly increased, while the tolls increased from 1847 to 1850, and have fallen off every year since.

Second.—That of the products of animals. The tonnage and tolls have increased to 1849, and have since diminished year by year.

Third.—That of vegetable food. The tonnage

and tolls on all of the canals have increased year by year to 1847, and that the tonnage has increased irregularly from 1848, while the tolls decreased to 1851, and have since increased, and that while the tonnage of wheat and flour from this State and the tolls derived therefrom have decreased since 1848. From other States they have steadily and largely increased.

Fourth.—That of manufactures. The tonnage and tolls have increased from 1843 to '53 some of the years showing a slight falling off.

Fifth.—That of merchandize. The tonnage has increased year by year since 1843, while the tolls increased to 1848, remained stationary to 1850, increased in 1851, fell off in 1852.

The following is a comparison of the tonnage and the tolls of some of the principle articles embraced in the foregoing classes.

Lumber.—The tonnage and tolls increased to 1847, fell off slightly in 1848, and have increased rapidly to 1853, except in 1852 when a falling off in tolls took place.

Beef, Pork, Bacon and Lard.—The tonnage and tolls have been irregular.

Butter and Cheese.—The tonnage and tolls have increased to 1848, since which they have rapidly decreased.

Flour.—The tonnage and tolls have increased to nearly double in 1847 and remained nearly stationary to 1850. The tonnage increased to 1852 and fell off in 1853 while the tolls decreased rapidly in 1851 and also 1853.

Wheat.—The tonnage and tolls increased to nearly three times in 1847, fell off in 1848 and 9, increased in 1850, fell off in 1851, and increased rapidly in 1852 and '53.

Corn.—The tonnage and tolls of this article exhibit the most extraordinary fluctuations, the tonnage and tolls being six times as much in 1846, twenty times in 1847, and thirty times as much in 1851 as in 1843. They decreased in 1848, increased in 1849, decreased in 1850, increased largely in 1851, and decreased very much in 1852 and '53.

Oats and Barley.—The tonnage and tolls have generally increased year by year to 1853.

Domestic Spirits, Pig Iron and Castings.—The tonnage and tolls have generally increased year by year.

The stationary condition of the tolls on the Erie canal since 1848 is mainly owing to the diversion of a portion of the western trade by the way of Oswego, and also to the reduction of the rates in 1850, '51 and '52.

The tonnage from other States cleared at Oswego in the last six years, has been nearly eighteen hundred thousand tons, more than half of which was vegetable food.

The tonnage from other States shipped in 1852 at Oswego, and that sent to them by the way of Oswego during the last year, amounted to five hundred thousand tons, the tolls on which are estimated to have been over half a million of dollars.

A large amount of the trade by the way of Oswego belongs to Canada, and the imperfect navigation of the Erie canal west of Jordan has undoubtedly caused the diversion of a considerable amount of trade to the Oswego route.

The reduction in the tonnage of the products of animals has been to some extent owing to the transfer of these articles to the Central and New York and Erie Railroads.

The following table shows the quantities carried by each from 1849 to 1853:—

	By Canals.	By Railroads.
	Cent RR.	N.Y. & E.
Product of animals, 1849..	31,854	13,859 not
" " 1850..	79,919	29,572 opened.
" " 1851..	68,799	33,847 53,991
" " 1852..	63,992	*50,000 75,948
" " 1853..	70,612	*60,000 99,755

*Estimated.

The reports of the railroad companies after 1851 do not furnish the amount of the articles forming the classification of "product of animals."

In the reports of the Central railroad for 1849, and, 50, and of the Central and Erie for 1851, these articles are stated from which it appears that on both the Central and Erie railroads in 1851, more than one-third of the amount of this class was made up of live cattle, which the canals did not carry. Another third on the Erie, and a considerable amount on the Central, was fresh meat, game and milk, which the canals could not carry; and that the amounts of beef, pork, bacon and lard, which together formed nearly one-half of the articles of this class carried by the canal, formed but one thirtieth of this class on the railroads, and that butter, cheese and wool were the only articles of this class carried by the railroads, which were to any extent diverted from the canal.

The diminished amount of the tonnage of vegetable food from this State, transported on the canals during the last few years, is ascribable to the changes which have taken place in the pursuits of the population of the interior; manufactories have sprung up in almost every section, which furnished a home consumption for these products. In the counties along the Mohawk and elsewhere, large quantities of flour are now imported, whereas formerly they exported it.

The cheaper and more fertile lands of the west can raise, grain which the farmers and mechanics of the State can purchase with the more valuable articles which they can raise, and manufacture more cheaply by being near the great market.

These changes have heretofore been more apparent in the New-England States than in this State. It has been represented that five millions of barrels of flour are now imported into New England.

Similar changes will continue and will still further reduce the amount of the tonnage of this class of articles on our canals, from this State, while it will at the same time continue to increase the tonnage of other articles and will also require the importation of more of the agricultural products of the west, and thus furnish an equivalent of those products from this State that are no longer transported on its canals.

VIII. COMPARISON OF THE BUSINESS OF THE NEW YORK CANALS WITH THAT OF OTHER LINES.

The statistics of the trade passing through the channels which connect the interior with the Atlantic, are not furnished in the reports of other lines in a convenient manner to permit of a comparison with those of this State. It has been necessary therefore to obtain some of the results stated in the following tables from other sources, and in some cases to arrive at the division of the trade on the several lines by estimate.

A comparison of the trade passing through the New York canals, and other water lines to tide water, is made in the annexed table R.

From these statistics it appears.

1st. That the tonnage transported upon the St. Lawrence canals is fifteen per cent, and that transported upon the Pennsylvania canals is twenty-three per cent, of that transported upon the New York canals.

2d. That the tonnage arriving at tide water by the St. Lawrence canals is fifteen per cent, and that by the Pennsylvania canals is twenty-five per cent of that arriving by the New York canals.

3d. That the tonnage from the western States passing through the St. Lawrence canals and that passing through the Pennsylvania canals, are each seven per cent of that passing through the New York canals.

4th. That the tonnage from the Atlantic, destined for the western States by the way of the St. Lawrence canals, is thirteen per cent, and by the way of the Pennsylvania canals, twenty per cent of that by the way of the New York canals.

5th. That the whole tonnage of the New York Northern railroad is six per cent; of the New York Central, is nine per cent; of the New York and Erie, is fourteen per cent; of the Pennsylvania railroad, is two per cent; and of the Baltimore and Ohio, is seven per cent, of the tonnage of the Erie canal.

6th. That the tonnage shipped from the western

terminus eastward, by the Northern railroad, is eight per cent; by the New York Central, is three per cent; by the New York and Erie, is four per cent; by the Pennsylvania, is two per cent; and by the Baltimore and Ohio, is three per cent of that shipped by the Erie canal.

7th. That the tonnage shipped from the eastern terminus, westward by the Northern railroad is five per cent; by the New York Central is eleven per cent; by the New York and Erie is twenty-two per cent; by the Pennsylvania is five per cent; and by the Baltimore and Ohio is ten per cent of that shipped by the Erie canal.

8th. That the through tonnage carried by the Northern railroad is eight per cent; by the New York Central is two per cent, by the New York and Erie is three per cent; by the Pennsylvania, and also by the Baltimore and Ohio is two per cent of that carried by the Erie canal.

It thus appears that the business of the New York Canals exceeds the combined business of all the Canadian and Pennsylvania Canals, and the New York and Pennsylvania, and the Baltimore and Ohio railroads by forty per cent, and that the western business done by the New York canals is three times as great as the aggregate business of all of the other lines, and also that the chief part of the business done by these lines is the local traffic of the country through which they pass.

The cost of transport by these routes as stated in the last report, limits the extent of their competition for the trade of the west, and hence the rivalry for this trade is between the water lines leading to New York and those leading to New Orleans.

The annexed statement of some of the principal articles received from the interior at New York and New Orleans, will show the comparative amount of the trade conveyed to tide water by these lines.

1848, '49 and '50.		1852 in tons.	
N. Orleans.	N. York.	N. Orleans.	N. York.
Bacon, tons 60,545	11,778	35,000	4,861
Butter, " 2775	27,542	1,000	3,668
Beef, bbls, 200,901	264,072	9,300	12,430
Corn, b'sh, 9,758,750	11,178,228	90,000	151,012
Cheese, tons, 3,998	43,569	1,500	8,000
Flour, bbls, 2,312,111	8,636,207	92,700	363,160
Lard, tons, 130,406	12,124	19,600	5,287
Pork, bbls, 1,536,817	211,018	46,500	11,068
Wheat, b'sh, 852,497	8,798,759	3,300	167,408
Ot'r grain, 350,151	11,210,230	12,000	166,400

Statement showing the trade of the Lakes and the Valleys of the Ohio and Mississippi,

For the year 1846.

	Lakes.	Mississippi Valley.
Value of the commerce	\$63,164,910	\$183,609,725
Tonnage employed, steam, tons, }	106,836	219,053
Tonnage employed, flat boats, tons, }		300,000
Tons transported,	3,861,088	
Value of shipping,	\$6,000,000	\$12,912,355
No. passengers carried,	250,000	
Receipts fm passengers,	\$1,250,000	\$3,191,982
Population dependent for communication to market, }	2,928,925	6,576,027
No. mariners employed,	6,972	25,114

For the year 1850.

	Lakes.	Mississippi Valley.
Value of commerce,	\$105,255,347	\$275,000,000
Tonnage employed, steam, tons, }	185,017	135,559
Tonnage employed, flat boats, tons, }		
Tons transported,	6,530,841	
Value of shipping,	\$10,200,000	
No. passengers carried,	1,514,290	4,347,560
Receipts fm passengers,	\$2,335,000	
Population dependent for communication to market, }		
No. mariners employed,	10,500	14,752

The above statement shows the trade of the Lakes and of the Valleys of the Mississippi and Ohio.

This table does not include lumber, sugar and tobacco, the former of which furnishes the heaviest amount of tonnage transported on the New York Canals while the two last named articles from the heaviest items of the tonnage delivered at New Orleans, because these articles are peculiar to their respective routes.

Of these exports from the West the product of the hog finds its chief market at New Orleans, as it is not slaughtered early enough in the fall to be carried through or canals, while wheat, flour, butter and cheese, which can reach the northern water lines before they are closed by frost, are chiefly conveyed through them.

Whenever the cost of transport by the northern route is cheapened to an extent equal to the interest on the cost of those articles for the period necessary to hold them until the northern lines are opened, they will seek that channel. The railroad lines penetrating the district, the trade of which is now disputed, will generally increase the trade through the northern lines.

The table also shows that the commerce of the Valley of the Mississippi and its tributaries is about twice as much as that of the lakes, but it is proper to remark that a portion of this commerce, on some of these tributaries of the Mississippi, already contributes to the lake business.

When the enlargement of the Erie canal is completed, the cost of transport will be so much reduced that the products of the west can be brought to the New York market from as far as the confluence of the Ohio and Mississippi rivers, cheaper than to New Orleans. Whenever this is done it will add to the business of the New York canals the trade of one-fourth of the States of Ohio, Indiana and Kentucky, of one-half of that of Illinois and Wisconsin, and of the whole of that of the western Mississippi valley above the mouth of the Ohio.

This territory, according to the census of 1850, contains

An area of.....	287,014 sq miles.
A population of.....	2,050,000
Land in farms improved.....	14,050,000 acres.
" " unimproved.....	19,000,000 "
Cash value of farms.....	301,500,000 dollars.
" " live stock on do.....	59,700,000 "
The ann'l product'n of wheat was.....	20,000,000 bushels.
" " " Indian corn was.....	120,000,000 "
" " " wool was.....	6,000,000 pounds.
" " " butter was.....	25,000,000 "
" " " cheese was.....	4,000,000 "
" " " value of animals slaughtered....	15,000,000 dollars.

The State of Ohio has a lake coast along her northern border, and a river coast along the southern; she is crossed by three lines of canal and three of railroads from the Ohio to the lakes.

The quantity of wheat raised in this State till last year was over thirty millions of bushels, and of corn over sixty millions.

The house consumption does not amount to one-third of these quantities.

The area of that portion of the states including in the above table, (excluding the territories) is four times that of the State of Ohio, and embraces land which is capable of greater production.

In view of the facilities of the water lines of the Ohio, Wabash, Mississippi, Illinois, Wisconsin, Des Moines, Missouri and other navigable streams which penetrate it in all directions, and the railroad lines completed, and in progress, and the rapidity of the emigration to and settlement of the country, it is not unreasonable to suppose, that within a limited period, the population and products of this region will be equal to four times those of the State of Ohio, in 1853.

This would give a population of eight million, an annual production of over three hundred millions of bushels of wheat and corn, and a surplus of all kinds for export, equivalent to at least five millions of tons per annum.

The tonnage of the Erie canal from the western states arriving at tide water, has been as follows.

In 1840.....	158,148 tons.	
1845.....	304,551 "	Increase.... 146,403
1850.....	841,501 "	" 536,950
1852.....	1,151,978 "	" 310,477
1853.....	1,213,690 "	" 61,712

The increasing ratio of the business from the western states, will fully occupy the augmented capacity which can be annually given to the Erie canal by its enlargement and improvement until it is completed.

The region just described, together with an increase of the products of the country already drained by the canal, will furnish a business more than equal to its increasing capacity.

CONCLUDING REMARKS.

In the preceding remarks an effort has been made to present the subject of the internal improvements of this State as a connected system and while discussing the comparative advantages and distinct duties of each kind of improvements to show also their mutually dependent relations and influence upon each other.

The change in the pursuits of the population of this state as well as the concentration at its commercial capital of so large a portion of the trade, wealth and population of the nation, has made it necessary to enter into an examination of the extension of the system of internal improvements through the great basins of the lakes, of the Ohio and Mississippi, from whence so large a portion of the trade and travel which is to furnish the future support of our trunk lines, must come.

The chief points which have been examined, may be briefly stated as follows:—

The natural features of the country suggested at a very early day, the lines upon which the main works were to be constructed, and the people of this State, availing themselves of these natural advantages, commenced and completed a system of internal improvements which was carried on partly by the government and partly by private enterprise, in advance of any similar undertaking in the Union, to a greater extent than any state of equal domain, and with a success that has excited the emulation not only of her sister States but also of the governments of Europe.

This system of public and corporate enterprise has been completed with an economy seldom equalled, and a judiciousness of expenditure which has been rarely excelled.

The natural water lines surrounding and penetrating the state indicated the artificial lines for connecting and extending them to the interior, while the commercial activity and enterprise of our people and the rapid development of a vast inland and fertile territory brought into existence an adjunct system, by means of which all secluded districts, which could not be reached by artificial water lines, were connected with the most accessible of those lines by a species of conveyance second only to canals for cheapness of transport.

The superiority of railroads for the rapid conveyance of passengers, and those descriptions of freight too perishable or too valuable to be forwarded by the slower but cheaper movements on water lines, soon led to their establishment over every section of the State, and to the paralleling of almost every water line.

The benefits which the completion of the Erie canal conferred on the citizens of this State lead to the extension of the system across the portages between the western lakes and rivers.

The sparseness of the population, the ready accessibility to the natural water lines, and the home demand for the products of the West from multitudes of new settlers, prevented the canals at first from proving as remunerative as their projectors anticipated, but the time is not distant when they will realize all their anticipations.

The difficulty of constructing even passable turnpikes through the rich soil of the West, the

facility and cheapness of building railroads, and their exact adaptation to the impulsive, energetic and social character of the people, united to make this species of conveyance a favorite one in that region, and railroads have there been built so fast that the "guide book" is almost valueless if it be three months old.

With the public mind thus turned so strongly in favor of railroads, it is almost hazardous to enter into an advocacy of the superior advantages of the water lines for the conveyance of the internal commerce of the country. The slow, plodding canal boat, with its cargo nearly equal to that of a locomotive and its long dashing train, is almost forgotten, until we are reminded by the daily arrival of these boats at this city, that it would require the daily arrival of one hundred locomotives and fifteen miles of cars to perform that business done on the Erie canal, which hardly attracts the attention of either the passing traveller or of our own citizens.

The experience and information obtained during the past year, in relation to the cost by the various channels, have confirmed the statements formerly presented.

The application of these general results showed that New York, with her canal enlarged, was the cheapest channel from the Ohio and Mississippi valleys to the Atlantic; and the farther examination of the present trade with the West showed that she had no formidable competitor for their trade until the cheapness of transport down the Ohio and Mississippi intercepted it in their great basins.

The effect of the enlargement of the Erie canal would be to place within her grasp the traffic of an extent of territory which would soon afford one-half as much as that already passing through her canals.

As the public mind had become somewhat disturbed by the assertions that the railroads of this state were diverting a large portion of the business of the canals, and would probably prevent an increase in the revenue sufficient to pay for the completion of the unfinished works without resort to taxation, it was considered proper to carry out a comparison between the cost, capacity and revenue of the canals, and of those roads, and the cost and charges for transportation thereon, which resulted in showing that the aggregate cost of the Central and Erie roads was much greater than that of the enlarged Erie canal, while their capacity was less than one-fourth as great, and also that the cost of transportation on these roads was three times that of the canal, and the charges more than double.

The errors of the statements which were offered to prove that the railroad diverted the business from the canals were exhibited by showing that the receipts of the canal, compared with those of the railroads, was understated one-half, while the railroad receipts were overstated one hundred per cent.

It was shown that these errors were again doubled by making the receipts of the railroads the standard for a comparison, instead of the tonnage, when the railroad charges were more than doubled those on the canals, and that when by this comparison, the proportion alleged was thus reduced to one-eighth, it was subject to farther reduction in consequence of more than one-half of the freight carried by the railroad being of a character that would prevent it from being carried at all on the canal;—that more than one-half of the remainder should be deducted for that portion of the freight carried by the railroad when the canals were closed, and that of the very small remainder, a very large proportion was local freight, which could not bear the expense of land transportation to the canals, and finally that the railroads brought a very large amount of business to the canals, far exceeding the amount of all of the legitimate canal freight which they carried to market.

In the continuation of this subject it was found necessary to analyze the present business of the canals to ascertain the relative proportions of the different kinds of tonnage, and the revenue deriv-

ed therefrom of the receipts and shipments from various localities. For this purpose extensive tables have been prepared, which exhibit for the first time the movement of the different articles and the error of such similar deductions made from the tables which have been hitherto published, was shown.

The comparison of the present business with that of each of the last ten years, has also been made, and some of the causes for a reduction in the revenues, while the tonnage was so rapidly increasing, have been given.

The incapacity of the canal to perform the business has led to the diversion of a portion of the western trade by the way of Oswego, which, with the reduction of the tolls, has diminished the revenue without producing a similar effect upon the tonnage.

The reduction in the amount of the tonnage of vegetable food from this state has been ascribed to the change in the articles cultivated and in the pursuits of the population, by means of which the tonnage of other articles and the demand for western agricultural products has been increased, and thus furnished additional reasons for an immediate enlargement of the capacity of the Erie canal, and an assurance that its revenue would thereby be increased to a sufficient extent to repay its cost.

Locomotive "Empire State."

The productions of the New Jersey Locomotive and Machine Co. have been often noticed, but not illustrated, at our hands. The completion, by this company, of a recent order from the New York Central Railroad, has now however, brought out the accompanying drawing, executed in Bien and Sterner's best style, and which shows the general character of these engines for proportions and arrangement.

The subject of the illustration is one of an order for an enlarged series of engines, found necessary for the increasing business of the New York Central road. It has 17 inch cylinders, 20 inch stroke and 6 feet driving wheels, thereby combining unusual power and speed for passenger business. The boiler room is in good proportion to the cylinder capacity, while the steam pipes and ports are of the most ample dimensions. The steam ports are of 16 inches length, being larger than any before made for locomotives in this country.

In the material and arrangement of the engine, as well as in the general details of the machinery, great strength has been secured. The cylinder connection is especially firm and secure, the smoke box being round, and the flanges of the two cylinders being made to embrace one-half of its circumference. This is besides the fastening to the frame. The back portion of the frame is also very stiff, and particularly convenient for repairs of the pedestals. The pedestals are forged separately, and with long backs, long enough to meet each other, so as to form a continuous "stiffening beam" beneath the frame, to which it is securely bolted. The trucks, rocker shafts, lifting motion, link suspension, etc., are also very strong. The pumps are of brass throughout.

In finish and ornament, this engine has a very fine appearance. The cylinders and steam chests are covered by handsome brass castings, not shown on the drawing. The domes, boiler bands, "cab," etc., are all finished in beautiful style.

We have before commended the plan and construction of these engines, so that little else, besides the drawing is now required. As successive improvements are developed however, by the New Jersey Locomotive Company, we shall continue to illustrate them.

\$1,700,000

LOAN OF THE MORTGAGE BONDS OF THE NEW YORK AND HARLEM RAILROAD COMPANY.

This Company will receive proposals for one million seven hundred thousand dollars of their First Mortgage Bonds, issued in sums of one thousand dollars each, payable at the office of the Company, in the City of New York, on the first day of May, 1873, with coupons attached for the payment of interest at the same place semi-annually, on the 1st of May and 1st of November, at the rate of seven per cent. per annum.

These Bonds are secured by a First and only Mortgage, to Thomas W. Ludlow and R. M. Blatchford, Trustees, on the road and its appurtenances, made under special authority of an Act of the Legislature and vote of the Stockholders.

The whole amount of Bonds which can be issued under the Mortgage is \$3,000,000, and will be the first and only lien upon the road, and will constitute the sole debt of the Company. The Company reserve \$1,300,000 of this Mortgage for the exchange of all the outstanding plain Bonds of the Company now in existence, and propose to dispose of the residue, One Million Seven Hundred Thousand Dollars, for the purpose of discharging all their floating debt, and of payment of the expenditure necessary for the full completion of the improvements now in progress upon the road.

The capital of the company paid in is \$1,500,000 of Preferred Stock and \$3,600,000 of Common Stock, upon which regular dividends have been earned and paid for the last five years of Eight (8) per cent. per annum on the former and Four (4) per cent. on the latter.

The receipts of 1853 amounted to 964,467, being an increase of twenty-six (26) per cent over 1852, and there is no doubt a still larger business will be done the present year.

The public have therefore now offered them a home security of the most reliable character.

The Acceptances of the Company will be received in payment for the Bonds.

Twenty (20) per cent, is required to be paid on acceptance of bids, and Twenty (20) per cent. every thirty days thereafter, for which Bonds will be given; Ten (10) per cent. however of the first instalment being reserved by the Company until completion of the contract; interest to be adjusted from the 1st of May.

Parties have the privilege of making payment in full and receiving their Bonds.

Sealed Proposals will be received at the office of BLATCHFORD & RAINSFORD, No. 58 Wall street, on or before the 10th day of May next, at 3 o'clock P. M.

LOCOMOTIVE ENGINES.

A. & W. Denmead & Son,
BALTIMORE, MD.

HAVING THEIR IRON FOUNDRY & MACHINE SHOP in complete operation, are prepared to execute, faithfully and promptly, orders for Locomotive or Stationary Steam Engines, Woolen, Cotton, Flour, Rice, Sugar, Grist or Saw Mills, Machinery for cutting all kinds of Gearing, Hydraulic, Tobacco, and other Presses, Car and Locomotive patent Ring-Wheels, warranted, Bridge and Mill Castings, of every description, Gas and Water Pipes, all sizes, warranted, Railroad Wheels, with best fagoted axle, furnished and fit up for use, complete. Estimates for Work, in any part of the United States, furnished at short notice. ap.14-15

Krupp's Best Cast Steel

SUITABLE FOR
MINT AND PLANTERS' ROLLERS.

A LSO of large size (72 by 18 inches diameter) for rolling Iron, Copper or Brass. PISTONS of Steam-Engines and Shafts for steamboats, not exceeding six tons weight in one piece.

Also the celebrated
CAST STEEL AXLES AND TIRE made from a solid bar without welding. Agents
THOMAS PROSSER & SON,
28 Platt street, New York.

Railroad Iron.

470 TONS 47 lbs. per yard of best quality now in store at New Orleans. For sale by
JOSE PERKINS & CO.
9 South-William street.

In 16

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—specular red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

Ogdensburg, N. Y., April, 1853.

G. PARISH,
15,3m*

Cast Iron Chilled Slip Tires for Engine Driving Wheels.

THE undersigned, principal Agent for the above improvement, offers it, with the right of use, to Railroad Companies and others. The cost of these Tires is less than one-third that of wrought iron, the cost of renewing one-quarter; and the adhesion, strength, and durability equally as great, as will be proved to the satisfaction of any party. Over two hundred locomotives of the heaviest class, (25 to 30 tons,) upon the Baltimore and Ohio Road, are shod with cast iron, with an acknowledged saving over wrought iron equal to \$30,000 per annum. Address

ZERAH COLBURN, Paterson, N. J.

Chambers' Wrought Iron Car Wheels and Axles.

THE advantages of these wheels, in connection with their comparative cheapness, are their strength, lightness, and durability, being wholly of wrought iron, and the set of four wheels and two axles weighing only about one ton. They are now used on the London and Northwestern and other principal lines of English Railways, carrying greater weights than other wheels, say 12 to 15 tons, and in no instance has one given way. Samples, testimonials, &c. may be seen on application to the manufacturer's agents,

NAYLOR & CO.,
99 & 101 John street
151f

New York, 12th April, 1854.

Notice to Contractors.



Office of the Milwaukee and Horicon R. R. Co.,
Milwaukee, Wis., March 15th, 1854.

PROPOSALS will be received at this office till the first day of May next for the construction of the second division of the Milwaukee and Horicon Railroad, from Horicon to Berlin a distance of forty-two miles or sections thereof.

Maps, profiles and specifications will be ready for the examination of bidders on and after the tenth day of April next.

JOHN B. SMITH,
Pres't M. & H. R. R. Co.

Railroad Car Works.

THE undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Road Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.

Maysville, Ky., Sept. 29, 1853.

Notice to Capitalists.

THE GREENVILLE AND COLUMBIA RAILROAD COMPANY

Now offers for sale their Coupon Bonds, redeemable in ten years, bearing interest at seven per cent, per annum, payable semi-annually, secured by mortgage of the entire Road, being the first lien upon it.

For a full understanding of the purposes, value of the property, and prospects of the Company, the following statement is made. It is proposed to issue Coupon Bonds, to the amount of three hundred thousand dollars which with those already issued will make the Bond debt \$800,000. The mortgage of the Road bearing date the eighteenth instant, is to cover these Bonds, as well those issued, as those to be issued, to the amount of \$800,000, and no more.

The Road was finished on the 9th December last, is well equipped, and in full and successful operation. The entire length of the Road, including its Branches, is 164 miles, and cost as follows

Surveying and Engineering,.....	\$ 66,881 34	
Right of way.....	10,441 89	
Graduation.....	474,787 89	
Masonry,.....	323,50 00	
Trestle Bridging,....	88,351 69	
Broad River Bridge,...	37,571 33	
Saluda Lower Bridge,	6,530 78	
Saluda Upper Bridge,	8,416 48	
Timber for Tracks,...	158,181 23	
Iron Rails,.....	575,235 59	
Spikes and Chairs,...	50,891 30	
Superstructure and Track Laying,.....	94,921 42	\$1,604,560 74
Real Estate,.....	\$ 22,754 90	
Depots and Water Stations,.....	44,745 52	
Workshop Building,...	17,125 54	
Machinery for Workshop,.....	16,702 19	101,328 15
Locomotive Engines,...	\$119,176 48	
Passenger and Freight Cars,.....	130,000 00	249,176 48
		\$1,955,065 37

Accounts for Materials, Work, &c., entering into construction, not yet fully ascertained, but supposed to be about,.....

100,000 00

2,065,065 37

Capital Stock paid in, \$1,100,029 49
Assessment on Stock paid in,.....

131,937 26
\$1,231,966 75

The Earnings of the Road for the last three months in an unfinished condition were as follows:

October—From Freight,...	\$12,761 13	
From Passengers	8,321 17	
From Mail,.....	700 00	\$21,782 30
November—From Freight,...	\$ 9,764 41	
From Passengers	8,403 35	
From Mail,...	800 00	\$18,967 76
December—From Freight,...	\$12,205 26	
From Passengers	9,034 00	
From Mail,....	900 00	\$22,139 26

For three Months,..... \$62,889 32

The whole expenses of the Road, it is believed, will not exceed \$11,000 per month, or 50 per cent, on the earnings. the Road, for the greater part, is well constructed—of good material and heavy iron, and could not now be made and furnished as it is for less than \$3,000,000.

By order of the Directors,

THOMAS C. PERRIN, President.

January 18th, 1854.

N. B. The Bonds can be had by applying to Mr. Jacob Cohen, of Charleston; Mr. J. P. Southern, of Columbia, or to me at Abbeville Court House. Bids for these Bonds are requested.

Railroad Iron.

1,300 TONS superior quality Yorkshire rails 56 pounds T pattern can be immediately delivered at New York, Savannah, or New Orleans.

For sale by

NAYLOR & CO.

New York, April 1st, 1854.

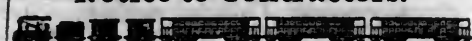
Brass Tubes for Locomotive and Marine Boilers.

THE undersigned having been appointed Agent for the high respectable manufacturers Messrs. Allen, Everitt & Son of Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to

JOHN H. HICKS,
90 Beaver str.

March 1854.

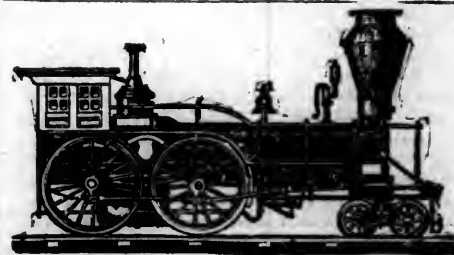
Notice to Contractors.



Proposals will be received for all the heavy work on the Blue Ridge Rail Road, South Carolina; Blue Ridge Rail Road, Georgia; Tennessee River Rail Road, North Carolina; Knoxville and Charleston Rail Road Tennessee. The above lines of rail-way are consolidated and under the management of one Company, Extending from Anderson South Carolina, via Clayton, Georgia, Franklin North Carolina, to Knoxville Tennessee, a distance of 194 miles. That part of the road from Anderson South Carolina, to the Turniptop Mountain, a distance of 40 miles is principally earth excavation, of about equal quantities of cut and fill, with several bridges. From the Turniptop Mountain to the Rabun Gap, a distance of 24 miles, the work is very heavy, there being on the line one tunnel of 5800 feet, one of 1400 feet, and one of 400 feet in length; a suspension bridge across the Chatuga River 500 feet long, with some very heavy earth and rock cuts. The rock in the Tunnels is gneiss stratified. From the Rabun Gap to twenty miles below Franklin, a distance of 50 miles, the line follows down the Tennessee River; the class of work is principally side hill excavation, some of which is rock; their will also be several bridges. From the point 20 miles below Franklin to Hardens, a distance of 35 miles, the line follows the Tennessee River the entire distance, causing heavy side rock excavations. On this portion of the line will be several expensive bridges, and a tunnel of about 1000 feet. From Hardens to Knoxville, a distance of 45 miles, the line follows the river about eight miles, then leaves it, running across the Chilhowis mountains almost a north line to Knoxville; this portion of the road is heavy work, with about equal quantities of cut and fill, an expensive bridge 1000 feet long and 45 feet high, crossing the Holston River at Knoxville. The character of the rock from Knoxville to Hardens is limestone, and from Hardens to Franklin gneiss rock stratified, and from Franklin to Anderson, stratified sand stone and gneiss rock. The character of the earth is sandy and clay loam. The line for the whole distance runs through high table lands, well settled, remarkable for its health, good water and ample resources for subsistence. The above line of rail-way offers great inducements to experienced contractors. The undersigned will be prepared to receive proposals and enter into contracts for the graduation, bridging, tunneling and masonry for the heavy portion of the line, from and after the 1st day of May next, at Knoxville Tennessee, Franklin North Carolina, and Pendleton South Carolina, and will continue at such places, until the same is under contract. Profiles and maps of approximate location can be seen at each of the above places after the 1st day of May. Proposals are asked with cash payments, also eighty per cent cash and twenty per cent in the Capital Stocks or Bonds of the Company. All communications prior to may 1st must be addressed at Pendleton South Carolina.

4,13

ANSON BANGS & Co.

ZERAH COLBURN,
CIVIL AND MECHANICAL ENGINEER.

OFFERS his services to Railroad Companies and others, in designing and constructing Locomotive Engines of superior adaptation and efficiency.

Refers to CHAS. MINOT, Supt. N. Y. and Erie Railroad; WM. RAYMOND ESQ, Pres't, Ogdensburg railroad; G. W. WHISTLER, Esq., Vice Pres't. New Haven railroad; ROBERT KETCHUM & GRANTON, Paterson, N. J., O. M. HYDE, Esq., Detroit.

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.
WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their **SYSTEM OF LOCOMOTIVE ENGINES** in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture **Five different kinds of Engines** and several classes or sizes of each kind.

Particular attention paid to the strength of the machine in the plan and workmanship of all the details. Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowing Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
 ILLINOIS CENTRAL RAILROAD.
 Vandalia, Ill.

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of

Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
 64 Courtland st., N. Y.

New York and Erie R. R.**PASSENGER TRAINS**

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the B. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAY EXPRESS, at 12½ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAY PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.

These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

CHAS. MINOT, Supt.

Railroad Iron.

2000 TONS Railroad iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and Crowsney's manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by **P. CROUTEAU, Jr., SANFORD & CO.,** December 4, 1852. No. 51 New street.

Travelling Agent Wanted.

A **PERSON** is wanted to travel throughout the United States, as Agent for one of the most respectable manufacturing establishments in this country. He must be a man of easy, good address, industry, perseverance, cheerful temperament, a competent salesman, possessing a practical knowledge of machinery, iron and steel, and able to produce the best testimonials as to integrity and general good character. One who has acted in the capacity of master mechanic and superintendent of a railroad machine shop would be preferred. Permanent employ and liberal compensation will be given. It will be a needless waste of time for any one to apply who is not fully qualified to suit the wants stated. He is not wanted to learn, but must have already learned to act his part. Address **EDART NORI**, Post Office, New York. ap12-3t*

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality by **THOMAS HUNT,** No. 63 Fulton Street, New York.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

BOORMAN, JOHNSTON & CO.,

Sept. 7.

90 Broadway, New York.

MANUFACTURERS' AGENCY

FOR

RAILROAD FURNISHING,

Office 18 Dearborn St., Chicago, Ill.

E. R. T. ARMSTRONG, Agent,

KEEPS constantly on hand Railroad Spikes, Burden's make, Railroad Wrought Iron Chairs, superior quality, Ames' manufacture of Locomotive Tires, Cranks, &c. Washburn, Pond & Co.'s Car Wheels, of best Salisbury and Stirling Iron, mixed under direction of Mr. Washburn, and warranted.

Orders invited for Locomotive and Car Rolled or Hammered Axles—Locomotive Lamps—Superior Pumps, for Stations, Switch Stands, Levers, and Targets—Locomotive Drivers and Cylinders—Boxes and Pedestals—Screw Cutters and Drilling Machines—Frog's Heads and Heel Blocks—Screw Presses, for forcing Wheels and Axles.

Oils of a superior quality, made expressly for railroads, and free from gums.

Refer to—Illinois Central railroad, Ohio and Mississippi river railroad, Michigan Southern railroad, Galena and Chicago Union railroad, Milwaukee and Mississippi river railroad, Little Miami railroad, Cincinnati, Hamilton and Dayton railroad, Central Ohio railroad.

14.6mo's.

S. SEYMOUR & O. GENERAL RAILROAD

AGENCY, Office, Metropolitan Bank Building.

No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years

OHIO AND MISSISSIPPI R.R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R.R. STOCK.

SCIOTO AND HOCKING VALLEY R.R. STOCK.

SCIOTO AND HOCKING VALLEY R.R. FIRST

MORTGAGE CONVERTIBLE BONDS, at 11 years.

LOUISVILLE AND NASHVILLE R.R. STOCK.

BUFFALO AND STATE LINE R.R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Notice to Contractors.

PACIFIC RAILROAD OF MISSOURI.

SEALED proposals will be received by the undersigned, at their office in the city of St. Louis, until six o'clock, p. m., of the 15th day of May next, for the Grading, Masonry, etc., of the first division of the South-west Branch of the Pacific Railroad, extending from Franklin Depot, the present terminus of the road, some 40 miles West of St. Louis, to the crossing of the Gasconade River, a distance of about 78 miles. The line will be divided into sections of about one mile each, and proposals may be made for one or more sections. The line, plans, profiles, specifications, form of contract, etc., will be ready for inspection on and after the first day of May next. The work to be let is quite heavy, situated in a healthy country, and is easy of access.

The undersigned reserve to themselves to reject all proposals that are not satisfactory.

A. S. DIVEN & CO.

March 24th, 1854.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,
 287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.

THE

New Yorker Handels-Zeitung

A **GERMAN** Commercial Paper, containing Prices Current, Market Reports, Exchange and Stock Rates, Shipping List and Correspondence from all parts of the world, appears twice a week in two separate editions, viz: one for home circulation, published each Wednesday and Saturday morning; the other for circulation in Europe,—the only German Paper published in the United States admitted to the German States—appears before the departure of each mail steamer for Europe. Terms:—The paper, per annum, at New York, \$5, for Germany, full Postage included, \$11, and for all other parts of Europe, the U. S. Postage inclus., \$3. Advertisements taken at liberal terms.

Howland, Burgess & Smith,

MANUFACTURERS of PURE SPERM OIL for Railroad Engines and Lamps, of Refined Whale Oil now so generally used for car wheels.—Works, New Bedford Mass.—Store, Albany, N. Y.

Orders (directed to either place) respectfully solicited from Superintendents.—All Oil warranted pure and perfectly satisfactory.

Pneumatic Pile Driving.

FOUNDATIONS FOR BRIDGES, PIERS &C.

BY THE PNEUMATIC process hollow cylindrical piles or tubes from eight inches to ten feet diameter can be driven through sand, mud, clay or other material to any required depth. The complete success which has attended the operations of this process shows it to be eminently practicable in, and much the best method known for, the construction of railroad bridges across deep and rapid rivers where permanent foundations of great strength are necessary, and have to be secured at great depth.

Applications for license for the use of the invention in any part of the United States may be made to H. V. POOR, Esq. Editor of the American Railroad Journal, 9 Spruce street; or for contracts for pile driving, or licenses as above to

CHARLES PONTEZ,

March 25th, 1854.

New York.

To Contractors.

PACIFIC RAILROAD OF MISSOURI

THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.

Thos. S. O'SULLIVAN, Chief Eng.

Pacific R.R. Office, St. Louis, Feb. 1854.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57 1/4 lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by
BOORMAN, JOHNSTON & CO.,
 90 Broadway, New York.
 June 9, 1853.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to
THOS. CHAMBERS, President,
 September, 1850.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.
VOSE, PERKINS & CO.,
 9 South William St.
 New York, June 1, 1851.

Knox & Shain,

MANUFACTURERS OF

LEVELS, TRANSITS AND SURVEYING COMPASSES.

No 72 Dock st. first door south of Walnut, west side PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
 157 Broadway, New York.CHARLES B. STUART,
 DANIEL MARSH,EDWARD W. SERRELL,
 SAMUEL MCLEROY.**Important to Railway Co's.**

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

**South-Western Car Shops,
 Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West,
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
 feb. 18. 1m.

**Ontario, Simcoe & Huron R.R.
 CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay. Lake Huron a distance of 66 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Onia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
 Superintendent.**Railroad Iron Via Quebec.****JOHN ANDERSON & CO.**COMMISSION MERCHANTS,
 SHIPPING AGENTS AND BROKERS,
Quebec and Montreal.

PARTICULAR attention given to the Transshipment of Iron, &c., in Transit for the Western Lake Ports, and to the Shipment of Rails in Great Britain.
 Quebec, Dec. 2, 1853.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery, for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
 No. 61 Camp Street,
 New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3 1/4 to 6 1/2 inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.



They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
 17 Burling Slip, New York.

February 15, 1850.

SHANAHAN & LOEBER,

 181 William-st,
 (1st floor—Up Stairs),
NEW-YORK. 

MANUFACTURERS OF

THEODOLITES, TRANSITS, LEVELS,

Surveyors' Compasses, Drawing Instruments,
 Chains, Scales, Levelling Rods, &c. 1y10**Notice to Contractors.**

MEMPHIS & OHIO RAILROAD.

SEALED proposals will be received at the office of the Memphis and Ohio Railroad Company, at Memphis, Tenn., until the 15th day of April next, for the grubbing, clearing, gradation, and masonry of the first 65 miles, from Memphis to Cherryville.

Contractors must give the most undoubted security for the completion of the work at the time, and in the manner specified; and contracts will be let in sections, or for the entire work, as may be deemed best by the Directors.

The Directors reserve the right of rejecting all bids, should none prove satisfactory; and it is desirable that all propositions should be submitted, with the view of preparing the whole work for the iron as soon as possible. Bids of that character and otherwise equally favorable, will have preference.

Maps, plans, and specifications may be seen at the office of the company, after the first of April.

E. PEABODY,
 Engineer in charge.**Notice To Contractors.**

OFFICE OF THE VICKSBURG, SHREVEPORT AND
 TEXAS RAIL ROAD COMPANY
 Monroe, La., March 8th, 1854.

SEALED PROPOSALS will be received at this office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty mile, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the entire sections, or any portion thereof, not less than one mile, and those proposing to take stock of the Company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the Company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract; or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,
 President.
 P. J. TOURNADRE,
 Chief Engineer.

7014

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

JOHN H. HICKS,
 90 Beaver street.

2d Feby.

H. SAWYER(of the late firm of SAWYER & HOBBS),
 Manufacturer of Transits and Levels,

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 17]

SATURDAY, APRIL 29, 1854.

[WHOLE No. 941, VOL. XXVII.]

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Baltimore and Ohio Railroad,.....	256
Southern Commercial Convention,.....	259, 256
Draws for Railroads,.....	256
Journal of Railroad Law,.....	259
Sale of Public Lands between Rio Grande and Pacific,.....	259
Statistics of Mass. Railroads,.....	260
Industry of United States,.....	261
Dayton and Cincinnati Railroad,.....	262
New York City Valuation,.....	262
American Debt Abroad,.....	267, 262
Statistics of Railway Rolling Stock in Great Britain,.....	268
Influence of the European War on the Commerce of Great Britain.....	263
Railway Exhibits,.....	264
American Securities,.....	266
Boston and Providence Railroad,.....	267
Fitchburgh Railroad,.....	267
Mississippi and Atlantic Railroad,.....	268
New York Locomotive Works,.....	268
Sunbury and Erie Railroad,.....	269

American Railroad Journal.

Saturday, April 29, 1854.

Baltimore and Ohio Railroad.

We copy the following resolutions adopted by the Directors of the Baltimore and Ohio Railroad, by which it will be seen that that company proposed to pay a cash dividend in October next.—Annexed is also a statement, showing the earnings of the road for the year ending April 1st; an estimate for 6 months ending October 1st:

Whereas, The time has now arrived, when this Company should declare to the Stockholders what their future policy in regard to paying dividends, will be:

Resolved, That it will hereafter be the policy of this Company to declare, semi-annually, beginning on the 1st of October next, such dividends in cash as the net earnings of the road will justify, after placing to the sinking fund the amount heretofore stipulated, and reserving such surplus as the Board may deem prudent and expedient.

Resolved, That this Company are impressed with the importance of practising a rigid economy in all its departments, and will act upon that policy; but they feel the necessity, founded upon the resolution of the City-Council, the act of the Legislature, and the public expectation, of constructing the double track, heretofore spoken of as early as

it may be done, without impairing the means of the Company to accomplish other indispensable objects.

I hereby certify the above to be a true copy.
J. I. ATKINSON, Secretary.

Statement of the Revenue and Expenses of the Main Stem of the Baltimore and Ohio Railroad, for the year ending on the 1st April, 1854.

Gross receipts of the main stem including dividend from the Washington Branch..... \$1,774,959 11
Deduct expenses..... \$934,188 68
Interest, ground rent, &c..... 384,401 34—\$1,318,500 02

Nett earning, which has been used in the payment of debt contracted for machinery to earn the revenue..... \$456,369 09

Estimated Revenue and Expenses for the six months ending 1st October, 1852.

Estimated receipts for the ensuing 6 months, being summer months, including Washington Branch dividend..... \$1,530,000 00

Expenses at 60 per cent..... \$900,000 00
Interest, ground rent, &c..... 385,401 34—\$1,285,401 34

Estimated nett earnings..... \$244,598 66

The Southern Commercial Convention.

We are glad to see that the subject of a Railroad to the Pacific received the attention of the Convention, however, much we may disagree with its action. In scientific investigation, the paths that lead to error must thoroughly explored, to make us certain that we have taken the true course; and those who suggest untenable theories for the construction of this great work, are doing a service second in value only to those that discover the way to success. Every side of the subject must be discussed and considered, before the public mind of the country will contentedly settle down upon any plan.

The Convention have made one good discovery; that the road cannot be built without money. It was our opinion, six months ago, that grants of land would build one or two lines; and that no further encouragement by the general government was necessary. A pretty thorough examination of this subject has since satisfied us, that we were entirely mistaken. The extent of fertile

territory west of the Mississippi River is much more limited than we had supposed; the western boundary of arable land commencing at about 98 degrees west longitude from Greenwich. So soon as the elevated table lands that skirt the eastern base of the Rocky Mountains are reached, all the intervening country on the southern route is a desert. All the land to be given to it, either by Mr. Givinn's or Mr. McDougal's bills, would not pay the cost of surveying and locating the road.—In confirmation of this opinion we give the following from the speech of Mr. Albert Pike of Little Rock, Arkansas, made to the convention in support of the above resolutions.

"Then again we are all looking to the general government for aid. You all agree that it is constitutional to make grants of land. Very well.—But supposing that the lands were granted, let me tell you that I know something about the country through which this road is to run. It happened to me some years ago to go poking about the head of the Red River on foot, and I know something of the character of that country; the rivers there, although wide, are often nearly dry, and the water found in them at such seasons is salt, for I dug among the sand with my hands on one occasion for a whole night to get a mouthful of fresh water after being without for two days.

We are told about this munificent grant of land by the State of Texas. There may be ten millions of acres of land granted by Texas, yet more than two-thirds of it is not worth a farthing an acre, instead of being, as has been said here, worth \$10 per acre. Well, when you have got through Texas you reach New Mexico. I have been in New Mexico too. Except the valley of the del Norte there is hardly a single foot of land worth a cent in New Mexico, on the line of this road.

The valley of the Del Norte is narrow, with but a small strip of land which is of any value. Then, when you get to the border of California, you travel through another desert. When I was there in 1832, the hunters were obliged to drive along with them a great quantity of mules, that they might use them as food. So thus you go the greater part of the way through a desert; and unless there are valuable mineral treasures to be found, the lands are not worth anything, and no man would be willing to vest money in their purchase.

Now these are difficulties which we blink at all the time instead of looking them fully and manfully in the face. You all say that Government has no power to grant money to build a road, and that the only way in which she can help us is by grants of land. And how much will that help you if the lands are worth nothing. If the road is to

be built, money must be had. It is no use to deny or attempt to conceal it, for

"To that complexion we must come at last."

We might as well say it now as to say it ten years hence, when it will be too late. *Somebody* has to advance the means, and the question is "who is to do it."

Mr. Pike is certainly good authority upon the subject upon which he speaks; and being a Southern man and an advocate of the *Southern* route, he certainly would not exaggerate the difficulties to be encountered in building a Railroad over it.

The idea is therefore, that the construction of the *Southern*, or *any* line, can be secured by a grant of land upon their *routes*, is utterly preposterous. As before stated, when the desert, which covers *one-half* of the North American continent, between the 30th and 40th degrees of latitude, is reached, the land is entirely *worthless*. To decide upon any plan for the construction of a Railroad over this *desert*, that does not provide *money* for its *entire* cost, is simply wasting time. A plan to be successful too, must provide at least \$200,000,000. We do not believe any Railroad can be built upon any of the routes proposed, for less than 100,000 per mile. These are disagreeable truths, but being truths, we may as well look them in the face as avoid them.

As *somebody* must furnish the money for the road, we are in favor of the plan that will furnish it in the most economical manner. Notwithstanding its cost, we are not sure that the road might not be made productive property. Under such expectation, we believe a sufficient amount of private means might be secured for it, to guarantee the government from *loss*, and relieve it from the necessity of superintending the construction and management of the road. Suppose government to agree to pay, for a term of 50 years, an amount for the transportation of mails, which shall represent the interest on a sum equal to \$50,000 per mile. Upon such a basis, would not private enterprise take up and complete the work? We do not see how the road can be built in any other manner. To divorce government from the work, is, with the present means and inducements to this end, simply to postpone its construction.

If the Southern States, by concerted and united effort, can build a Railroad to the Pacific, they will deserve the lasting gratitude of the whole country. But we must say they are offering to do altogether too much. The Charleston convention acted upon the idea that a Southern line was to secure *special* and peculiar advantages to the *Southern* States. This is a great mistake. Any given section of the country is more benefitted by the development of that portion *most dissimilar* to it, in its resources and productions, than of one possessing the *same* characteristics. Massachusetts would not derive half the advantage by the creation of another Massachusetts, as of a *new* State of equal population, but devoted, as it naturally would be, to *different* pursuits. In the one case, a *new* market would be opened for her products. In the other, a *rival* in all her industrial interests would be created. The *North* is much more interested in the development of the resources of the *Southern* States than are the latter; because in these, the North finds the best market for her products. The reverse of the proposition is equally true, when applied to the Southern States. A Railroad to the Pacific cannot be made a *sec-*

tional affair, were parties in it so disposed. No road can be built upon any route that would not benefit New York and Massachusetts more than any other States in the Union; for the reason that they have a greater number of interests to be effected by it, than any others.

Where North Carolina would make one dollar out of the *Southern* line, New York would make fifty. North Carolina has no commerce and no navigation to which the road would give increased and profitable employment. Why then should she volunteer to build a work in which 20 States are to be more interested than herself? She should not, nor will not. The Southern scheme is therefore unjust to the Southern States, and utterly impracticable. Fourteen States, all whose interests are different, and many of them conflicting, would never act together harmoniously. It is not in the nature of things. If they could, they are incompetent to the task they propose to undertake. *State Governments* were not organized for *commercial* purposes, and possess no function fitting them to superintend such enterprises. We want no better proof of this, than the history of such States as have undertaken to execute systems of internal improvement. What *one* State cannot do, *fourteen* certainly cannot, for the diversity of sentiment which would prevail, would certainly paralyze the *Confederacy*. Were they to attempt to do any thing of the kind, they would be certain to be *robbed* of the money devoted to the work. To be successful, it must be under the guardianship of private interest, and private skill; otherwise it must prove a disastrous failure. The Charleston project is a visionary and impracticable one. Its discussion however, will do good. It will bring the public mind one step nearer to the truth. It has already admitted that the road will have to be built with money, and "*nothing else*." How shall the money be raised is the next question? We have no doubts that the General Government must and will come to the aid of this great work. Its necessity, and the impossibility of providing the means in any other manner, will compel such a result. Strict constructionists may shape their views accordingly. When *Government* shall espouse the subject in good earnest, only *then* will the first efficient step be taken toward the construction of the Pacific Railroad. We confess that we fear this step will not be taken at an early day.

New Orleans, Jackson and Great Northern Railroad.

The subscriptions to the capital stock of this company, have been as follows:

State of Louisiana.....	\$1,600,000
City of New Orleans.....	2,000,000
Tax payers of ".....	333,333
Individual subscriptions.....	617,750
Contractors.....	186,720
State of Mississippi.....	600,000
Monroe county, Miss.....	460,000
Madison ".....	100,000
Attala ".....	72,075
Oktoberlin ".....	50,000
Hinds ".....	39,600
Copiah ".....	6,925
Pike ".....	9,500
Canton and Jackson R. R. Company...	44,170

Total.....\$6,120,073
Of these sums there will be payable in 1854, \$2,801,150 65; 1855, \$1,890,592 50; 1857, \$374,930; and after 1856, \$577,223 75.

The receipts of the road up to Jan. 1, 1854,

amounted to \$1,794,936 57, and the expenses on the work done to \$1,736,254 93.

Draws for Railroads.

At the present time, when there are so many railroads in process of construction, and many of them crossing navigable streams, a few remarks on the various methods of constructing "Draws," and the advantages and objections peculiar to each kind in use, may not be out of place.

1st. *The floating draw*. This plan of draw is very simple, consisting merely of a platform of sufficient length to fill the opening in the bridge, supported by two or more water-tight *caissons*. This construction is only applicable to streams whose level is nearly constant, and whose current is slow. It is often used for ordinary roads, but is not adapted to railroads.

2d. *The leaf draw*. This draw in its simplest form consists of a platform, or "leaf," laid across the opening, and which leaf revolves on a horizontal axis, attached to one of the piers, against which it rests. It is raised and lowered by means of chains, which pass over pulleys in the tops of *uprights*, placed just behind the axis, to which is attached the necessary gearing. This kind of draw is sometimes used on railroads, but is not so applicable to them as to common roads, on which a modification, with two leaves, is very common.

3d. *The rolling draw*, consists of a platform much longer than the opening, mounted upon wheels which run upon rails placed upon the pier beneath the level of the road. There are various forms in use. In the one best adapted to railroads, the rails on which the platform runs, are laid on an acute angle with line of the road, thus giving it a diagonal movement which takes it clear of passage; it is commonly operated by a "rack and pinion." This form of draw though superior to either of the others, has its objections. It takes a long time to open and close it, and its movement is a confined one; they are not well suited to streams whose current is rapid, from the fact, that vessels in passing often get foul with it, and great difficulty is experienced in clearing them.

4th. *The swing draw*. This kind of draw consists of a platform, stiffened by the proper "trusses," and turning around a vertical axis, passing through its centre of gravity. Only a portion of the weight is sustained by the axis; the remainder being distributed among a system of wheels which run upon a circular rail concentric to the axis. The draw, with its appurtenances, is supported on a pier of masonry or piles, leaving a channel way on each side clear for the passage of vessels. This draw, it is believed, has many advantages over the others, there is no "dead weight" to be raised, as is the case with the leaf drawer. It has only the friction caused by its weight to overcome, and unlike the rolling draw, it can open in either direction. "*Fouling*" is by this means avoided. It may be operated by a "rack and pinion" worked by a hand crank, or by wind, or horse power; and in case of very small spans by a "setting pole" in the hands of the "tender." It is better adapted to large spans than any other form. It is rapidly moved; draws of two spans of 50 feet each, being opened in the short space of 2½ minutes. This is undoubtedly the best form of draw for railway purposes, having all the advantages and none of the objections

of the other forms. All drawbridges are an obstruction to the navigation of the streams which they cross, and it is the duty of all parties who are benefited by them, to mitigate the inconveniences they occasion as far as possible.

Journal of Railroad Law.

From the highly valuable 1st volume of Duer's reports of the New York Superior Court, lately published by Mr. Little, of Albany, we extract the two following decisions:

DAMAGES TO PERSONS, AND HOW ASCERTAINED.

In an action for an injury to the person, the circumstances, condition in life and pursuits of the plaintiff may properly be given in evidence, in order to enable the jury to understand the amount of his actual damages. *Duer, Caldwell vs. Murry.* For the same reason, an inquiry into the probable consequences of the injury as transitory or permanent, is eminently proper.

Where successive actions may be brought for a continuous wrong, as for a nuisance, the damages in each action may be justly limited to those sustained by the plaintiff at the commencement of said action—Ib.

But when an action is based upon an injury to the person only, for which a single action can be brought, the certain and probable consequences of the injury must, of necessity, be shown, in order to enable the jury to give the plaintiff an adequate compensation. Yet subject to the foregoing limitation, it is the general rule that contingent damages must not be regarded by the jury—Ib.

When the Judge, in the beginning of his charge, told the jury that a common carrier for the transportation of passengers is liable to the same extent as a common carrier of goods, the Court conceded that such a position was erroneous, inasmuch as passengers are ordinarily able, in a measure to take care of themselves. Yet the Court held, that the above mentioned error committed by the Judge who charged the jury in the cause was immaterial, inasmuch as he finally submitted the cause to the jury, upon the single question as to whether or not the servant of the defendant had been guilty of negligence in driving the stage—Ib.

Although the liability of a carrier of passengers is in some respects more limited than that of carriers of goods—he is bound to use the utmost care, diligence and foresight—and if an accident, by which a passenger is injured, results from the want of care, diligence and foresight, the carrier is liable—Ib.

The Judge therefore was correct in charging the jury that the carrier was liable, unless the overturning of the stage by which the injury was occasioned, was the result of irresistible force or inevitable accident—Ib.

When the proprietor of a vehicle demands fare from passengers who ride upon the top, he is not at liberty to set up the defence in case of any injury sustained by such passengers, that they had chosen an unsafe situation—Ib.

Even if negligence is imputed to a plaintiff, still if it did not in any degree contribute to the injury of which he complains, it will be no bar to his right of recovering damages for the same—Ib.

See *Font vs. Tracy*, 1; *Johnson*, 73; *Lincoln vs. Saratoga and Schenectady Railroad Company*, 23d; *Wend*, 425; *Ingalls vs. Bills and al* 9th; *Metcalf*, 1.

PASSENGERS—THEIR DUTY TOWARDS CARRIERS.

When a passenger is injured by a collision occasioned solely by gross negligence of a carrier, the former may recover damages, although at the time of the injury he was in the baggage car—provided he was lawfully there—notwithstanding he knew the passenger cars to be much safer, for his negligence did not contribute to the injury. A passenger in choosing his seat, owes no duty to the company to guard against their gross negligence. *Carrol vs. New York and New Haven Railroad Company*, 1; *Duer*, 235.

Southern Convention Pacific Railroad

The following are the Resolutions passed by the Southern Convention recently held at Charleston, in reference to a Railroad to the Pacific.

1. *Resolved*, That it is vitally important to the progress and prosperity of the United States, to have one or more railroads connecting the States on the Atlantic with those on the Pacific Ocean.

2. *Resolved*, That the Southern route ought to commence at suitable points on the Mississippi river, between the New Orleans and St. Louis, thus connecting itself with the various similar improvements made and contemplated in the Atlantic States, and concentrating at some point in Texas, on or near the thirty-second parallel of north latitude; thence to the Rio Grande, on the western border of Texas, by the route designated by that State at the last session of the Legislature, chartering the Mississippi, El Paso and Pacific Railroad, and thence to the Pacific Ocean or Gulf of California.

3. *Resolved*, That in the deliberate judgment of this Convention, the Gadsden Treaty with the Government of Mexico, as published in the newspapers, ought to be ratified by the Senate of the United States, so far, at any rate, as to secure the best route for the proposed Southern Railroad from the western limits of Texas to the Pacific Ocean.

4. *Resolved*, That in order to make provision for the construction of said road, this Convention respectfully recommend that a Southern organization be effected, if practicable, of the States of Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Mississippi, Louisiana, Texas, Arkansas, Missouri, Tennessee, Kentucky, and of the different cities, and rail road companies and corporations in those States, for the purpose of building a Southern Railroad to the Pacific Ocean or Gulf of California, by the route, and from one or more of the points indicated in the second of those resolutions,—negotiating for the right of way, if necessary, with the Government of Mexico.

5. *Resolved*, That to the effect this organization, this Convention respectfully advises the incorporation, by the Legislature of the State of Virginia, of a Southern Pacific Railroad Company, with a capital sufficient to build such road from the point or points, and by the route indicated in the second resolution—of which corporation the several Southern States above mentioned, the several cities therein, and the several railroad companies therein, shall be invited to be co-operators, together with such other companies and individuals as may choose to subscribe for stock, including, if they desire it, the Cherokee, Choctaw and Creek nations of Indians, west of the Mississippi. That said States be invited to take stock in such corporation to the amount of not less than two millions of dollars each, to be raised and secured in such manner as the Legislature of each such State may direct. That each of said cities and railroad companies be invited to subscribe for stock to such amount as its means will admit. That the existence of said corporation be recognized by each of said States, and such powers be vested in, and such franchises and capacities granted to it by the Legislature of each such State, as may be necessary to effect the object of the organization, and that in its Directory, each such States be equally represented.

6. *Resolved*, That this Convention respectfully recommends that, if necessary, special sessions of the Legislatures of such States be called, for the purpose of taking into consideration this plan; and that a committee of one member from each State represented in this Convention, be appointed to draft a charter of incorporation for such company, and lay the same before the Governors of the said several States, and the chief or General Councils of the Cherokee, Creek and Choctaw nations, requesting each of said Governors to convene the Legislature of his State, in order to consider the same, and taken such other steps in regard to such road as may be necessary and proper, if, in his opinion, it should be expedient to do so; and especially praying the Governor of Virginia to lay said draft of a charter before the Legislature of that State, with his views in regard thereto; and requesting said Councils of the Cherokees, Choctaws and Creeks, to act therein, to recognize such company, grant rights of way through their national lands for any branch or branches of said road that may pass through the same, and enact such other laws as shall secure to the South, so far as may be in their power, the exclusive benefits and advantages of the commerce of the Pacific, and of the wealthy provinces of Mexico intended to be traversed by said road.

7. *Resolved*, That this Convention recommend that power be given to said corporation, by its charter, to negotiate with Mexico for and purchase, if necessary, a right of way through her territory to the Pacific Ocean, or to some point on the Gulf of California; to stipulate with the government that in the event the same is granted no higher rates or charges shall ever be imposed or exacted for passage transportation over said road on citizens of Mexico than on those of the United States; and to agree that the company will maintain military posts along said road, will in all time submit to the jurisdiction and laws of Mexico, and claim no political rights nor attempt to colonize the country.

8. *Resolved*, That in the opinion of this Convention, the Southern States, corporations and people, are entirely able to build said road, and that no time should be lost in doing so; that it is as easy to commence it now as ten or twenty years hence, and it can as easily be completed in ten years as in a century; and that it is the duty of every Southern man, to himself, his children, and his country, to engage earnestly in this great and indispensable measure of security, as well as of wealth, and of political and commercial power to the South.

Sale of the Lands between the Rio Grande and the Pacific.

Mr Bartlett, of the Mexican Boundary Commissioners, in a recently published letter, speaks as follows of the country between the Rio Grande and the Pacific.

Much has been said of the value of the territory which Mexico proposes to cede to the United States, in addition to the abrogation of the 11th article of the Treaty of Guadalupe Hidalgo, and the claims arising under it, for twenty millions of dollars. I have been repeatedly asked what may venture to give an opinion. What is a desert to one may be a paradise to another; and although I would consider it a separate punishment to be compelled to live there. There are it is true, some delightful little spots within it, perfect oases in the midst of vast deserts; but take it as a whole, the district south of the Gila for more than one hundred miles in width, and extending from the Rio Grande to the Pacific, does not contain one half of one per cent. of arable land after leaving the latter river; such as can be made to produce wheat, corn, or other necessities of food, even by the aid of artificial irrigation, could water be commanded.

This is pretty conclusive proof, that if the road over this route is to be built, (as well in our opinion, as over any other,) government must aid the undertaking in a much more substantial manner than by grants of land upon its line.

Statistics of the Railroads of the State of Massachusetts, Showing their Financial Condition on the 30th day of Sept. 1853.

NAMES OF ROADS.	Capital paid in.	Cost.	Length.	Length of Double Track.	Length of its Branches.	Speed of passenger trains adopted, per hour.	Speed of freight trains adopted, per hour.	Earnings.	Expense of working.	Net earnings.	Dividends.	Debt.	Surplus.
Agricultural Branch*,.....	\$32,988												
Amherst and Belchertown,.....	185,736	\$263,743	19.50										
Berkshire,†.....	600,000	600,000	21.20			25	12	\$42,000		\$42,000	\$42,000		
Boston and Lowell,.....	1,830,000	2,044,536	25.77	25.77	1.87	26	12	434,599	\$320,501	114,098	109,800	\$206,190	\$99,742
Boston and Maine,.....	4,076,974	4,111,345	74.26	27.79	8.79	24	11	803,024	384,665	418,358	332,456	150,000	172,803
Boston and N. Y. Central,.....	1,159,228	2,221,068	74.50	.19		24	12	90,315	55,100	35,214		953,370	
Boston and Providence,.....	3,160,000	3,576,041	43.50	15.75	12.00	25	14	508,326	281,687	226,639	205,400	402,326	43,628
Boston and Worcester,.....	4,500,000	4,850,754	44.63	44.63	24.00	25	11½	887,219	473,930	413,289	315,000	560,541	188,831
Cape Cod Branch,.....	421,950	633,906	27.80	27.80	1.04	21½	14	68,942	42,530	26,412	20,000	180,000	42,983
Charles River, and Branch,.....	123,770	253,808	28.00			20		10,987	10,124	863		146,359	893
Cheshire,.....	2,083,825	3,075,195	53.64			25	10	315,299	185,596	129,703	84,808	867,123	9,769
Connecticut River,.....	1,591,110	1,802,244	50.00		2.35	25	10	258,220	156,122	102,098	91,838	256,363	44,210
Danvers,.....	21,280												
Danvers and Georgetown,.....	67,799												
Dorchester and Milton Branch,§	73,340	117,798	3.25			20	12½			7,530		44,458	
Eastern,.....	2,850,000	3,120,391	38.10	16.00	19.91	21	15	620,810	309,935	310,875	200,550	1,921,975	115,800
Essex,.....	298,607	738,425	19.86	2.00	1.36	21	15	47,679	60,461	loss 12,781		461,228	
Fairhaven Branch,.....	166,978		15.07							128		14,021	
Fall River,.....	1,050,000	1,050,000	42.24			22	13	294,183	167,593	126,589	84,000	6,208	87,769
Fitchburg,.....	3,540,000	3,716,870	50.93	50.93	16.85	24½	12½	626,659	412,026	214,633	212,400	191,500	159,836
Fitchburg and Worcester,.....	232,768	319,169	13.90			22	10½	36,205	22,464	13,741	7,428	72,019	26,467
Grand Junc. RR. and Depot Co.†	793,194	1,385,711	6.49	2.89			10	36,053				588,344	
Hampshire and Hampden,.....	151,051		24.95										
Hartford and New Haven,.....			5.87	5.87		30	12					900,287	
Harvard Branch,||.....	20,800	25,701										7,412	
Horn Pond Branch,.....	2,000												
Lexington and W. Camb'dge¶	121,000	232,385	6.63								6,570	121,062	
Lowell and Lawrence,.....	200,000	363,658	12.35			25	12	51,357	28,257	23,099	12,000	163,858	32,778
Marlborough Branch,*.....	16,000		3.88										
Medway Branch,**.....	32,500	36,073	3.60							2,940		6,746	
Nashua and Lowell,.....	600,000	651,214	14.58	14.20		28	14	162,945	101,792	61,153	48,000	24,000	29,427
New Bedford and Taunton,.....	500,000	529,964	20.13		.95	26	16	188,442	141,603	46,839	35,000		30,916
Newburyport,.....	137,260	281,721	14.59			24	24	25,981	23,678	2,302		143,370	
N. Lond., Willim. and Palm,.....	559,064	1,524,329	66.00			30	15	128,715	136,432			1,008,560	
Norwich and Worcester,.....	2,122,200	2,596,488	59.00	1.80	7.00	21	9½	321,046	169,824	113,088	84,418	709,337	67,223
Old Colony,.....	1,964,070	2,293,534	37.25	11.50	7.75	20	12½	374,879	252,063	122,816		294,088	274,863
Peterborough and Shirley,††	211,200	263,576	14.08			24½	12½				7 pr. ct. on cost	25,702	
Pittsfield and North Adams,.....	450,000	443,677	18.65	.70		20		47,332	21,124	26,208			
Providence and Worcester,.....	1,481,800	1,791,999	43.41	5.41		20	12	291,417	170,525	120,891	90,225	300,000	14,076
Prov. Warren and Bristol,.....	15,000												
Salem and Lowell,.....	243,305	362,852	16.88			25	12	55,651	53,748	1,932		124,250	
Essex Branch,.....	126,550	170,402	8.40			20		17,246	15,138				
South Reading Branch,.....	209,532	236,226	8.15		.19	21	15	21,651	22,441	loss 789		26,693	
South Shore,.....	259,685	435,163	11.60					24,973				136,549	
Stockbridge and Pittsfield,.....	448,700	448,700	21.93					31,409		31,409	31,409		2,243
Stoneham Branch,*.....	33,316		6.67										
Stony Brook,††.....	266,900	266,184	13.16			28	12				16,014		
Stoughton Branch,.....	85,400	93,433	4.04			20	20	81,147	24,154	6,993	6,405		3,882
Taunton Branch,.....	250,000	307,136	11.10		.60	25	14	159,738	138,247	21,490	20,000		42,516
Troy and Greenfield,.....	94,025		42.55									20,013	
Vermont and Massachusetts,.....	2,233,959	3,207,813	69.00		8.00	20	12	244,323	231,173	13,144		1,139,615	
Western,.....	5,150,000	9,953,258	155.40	53.14		28	15	1,525,223	778,487	746,736	360,500	5,319,520	188,889
Worcester and Nassau,.....	1,140,900	1,342,593	45.69	.76		23	10	182,398	100,590	81,807	76,039	194,445	17,220
Total.....	48,025,370	61,778,695	1,414.92	307.32	112.66	Av. 23.81	Av. 13.06	8,966,441	5,292,030	3,618,551	2,519,255	17,718,244	1,636,295

*Not in operation.

†No return this year.

‡Run by Housatonic Railroad Company.

§Run by Old Colony Railroad Company.

¶Run by Fitchburg Railroad Company.

||Run by Fitchburg Railroad Company.

**Run by Norfolk Co. Railroad Company.

††Run by Fitchburg Railroad Company.

‡‡Run by Nashua and Lowell Railroad Co.

Lient Whipple's Exploring Party.

We learn from the California papers that the exploring party for the New Mexican Route for the Pacific Railroad, under the charge of Lient. A. W. Whipple, U. S. T. E., arrived at Los Angeles on the 21st ult. This party left Fort Smith, Ark. on the 17th of July last, with a train of wagons and about 28 men, under Lient. J. M. Jones, 7th infantry, and after a careful examination of the country and route northeast of the Rio Grande, reached Albuquerque, N. M., on the 5th of October. They left Albuquerque on the 10th of November, with a train of 13 wagons, 12 carretelas, and four months' provisions. They passed the Sierra Madre near the Pueblo of Zuni, thence over a favorable country to Colorado Chiquito, down

which they marched to a suitable point for striking westward. Passing S. E. of the San Francisco mountains, crossing some of the head streams of the San Francisco river, they reached one of the leading branches of Bill Williams Fork, down which they continued to its junction with the Great Colorado; thence up the Valley of the Colorado to the north fork of Amokhave river. Opposite this point they made a successful crossing of the river, explored across to the junction of the Spanish trail, or Salt Lake City road, on the Amokhave river. Being short of provisions, they pursued this trail, making the Cajon Pass, and arriving in good health at Los Angeles on the 21st. Lients. Jones and Tidball, the latter having joined the party with an additional escort of 25 men on the Little Colorado, from Fort Defiance, went into San Diego via San Bernardino.

Orange and Alexandria Railroad.

The stockholders in the Orange and Alexandria Railroad assembled on Thursday and Friday of last week, in Alexandria, for the purpose of considering the proposition to extend said road to Lynchburg. A report was presented by the President, including two full and able reports from T. C. Atkinson, the chief Engineer of the Company. After a discussion, it was decided by a vote of 6, 927 to 246, to prosecute the extension of the road, upon the credit and resources of the company with such collateral aid as may be obtained from private, county, and corporation subscriptions. The route adopted was the lower or Gordon's Gap route, provided that such arrangements can be made with landholders as shall be satisfactory to the president and directors.—Chicago Democratic Press.

The Industry of the United States.

The notion generally promulgated amongst us of the people of the United States is that they are a filibustering, rollicking race—filling their newspapers with whole columns of boasting falsehood—haunting tavern bars—swallowing continually mint julep and other spirituous compounds—nervously chewing tobacco, and disfiguring every place they frequent with disgusting pittings—sacrificing their best statesmen and even the judges to party predilections—and forming at once a noisy, restless, anarchical, and aggressive community. So we think the Tory and genteel writers of England have loved to paint them, and so they are thought of by a large number of the public. To the British Commissioners appointed to attend the New York Industrial Exhibition, or rather to two of them—Mr. Joseph Whitworth and Mr. George Wallis, who have made special reports—we are indebted for a very different description of the Americans. They are more industrious than we are; they work longer and more continuously; English artisans come away from the States because they find the work too much for them; and American factories are regulated with as much care as the best factories of England. The bulk of the people are sober, steady, methodical, and energetic. Unless we direct all our energies to the work of self-improvement, the Americans will surpass us as much in ingenuity and skill, in intelligence and power, as they are certain to surpass us in numbers. For a people justly proud as we are of our country, and individually great rather from belonging to a great nation than from a personal consciousness of superiority, the possibility of being outdone in abilities while we are sure to be outdone by numbers is a painful contemplation, and it behoves us all to examine the subject, and exert ourselves as patriots and as Englishmen to preserve the national greatness.

For nearly a century we were almost without a formidable rival in trade, or a formidable competitor for maritime superiority. Within a few years, however, the Americans have plucked some laurels from our brow, and now boast a mercantile marine very nearly as numerous, and quite as well appointed and as well managed, as the vast fleet we possess. American clippers carry American trade to all quarters of the world, and successfully compete in our own business with the best of our own shipping having all the advantages of local connection. In fact, their progress ahead of us, the greatest maritime and trading people of the world, has already compelled us to imitate them, and we succeed in competition with them by following their example and borrowing their improvements. But their growing superiority on the ocean, which is so apparent, is only a type, if we read the special reports of Her Majesty's Commissioners correctly, of their growing superiority on the land. It is not in maritime knowledge and in the art of navigation only that they display their skill, but in every species of knowledge and in every art that ministers to the progress of society and the greatness of nations.

We showed last autumn, when noticing the work of the late lamented Mr. Mackay on the growth of cotton in India, that the real source of the inability of the cultivators of cotton there to compete successfully with the cultivators of cotton in the United States, is the different political condition of the bulk of the population of the two countries; the one mainly consisting of free and intelligent men (for that character belongs to those who employ slaves)—the other mainly consisting of men unacquainted with freedom, and mentally as well as physically enslaved. While exertions are making in India to bring the cotton to market on as low terms as that from the States, the planters in the States are making additional improvements, and by their intelligence distancing still more all competition. Mr. Wallis shows us the planters consulting the manufactures as to the cotton most suitable for use and most valuable. They are exerting themselves by careful cultivation and cleaning to adapt their produce to the wants of their customers. Mr. Whitworth describes them

as inventing new cotton gins, the instrument which originally gave the Americans their superiority. Both dwell continually on the universal diffusion of education, the great development of the faculties of the people, and on the general intelligence. We have a few great engineers and mechanics, and a large body of clever workmen; but the Americans seem likely to become a whole nation of such people. Already their rivers swarm with steamboats; their valleys are becoming crowded with factories; their towns, surpassing those of every State of Europe, except Belgium, Holland, and England, are the abodes of all the skill which now distinguishes a town population; and there is scarcely an art in Europe not carried on in America with equal or greater skill than in Europe, though it has been here cultivated and improved through ages. A whole nation of Franklins, Stephensons, and Watts in prospect is something wonderful for other nations to contemplate. In contrast with the comparative inertness and ignorance of the bulk of the people of Europe, whatever may be the superiority of a few well-instructed and gifted persons, the great intelligence of the whole people of America is the circumstance most worthy of public attention made known by the Commissioners.

Mr. Whitworth says, "the development of the vast resources of the United States, instead of being, as in former cases, gradual and protracted through ages, is by the universal application of machinery effected with a rapidity that is altogether unprecedented." "The greatest energy and attention are brought to bear upon the manufacture of machinery." "Combinations to resist its introduction are there unheard of." Such is the intelligence of the workmen, and such their appreciation of mechanical improvements, that "they hail them with satisfaction as releasing them from the drudgery of unskilled labour." The energy and the aptitude of the people to avail themselves of the immense natural resources of their country, appeared to Mr. Whitworth (who is himself a most ingenious and energetic man, and takes a lead at Manchester, one of the most energetic of our towns) to be most extraordinary. To these circumstances, to the general education enabling the people to understand and appreciate the peculiarities of their condition, to the facilities for diffusing knowledge by a universal and perfectly free press, Mr. Whitworth justly attributes the great prosperity of the country. Its natural resources are immense, but so are the natural resources of almost every other country, though as yet apparently only the Americans have known how properly to use the bounties of Nature. Unfettered by prejudices, they have opened their eyes and their ears to the lessons of the magnificent world in which they live, and they have drunk in deep a knowledge of physical powers which will make them, on the aphorism of Bacon, the conquerors of Nature herself.

"The one thing which more than any other," says Mr. Wallis, strikes the visitor to the seats of industrial skill in the United States, is the ingenuity, the indomitable energy and perseverance displayed in overcoming the early difficulties which must have stood in the way of anything like successful progress at the outset. It is not, therefore, a matter of surprise that many skilled artisans have from time to time returned to Europe after an attempt to establish a manufacture, since the embarrassments, arising out almost unaided exertions and an isolated position, were too great to allow them to do justice to themselves." "There are very few Englishmen compared with what I expected to find, or are generally supposed to be engaged in the industrial establishments of the United States. The hours of labour are too long for most of those who are induced to emigrate." It appears, too, that the isolation of many American manufactures—the want of mutual aid to which English workmen are accustomed—stand in the way of their success. The peculiarities in the condition of America standing in the way of manufactures, which the Americans have known how to surmount, "would now make," says Mr. Wal-

lis, "many of the manufactures of Birmingham or Sheffield close their doors, if they had to furnish themselves with all the partially prepared materials for which they depend on those whose business it is to manufacture them." The American system is not as much borrowed from Europe as adapted, "with some knowledge of what is done in Europe, to the circumstances of America." One of their great arts Mr. Whitworth shows us is of native origin, and the parent of many others. "The early settlers," he says, "found in the forests an unlimited supply of wood, which necessity compelled them to employ in every possible way." Wood thus became with them a universal material; and, workpeople being scarce, machinery was introduced as far as possible to supply the want of hands. The character thus given to one branch of manufactures has gradually extended to others. Applied to stone-dressing, for example, one man is enabled to perform as much work as twenty masons by hand. They have saw-mills of great power and great ingenuity. They have large manufactories of doors, sashes, and window-frames, made generally by self-acting machinery. They have portable sawing machines adapted to their wants. They have numerous kinds of wood-planing machines. Though England, in the machinery for making blocks at Portsmouth, has done something in the manufacture of wood, "the improvements have not been extended," Mr. Whitworth says, "to ordinary purposes" as they have in America; though persons in Liverpool, sensible of the superiority of the Americans, are now about to import some of the best American machines to England. American clocks are of world-wide celebrity, though the Americans have no other advantage for making them than their own enterprise and energy and their judicious employment of machinery. Labour and materials are more expensive than in the countries to which they are exported, and many are exported to England, a large portion of which are re-exported to other markets.

The rapid progress and the greatness of the Americans, like their clipper ships, are, in the main, their own and chiefly due to themselves. With a country offering to their energy almost unlimited means of subsistence, and abounding in the raw materials of all the arts, while they possess sharpened faculties, habits of industry, and mental energies far superior, taking them as a whole, to any of the yet half-enslaved, debased, and misled people of the Old World—prolific in themselves, and yet having room amongst them for all the people Europe can spare—they seem certain to become the greatest and most powerful nation that ever existed. England may hope to share in their greatness as hitherto, and may further hope that the two nations may grow together and be more and more closely united as they grow, till they become identified in interests by mutual services, if always destined to remain geographically distinct. To the intelligent Commissioners, who have known how to appreciate the talents and skill of the Americans, their independence and their freedom, the public are deeply indebted for the more just opinions than those formed by hasty tourists which they have brought back to Europe.—*London Economist*.

North Eastern Railroad of South Carolina.

The total cost of the Road when completed, with the necessary equipments for efficient service, is estimated at \$1,600,000. To meet this there is a subscription of \$89,700, leaving a balance of \$710,300 to be provided by further subscription, or the issue of bonds upon the mortgage of the Road. The entire line has been located. Thirty miles from Charleston have been placed under contract, and twenty-nine miles after crossing the Santee. The remainder of the grading, together with all the unlet and unfinished work upon the Road, is to be finished by 1st July, 1855.

The total receipts of the Road up to 31st March last, were \$533,715 82. Expenditures \$331,033 88. Total number of shares subscribed 17,794.

Dayton and Cincinnati Short Line Railroad.

This Company are now employed upon their tunnel, through which their road enters the city of Cincinnati, and have done little or no work upon other portions of their line.

The last estimates of the cost of the road up to the iron, are as follows:—

Engineering and Incidentals.....	\$35 000
Depot grounds, Cincinnati.....	210 000
" " Dayton.....	15 000
" " Eleven intermediate Stations.....	12 000
Right of way.....	108 000
Fencing.....	28 000
Road Bed.....	30 000

TUNNEL AND APPROACHES.

South approach.....	77 909
North ".....	30 230
Shafts, (cost).....	24 250
Body, ".....	643 600

\$775 989

Earth work, masonry, timber, and bridging from tunnel to Dayton..	669 127
---	---------

Total, ready for iron.....\$1,885,996

Including four miles of double track road-bed, and side-track grading for 12 places. The estimates for iron, rolling stock, depot buildings, etc., are not given.

The following statement will show the characteristics of the road:

Length of road.....	53,266 miles
Straight line.....	39,882
Curved ".....	13,384 53,266 "

Total curvature.....	1236°31
Minimum curvature.....	16371 feet.
Maximum ".....	1910 "
Level grade.....	15,940 miles
Ascending grade.....	21,757 "
Descending ".....	75,469 "
Total ascent going north.....	556.50 feet.
" descent ".....	381.50 "
Elevation of Dayton above Cin'ti....	175.00 "

The receipts of the Company, up to the present time, have been \$228,967. Disbursements, \$216,676. Balance on hand, \$12,291. The Company have issued no bonds, with the exception of \$28,000 paid to contractors.

New York City Valuation for 1851.

The following table will show the comparative valuation of the real and personal estate for 1853 and 1853.

REAL ESTATE.

Wards.	1853.	1854.	Per cent.
I..	\$31,918,133	\$40,440,200	23,531 increase
II..	18,844,750	26,751,500	41,424 "
III..	18,702,600	20,993,150	12,247 "
IV..	8,825,320	8,967,070	1,606 "
V..	12,864,350	13,607,500	5,775 "
VI..	9,257,150	9,480,600	2,314 "
VII..	11,963,085	12,271,034	2,575 "
VIII..	14,705,200	15,983,200	8,690 "
IX..	12,519,150	13,350,000	6,716 "
X..	7,791,850	7,971,700	2,308 "
XI..	7,228,300	7,395,800	2,303 "
XII..	5,609,272	5,789,788	56,701 "
XIII..	4,838,700	5,076,700	4,914 "
XIV..	9,194,600	9,654,900	5,006 "
XV..	20,257,600	24,786,500	22,356 "
XVI..	12,858,550	14,035,450	8,115 "
XVII..	14,505,030	15,121,154	4,247 "
XVIII..			
and XXI..	44,720,255	50,661,195	13,208 "
XIX..			
and XII..	16,970,000	21,342,276	25,764 "
XX..	11,066,000	12,344,600	20,591 "

\$294,652,795 \$340,024,317

294,652,795

Increase in
real estate..\$45,371,522 15,398

PERSONAL ESTATE.

Wards.	1853.	1854.	Per cent.
I..	\$49,008,060 35	\$64,789,980 78	32,200 Inc.
II..	4,759,207 19	5,996,078 73	26,239 "
III..	10,504,646 54	11,978,680 55	14,032 "
IV..	1,766,794 80	1,725,872 00	2,315 Dec.
V..	2,669,303 00	2,206,250 00	20,988 "
VI..	1,946,314 12	1,423,394 97	38,018 "
VII..	3,128,790 00	4,115,984 62	31,764 Inc.
VIII..	2,492,615 00	2,423,150 00	1,868 Dec.
IX..	1,961,393 00	2,454,199 38	25,140 Inc.
X..	1,140,800 00	1,228,150 00	7,732 "
XI..	555,551 83	425,764 00	30,281 Dec.
XII..	837,500 00	1,032,000 00	24,432 "
XIII..	624,158 23	721,858 23	1,565 "
XIV..	2,290,553 97	2,545,834 38	11,139 "
XV..	17,621,229 65	18,690,080 68	6,066 "
XVI..	1,899,568 96	3,494,852 84	84,007 "
XVII..	3,056,250 00	3,054,176 00	0,065 Dec.
XVIII..			
and XXI..	11,987,600 00	22,427,100 00	87,060 Inc.
XIX..			
and XXII..	448,000 00	2,188,000 00	388,392 "
XX..	283,400 00	540,100 00	90,706 "

\$119,034,137 94 \$183,461,529 62

119,134,137 94

Increase in per-
sonal estate 34,427,391 68 28,922 Inc.

REAL AND PERSONAL ESTATE.

Wards.	1853.	1854.	Per cent.
I..	\$80,927,193 35	\$105,229,230 78	30,029 In.
II..	23,603,057 19	32,747,576 73	38,740 "
III..	29,207,246 54	32,071,830 55	12,899 "
IV..	10,592,114 80	10,692,942 00	0,951 "
V..	15,535,653 00	15,843,750 00	1,780 "
VI..	11,221,404 12	10,903,994 97	2,911 Dec.
VII..	15,086,875 00	16,387,018 62	8,631 In.
VIII..	17,197,808 00	18,406,350 00	7,027 "
IX..	14,480,543 00	15,804,199 38	7,133 "
X..	8,932,150 00	9,199,350 00	2,997 "
XI..	7,783,851 83	7,822,564 00	0,467 "
XII..	6,446,772 00	9,821,788 00	52,358 "
XIII..	5,462,858 23	5,798,558 23	6,145 "
XIV..	11,485,154 97	12,200,734 84	6,230 "
XV..	37,878,829 65	43,476,560 68	14,751 "
XVI..	14,758,118 69	17,530,302 84	18,746 "
XVII..	17,561,280 00	18,175,325 00	3,495 "
XVIII..			
and XXI..	56,707,855 00	73,088,295 00	28,880 "
XIX..			
and XXII..	17,418,000 00	23,530,296 00	35,092 "
XX..	11,340,400 00	13,884,700 00	22,338 "

\$413,686,832 94 \$493,485,846 64 19,389 In

413,686,932 94

Total increase
in valuation.. \$79,798,913 70

South-Western Tennessee Railway.

From the Annual exhibit of the condition of this company, with the report of W. E. Ferguson, Esq., C. E., we learn that the Company was incorporated in 1852, with a perpetual charter, with a capital of \$3,000,000. Its termini are McMinnville, on the south, and some point on the Kentucky State line, in the direction of Danville, on the north. This company is the recipient, among others, of State aid to the amount of \$10,000 per mile, for laying the iron. It was put under contract to Messrs. Ferguson & Chamberlain, of Cleveland, Ohio, in June, 1853, to be completed and fully equipped as a first class road. The survey of the line was completed November 21, 1853, and the original survey lessened 3 miles.

The cost of the road, completed in running order, will not exceed....\$2,603,107 50

To meet which the company has State Bonds	830,000 00
Individual Stock.....	103,000 00
County Stock.....	100,000 00
Contractors Stock.....	867,732 50-1,900,732 50

Balance..... 703,235 70

To meet which \$1,500,000 of the company's Bonds, bearing not less than 7 per cent., have been authorized, secured by deeds of trust on the road,

stock, &c. These Bonds will not be used until the subscription shall have been increased \$300,000, which, with a sale of \$350,000 of the Bonds, and the local subscription relied upon, will furnish ample means to complete the road.

From the Engineer's report we gather the following elements, viz:

Length of road.....	83.0 mile s
Straight line.....	63.8 "
Curved line.....	19.2 "
Curvature.....	3100 deg.

Alignment as follows:

Gauge.....	5 feet.
Level.....	14.3 miles.
Less than 10 feet.....	3.3 "
Between 10 and 20 feet.....	3.6 "
Between 20 and 30 feet.....	8.0 "
Between 30 and 40 feet.....	6.2 "
Between 40 and 50 feet.....	11.6 "
Between 50 and 60 feet.....	28.4 "
Of 70 feet.....	3.2 "
Of 90 feet.....	4.4 "

Total ascent going north.....1,579 feet.

Total ascent going south.....4,914 "

Sharpest curve 6 degrees, having a radius of 955 feet.

The estimates for 83 miles of road and 3 miles of turn-out, are as follows:

Preparing road for iron.....	\$1,496,147 50
Superstructure.....	810,450 00
Equipment.....	216,000 00
Engineering and Superintending....	80,000 00

\$2,603,197 50

Or \$30,000 per mile.

From these facts it will be seen that the position of this road is very favorable, having but few hindrances, to an early completion, and those will doubtless, be readily surmounted.

American Debt Abroad.

From the London Times, April 7th.

On the 22d ult., it was mentioned that the return moved for in the United States Senate last Spring of the total estimated amount of the various American securities held at home and abroad had been partially completed, and that it was believed about \$5,400,000 out of the entire Federal debt of \$41,650,000, and about \$22,200,000 out of the various State debts, amounting to \$38,450,000, were in European hands. The figures in relation to the several railroad, canal, city and other stocks remained to be ascertained, and these, it was thought, would finally augment the total of American securities held on this side to about \$40,000,000. The full statements have now been furnished, and the estimates under each specific head appear as follows:

	Total.	Foreigners.
United States Stock.....	\$11,650,000	\$5,400,000
State Stocks.....	38,150,000	14,585,000
Town and City Bonds...	15,870,000	3,290,000
County Bonds.....	2,780,000	1,000,000
983 Bank Stocks.....	53,340,000	1,340,000
75 Insurance Stocks....	2,566,000	75,000
244 Railroad Co. Stocks.	61,980,000	1,650,000
244 Railroad Co. Bonds...	34,020,000	8,780,000
16 Canal Co. Stocks....	7,180,000	130,000
16 Canal Co. Bonds.....	4,420,000	395,000
15 Miscellaneous Stocks.	3,475,000	160,000
15 Miscellaneous Bonds.	470,000	60,000

Total.....£235,900,000 £36,865,000

This list brings the total held on this side to £36,865,000 only, instead of £40,000,000; but some circumstances require to be taken into account, which will increase it to a point beyond the latter sum. Thus, in the returns given by the four repudiating States of Mississippi, Michigan, Florida and Arkansas, the amounts held by foreigners are either suppressed or falsified. Mississippi and Arkansas, for instance, give no information. Michigan reports only that portion of her debt which she has not repudiated, and treats the remainder as having no existence; and Florida acknowledges no liability of any kind. Illinois like wise, which, although not a repudiating State, is

a defaulting one, withholds the particulars as to where the sufferers from her course are chiefly to be found. Reckoning these with other omissions, the impression is that, instead of the State Stocks held out of the country being put as above, at £14,585,000, the sum should be at least £22,585,000, even without making full allowance for arrears of interest, &c. The total of all kinds of United States securities abroad may therefore be assumed to be little short of £45,000,000, or about a fifth of the entire total of £235,900,000. Next to the stocks of individual States, the chief things which have found their way to Europe, have been the bonds of railroad companies;—while railroad stocks, which, when bought at market prices, are intrinsically more profitable and safe, inasmuch as the interests of American holders are identified with them, have been comparatively neglected.

Richmond and Danville Railroad.

Vincent Witcher, Esq., has been elected President of the Richmond and Danville Railroad Company, in place of W. P. Tunstall, deceased.

Burlington and Missouri Railroad.

J. W. Brooks, of Detroit, Mich., has been elected President of this company, and Oliver Cook, of Burlington, Iowa, Secretary.

Statistics of Railway Rolling Stock in Great Britain.

It appears from a return that the total number of locomotive engines on railways in the United Kingdom is 3942, being about one locomotive to every two miles of railway; the number of first class carriages 2413, capable of holding 49,226 passengers; the number of second class carriages 3413, capable of holding 124,703 persons; the number of third class carriages 2954, capable of holding 121,807 persons; the number of composite carriages 1114, capable of holding 35,239 persons; and the number of other carriages 1470, capable of holding 4231 person—making together 11,364 carriages, capable of holding 335,206 passengers. The number of horse boxes is 1547, capable of holding 4547 horses; the number of cattle wagons, 7127, capable of holding 76,696 head of cattle. The number of carriage trucks is 1561.

Of the 3942 locomotive engines, 3221 are used on railways in England and Wales, 527 on railways in Scotland, 194 on railways in Ireland. Of the 2413 first class carriages, 1967, capable of holding 40,005 persons, are on railways in England and Wales; 346, capable of holding 6252 persons, on railways in Scotland; and 100, capable of holding 2969 persons, on railways in Ireland. Of the 3413 second class carriages, 2846, capable of holding 104,811 persons, are on railways in England and Wales; 396, capable of holding 10,930 persons, on railways in Scotland; and 171, capable of holding 8962 persons, on railways in Ireland. Of the 2954 third class carriages, 2204, capable of holding 93,235 persons, are on railways in England and Wales; 545, capable of holding 17,743 persons, on railways in Scotland; and 210, capable of holding 10,829 persons, on railways in Ireland. Of the 1114 composite carriages, 822, capable of holding 26,635 persons, are on railways in England and Wales; 210, capable of holding 4846 persons, on railways in Scotland; and 82, capable of holding 3758 persons on railways in Ireland. Of the 1470 other carriages, 1305, capable of holding 2961 persons, are on railways in England and Wales; 101, capable of holding 820 persons, on railways in Scotland; and 64, capable of holding 460 persons, on railways in Ireland. Of the 1547 horse boxes, 1282, capable of holding 3751 horses, are on railways in England and Wales, 162, capable of holding 486 horses, on railways in Scotland; and 103, capable of holding 310 horses, on railways in Ireland. Of the 7127 cattle wagons, 5892, capable of holding 67,319 head of cattle, are on railways in England and Wales; 745, capable of holding 5423 cattle, on railways in Scotland; and 490, capable of holding 3954 cattle, on railways in Ireland. The number of carriage trucks on railways in England and Wales is 1311, in Scotland 165, and in Ireland 85.

On the broad, or 7 feet gauge lines, the working

stock consists of 239 locomotive engines, 197 first class carriages, capable of accommodating 5880 persons; 259 second class carriages, capable of holding 17,150 persons; 71 third class, capable of holding 462 persons, and 44 composite carriages, capable of holding 2029 persons; 168 horse boxes, capable of holding 647 horses; 1492 cattle wagons, capable of holding 11,699 cattle; 230 carriage trucks, and 103 vans.

On the narrow, or 4 feet 8 1/2 inch gauge lines, in England and Wales, the working stock consist of 2982 locomotive engines, 1770 first class carriages, capable of holding 34,125 persons; 2578 second class carriages, capable of holding 87,661 persons; 2133 third class carriages, capable of holding 88,603 persons; 778 composite, capable of holding 24,606 persons; 1202 other carriages, capable of holding 2961 persons; 1114 horse boxes, capable of holding 3104 horses; 4440 cattle wagons, capable of holding 55,620 head of cattle, and 1081 carriage trucks. They are all narrow gauge lines of 4 feet 8 1/2 inches in Scotland; the gauge of railways in Ireland is 5 feet 3 inches. The working stock on these lines is stated above.—*Herald's Journal.*

Probable Influence of an European War upon the Commerce of Great Britain.

We copy from the London times, the following speculations upon the probable financial effect of an European War.

The primary question is, whether the annual expense of the war is likely to exceed the annual gain of the country from the course of trade, and thus to necessitate shipments of bullion to the amount of the deficiency, and a consequent contraction of the circulation. If this result is experienced, the funds must necessarily fall, but in the opposite case, no matter what may be the temporary disasters sustained, nothing can prevent a rise; and the idea that 80, 90, or even 100 is not the price which individuals had previously conjectured as that which would prevail on a European contest, will have no influence in preventing it from being maintained.

Hitherto the principal, if not the only explanation, offered for the existing depression has been, that the public have begun selling, and consequently that it will be severe and permanent; those who give this reason have entirely omitted to show what the public are subsequently to do with their money. If it had been remembered that this money must find its way back to the market, either in the shape of banking deposits or some other form, and thus produce a feeling of great ease, which would soon manifest its effect on the Stock Exchange, they would at once see the groundlessness of the attempt to raise alarm on that score, and would have been brought back to the one predominant consideration, namely, whether there is any cause to anticipate a steady diminution of our stock of gold.

Whatever may be the opinion warranted on that point, it is by keeping it always in view that the instances of vague fear exhibited in October last, and repeated in the present month, can alone be averted; and although the materials for arriving at a conclusion respecting it are not positive, they are enough to lead to a considerable degree of certainty. Supposing, for instance, the war to become not only serious but chronic, and to involve an additional cost of £10,000,000 per annum, the problem to be determined is, how far the drain for that expenditure will be mitigated, and whether, after allowing for everything, the balance will be beyond the surplus usually at our disposal for foreign outlay.

The only way to ascertain this probable surplus is to estimate the yearly investments we have been accustomed to make, not merely in foreign loans and public undertakings, but also in great works at home not immediately of a remunerative character. Advances for foreign purposes, of course, take so much capital direct from the country, and extensive home undertakings operate in a similar manner, by causing the population to be employed in the manufacture of other than ex-

portable articles, while they are consuming imported food and raw material for clothing. Now, there is reason to believe that on an average of several years, the annual totals sent direct to foreign countries in the shape of loans, &c., cannot have been less than fifteen or twenty millions, to say nothing of the series of quiet investments in American securities, which, in a very short space, have reached an aggregate of probably £40,000,000 on European account, England, doubtless, being by far the greatest holder.

At the same time our own public works have extended on a scale never before known, and the increase of our shipping, even during the last year, has been nearly 400,000 tons. Under these circumstances, the question whether ten, twenty or thirty millions can be spared for a war, loses much of its terror. During the struggle no foreign loans of any magnitude are likely to be taken, and even such small ones as may be introduced can only originate in the fact of our money market being the easiest that can be found. All outlays for industrial works in foreign countries will be suspended, and at home only schemes of immediate necessity will be undertaken. Meanwhile our trade will go on, and Australia and California will still pour forth their supplies. Hence our early surplus of profits must still accrue to us, especially under the prevailing economy always induced by troublous times, and, with every extraneous channel of investment cut off, a periodical creation of £10,000,000, consols, if it should be found desirable, in place of increased taxation, would not only be absorbed without difficulty, but would actually be welcomed. Even the money thus raised, moreover, would not be immediately felt as a dead loss to the country, since it would be partly laid out on home labor for military stores, although of course this labor might be more profitably expended in the creation of articles for commercial interchange. It must also be borne in mind that when we speak of £10,000,000 per annum, it is a very large amount even for a severe war.

Mad River and Lake Erie Railroad.

The cost of the construction and equipment of the Mad River and Lake Erie Railroad, according to the annual report, just published, is \$4,424,681. The debt of the Company is \$2,120,000. The earnings of the Road for the year ending Feb. 1, 1854, were;

	Passengers.	Freight.	Incidentals.	Mail and Total.
February	\$10,901 61	\$14,053 77	\$2,390	\$27,345 38
March...	17,523 97	18,642 46	2,435	38,601 43
April...	17,306 66	22,228 60	2,420	41,955 26
May....	17,599 63	43,566 41	7,940	69,106 04
June....	20,996 11	33,422 63	1,790	56,208 74
July....	22,105 08	31,712 78	2,790	56,607 86
August.	26,113 41	44,393 92	2,805	73,312 33
Sept....	32,589 92	60,042 58	2,790	95,422 50
October.	28,787 25	53,471 69	2,790	85,048 94
Nov....	21,660 92	41,878 27	2,790	66,329 19
Dec....	19,491 63	19,123 18	2,790	41,404 81
'54. Jan	17,105 00	15,663 35	2,290	35,258 35

Total \$251,181 19 \$398,399 64 \$36,020 \$636,600 83

The net earnings were \$209,197, after the payment of interest and taxes, or about 9 per cent. The following statement gives the gross income since the road was opened;

Year 1848..	\$269,621 83	Year 1851..	\$393,571 75
1849..	343,734 85	1852..	305,751 71
1850..	434,961 92	1853..	681,074 24

Logansport and Northern Indiana Railroad Company.

The following gentlemen were recently elected Directors of this company:

Wesley Park, and Reuben J. Dawson, of Dekalb county; Adams Y. Hooper, and Wm. H. Swasey, of Whitley; Wm. Thorne, and Abraham Shallenbarger, of Wabash; John H. Constant, of Miami; James W. Dunn, W. S. Brown, S. B. Kendrick and Philip Pollard, of Cass; Hamilton B. Bradshaw, of Brooklyn, N. Y.; and Henry E. Barret, of Troy, N. Y.

Philip Pollard, Esq., was elected President, and

Charles C. Clark, Secretary and Treasurer. L. S. Nash, Esq., was appointed Engineer-in-Chief.

The whole of this line, except 7 miles, is cleared and grubbed, and 20 miles are nearly graded. Means for the completion of the road, ready for the iron, have been provided.

American Railroad Journal.

Saturday, April 29, 1854.

Railway Exhibits--Financial statements. Etc.--Printing.

When an enterprise comes before the public for favors, either as a borrower of money, or seller of bonds, or a solicitor of subscriptions to Capital Stock, it is due alike to itself, (if it be a legitimate enterprise,) and to the public, that it present a well-written and handsomely printed statement of the facts and figures, upon which it bases its claims. It so happens, that these statements are generally written by the officers of the Corporation, who are business men, not accustomed to writing for the press, and unacquainted with those significant marks which are used to indicate to the compositor the meaning of the author. Again, when the proof is sent for correction a similar difficulty occurs from ignorance of the usual marks for the rectification of errors; and the consequence not unfrequently is, a pamphlet full of errors, for which the author himself is at a loss for an explanation; as mortifying to him, as they are frequently detrimental to the interests of the enterprise, whose success he has most at heart.

A clear and forcible statement of the affairs of a railway enterprise, consisting of facts of its history, progress, and prospects, accompanied by concise tabular statements of its resources, expenditures, earnings, and expenses—past, present, and prospective—printed upon good paper and made up in such a style as to reflect the impressions of the author directly upon the mind of the reader, is of essential service. On the other hand, one carelessly got up, or the sense of which is destroyed, or obscured, by printing, is worse than useless—a positive injury. The author should write as he would talk, and the printer should comprehend his subject and transfer the exact meaning to the mind of the reader. Otherwise the effect is much the same as is produced upon the mind by surveying an object through an imperfect glass; the vision is obscured rather than brightened, and we see, instead of a beautiful picture with all its lines distinct and shading perfect, forming one harmonious whole, a conglomerate mass of indefiniteness, without form, meaning, or object, and tending to create distrust or suspicion.

The observance of these difficulties, and their effects, has induced us to add to the Printing Office of this Journal a Book and Job department, with particular reference to the neat and proper execution of all Railroad work. This office is under the supervision of Mr. JOHN H. SCHULTZ, whose connection with the Journal for many years past, has given him an intimate knowledge of the necessities of Railway Companies in these matters. He will give his personal attention to the printing and proof-reading, of all reports, exhibits, circulars, time tables, cards, handbills, &c., which may be entrusted to his charge, and his long experience in this field will, doubtless, prove of much advantage to those of our patrons who are entirely unacquainted with the art of printing.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equip't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	83
Androscoggin and Kennebec...	55	824,863	1,043,540	2,036,140	177,003	80,053	none	80
Kennebec and Portland.....	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth..	51	1,355,500	123,884	1,459,384	208,669	6	6	98
York and Cumberland.....	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	30
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	108
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	37
Northern	82	3,016,634	.....	.....	328,782	163,075	5	52
Manchester and Lawrence....	24	717,543	.....	.....	.....	6	8	83
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	108
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan.....	26	.....	.....	673,500	.....	.....	none	12
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	26
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central.....	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	9
Vermont and Canada.....	47	1,500,000	.....	1,500,000	.....	.....	Leased to the Vt. Cent.	97
Western Vermont.....	51	392,000	700,000	.....	.....	.....	Recently opened.	none
Vermont Valley	24	.....	.....	.....	.....	.....	.....	none
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	90
Boston and Maine.....	83	4,076,974	150,000	4,111,345	803,024	418,358	8	103
Boston and Providence.....	55	3,160,000	402,326	3,579,041	509,326	226,639	6	82
Boston and Worcester.....	69	4,500,000	500,541	4,850,754	887,219	413,289	7	99
Cape Cod branch.....	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River.....	52	1,591,110	286,363	1,802,244	258,220	102,098	4	55
Eastern.....	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	84
Fall River.....	42	1,050,000	6,208	1,050,000	294,183	126,589	8	95
Fitchburg.....	67	3,540,000	191,500	3,716,870	626,659	214,633	6	88
New Bedford and Taunton...	20	600,000	none.	529,964	188,442	66,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	68
Old Colony.....	45	1,964,070	295,038	2,293,534	374,897	122,866	none	96
Taunton Branch.....	11	250,000	none.	307,136	150,738	21,490	8	.....
Vermont and Massachusetts..	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	15
Worcester and Nashua.....	46	1,140,000	194,445	1,342,593	182,398	81,807	5	62
Western.....	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	96
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	69
Providence and Worcester...	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	639,529	294,269	10	122
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill..	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer	66	658,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven...	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	94
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.	55	750,500	650,000	1,380,610	Recently opened.	none	40	.....
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	54
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	none	.....	.....
Buffalo, Corning and N. York.	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line.....	69	879,636	872,000	1,921,270	Recently opened.	.....	130	.....
Canandaigua and Niagara F..	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira.....	47	425,509	582,400	987,627	76,760	33,360	none	.....
Cayuga and Susquehanna.....	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)....	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	72
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	65
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	51
Long Island.....	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central.....	504	23,085,600	10,773,823	33,359,423	.....	.....	.....	106
Ogdensburg (Northern).....	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	19
Oswego and Syracuse.....	35	350,000	206,000	633,593	92,353	46,072	.....	70
Plattsburg and Montreal....	23	174,042	131,000	349,775	Recently opened.	none	.....	.....
Rensselaer and Saratoga.....	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.....	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington....	41	899,800	940,000	1,832,545	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	Recently opened.	.....	33	.....
Troy and Boston.....	39	430,936	700,000	1,043,357	Recently opened.	none	.....	.....
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	94
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,409	1,388,385	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey.....	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central.....	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	20	600,000	.....	750,000	Recently opened.	.....	125	.....
Harrisburgh and Lancaster..	36	880,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading....	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	754
Philad., Wilmington and Balt.	98	5,000,000	2,399,166	8,067,285	868,088	541,769	5	76

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Total cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102 1/2
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	62
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna.. "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7 1/2	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga. "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	.....
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	.....
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	80 1/2
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	93	89
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	117
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102 1/2
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	.....
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111 1/2
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77 1/2
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley.. "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77 1/2
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Terre Haute and Indianapolis "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	130
Michigan Southern and Ind. N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	116 1/2
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	104 1/2
Pacific..... Mo.	38	.....	non	In progress	Recently opened.	.....	.....	.....

We rarely refer to private or business affairs in the columns of the *Journal*, and do so in this instance only to call attention to facts not generally known to our subscribers. Any orders sent to us will be promptly and faithfully executed on the usual terms.

We have also superior facilities for providing companies with handsome lithograph maps, with lines colored on them illustrative of their road and its connections.

Stock and Money Market.

There has been little change in the general tone of the Money Market since our last issue. The last steamers news was regarded as more favorable, and has been followed by a corresponding improvement, though not great, in the Share Market. In bonds, hardly anything is doing. The foreign demand is only nominal. It is believed that as soon as the first effect of the declaration of war by the European Powers shall pass away, orders from abroad for our R. R. securities will be renewed. To adapt themselves to the present state of things, R. R. companies are reducing their expenditures as fast as possible; while many that were about to commence operations have postponed them to a more favorable season.

Notwithstanding the indifference which prevails toward R. R. securities, the earnings of our roads continue to be most satisfactory. Returns from 19 companies, all that have been made to date, show the following result.

Statement of earnings of railroads for March, as far as heard from:

	1854.	1853.
New York and Erie.....	476,316	371,491
Michigan and Southern.....	149,395	87,144
New York and New Haven.....	68,130	60,555
Cleveland and Toledo.....	70,784	44,855
Rock Island and Chicago.....	74,700	New.
Pennsylvania Central.....	486,184	310,955
New York Central.....	416,849	324,511
Ohio and Pennsylvania.....	81,150	36,743
Cleveland and Pittsburgh.....	37,790	31,670
Macon and Western.....	34,856	26,590
Milwaukee and Mississippi.....	20,698	8,143
Hudson River.....	174,240	119,803
Louisville and Frankfort.....	22,504	16,989
Muscogee.....	13,555	3,061
Indianapolis and Cincinnati.....	26,248	New.
Baltimore and Ohio.....	389,168	270,420
Michigan Central.....	113,257	59,460
Galena and Chicago.....	75,065	28,226
Madison and Indianapolis.....	25,131	21,267

Total,..... \$2,755,505 1,821,786
1,821,786

Increase of 51 per cent. 933,718

The cost of our roads is steadily increasing, so that their *net*, do not of course keep pace with their gross, earnings. There is no doubt however, that the increase of *earnings* is much greater than the increase of *cost*. The result is well calculated to strengthen confidence in railroad securities, and is gratifying evidence of a very active *internal* trade.

There have been large shipments of *specie* by two or three of the late steamers, without decreasing materially the amount held on deposit in this city. The receipts of gold from California from Jan. 1, up to the present time, have been about \$16,000,000. Received for the same period for 1853, \$18,400,000. Exported for the same period in 1853, \$3,523,000. For 1854, \$6,259,000.

The following statement showing the valuation,

indebtedness and value of property belonging to the city of Cleveland, Ohio, is copied from the recent message of the Mayor:

Value of real property in 1846.....	\$ 2,619,933
" same in 1853.....	13,746,779
" of personal property in 1851....	2,528,075
" same in 1853.....	4,764,000

Railroad Stock on hand, and its present Market Value.

C., C. & C. R. R., 1,314 shares at \$120 each.....	\$157,980
C., P. & A. R. R., 2,000 shares at \$60 per share.....	120,000
C. & P. R. R., 2,000 shares at \$42 per share.....	84,000
Accumulated profits on C. & P. stock over interest on bonds.....	22,000
Accumulated profits on C. P. & A. stock over interest on bonds.....	18,500

\$402,180

Outstanding bonds for C. C. & C. R. R.....	\$ 66,000
Outstanding bonds for C. P. & A. R. R.....	100,000
Outstanding bonds for C. & P. R. R.....	100,000
Indebtedness for all other purposes.....	54,000
	\$320,000

Excess of assets over liabilities.....\$82,180

The population of the consolidated city of Cleveland and Ohio city is estimated at 45,000.

The following is a statement of the comparative condition of the Banks of this city, for the weeks ending April 15th and 22d:—

	April 22	April 15
Loans.....	\$90,376,840	\$91,636,274
Specie.....	10,526,976	11,044,044
Circulation.....	9,353,854	9,533,998
Deposits.....	59,225,902	60,325,191

American Securities.

The condition of this country as compared with that of European nations in all that relates to the material interest of each, certainly presents a contrast most favorable to our own. Allowing similar views to prevail in all, in everything that concerns the rights of the subject and the state, and similar ideas upon the matters of political and domestic economy, there is yet a wide difference in the ability of European countries and the United States to realize them in practice. In Europe, the *past* has imposed obligations on the present which can be neither avoided nor neglected, with safety to the peace of society. The present is still bound by the will of an ancestor, who passed off the stage a hundred years ago, and with him the motive and the reason of his acts, which now owe their authority to the force of tradition, or prescription, only. The Englishman as keenly feels, in the vast burden which the national debt imposes, the follies and mistakes of previous generations, as of his own. Every age has left its legacy of bad, as well as good, and both must be accepted together.

Whatever may be the *future* of this country, its *present* has no burdens resting upon it, derived from the *past*. But the *future* of this country can be like that of no other because its antecedents are unlike all others. In all matters of *taxation*, our people have no burdens which are not annually imposed by *themselves*. As a nation they have no debt exceeding the trifling sum of \$50,000,000, or about £10,000,000, while it holds more than one-

half of this sum as a surplus in its treasury, with a domain in its public lands, worth vastly more than the whole indebtedness. A few years only will elapse before this debt, which is less than many European nations expend annually upon a single branch of a war establishment will be paid. Most of the States that have contracted public debts are rapidly liquidating them; so that any thing in the shape of a national, or State indebtedness will soon be unknown.

Another contrast in favor of this country, is the freedom of property of all kind, from every burden but specific and direct taxation, annually-imposed for objects specified by those who pay it. The *landed* property of the country goes into the hands of its possessors free of all onerous conditions. The taxes that are imposed are light, because the genius of the country is *pacific* in its character, is devoted rather to the development of its internal resources, than to an interference with the affairs of its neighbors. We are pre-eminently a *practical* people. We interest ourselves but slightly in the affairs of other nations, from our comparatively isolated, and independent position; while at the same time there never was a people that had such stimulus to a life of intense action, and one calling forth the *highest* qualities of our nature. We have still before us a continent teeming with wealth and wanting only labor and capital to make it instrumental to the gratification of every want known to the race. In addition to such motives, the charm of novelty, which surrounds labor in this country, is a great incentive to action. In no country does labor show such a result as in our own. It is not an unusual sight, to see, in the course of ten years, rich and populous States, in possession of all that distinguishes civilization, spring from a complete wilderness. It is natural that our people should feel some self complacency, and point with pride to results which are certainly the highest achievement of human effort and ambition, and that such results should further stimulate the *practical* tendency of our people.

This practical tendency shows itself as much in the administration of *public*, as of *private* affairs. In Europe the possibility of the payment of a *national* debt has no place in the plans of her statesmen. They were not contracted as a part of an ordinary business transaction, and are consequently subject to none of the principles growing out of such. On the other hand, the debts contracted by the several States of this country were all *commercial* obligations, contracted in the ordinary course of business. The objects for which they were contracted being accomplished, the attention of the States are immediately turned toward the liquidation of their liabilities. Such without exception is the policy of *every* State that presumes to pay its debt at all; so that within ten years, in the ordinary course of events, nearly every State will be free from pecuniary obligation. The general government in obedience to a similar sentiment acting upon it, is rapidly buying up its indebtedness, and that too at a premium of 21 per cent, so that our people, as far as they are represented by their *government*, will soon be entirely free from all pecuniary burdens.

We think it can be as easily shown that it is not in the management of the affairs of the government that our people are distinguished above all others. The policy which characterized us, has

rendered labor and capital more productive in this country than any other. This fact is undeniable. It is so, not more from the superior resources of the country, than from the perfect freedom of action allowed, which enables every man to devote himself to the pursuit in which he can be most profitably employed. Where such freedom is allowed, the more dense the population, the more valuable does labor become, from the greater number of wants to be supplied.

It is to this entire freedom of action that the greater part of our success is owing. In the construction of our railroads, for instance, nothing is sacrificed to any object that has not reference to the grand result, which is *profit*. They are intended to be constructed upon such routes, and in such a manner, as shall reduce the cost of transportation to the lowest limit. The convenience of Government, or of any particular interest, is no more consulted than in the construction of an ordinary merchant ship. A purchaser of their securities, therefore, been all the guarantees that are afforded by the action of an unbiassed judgment, intent only on making a *profitable* investment.

Where Government presumes to dictate in the construction of railroads, if it be only to define their *routes*, such interference necessarily taints the securities, as their value may be made to depend upon a fictitious support, which, any day, may be withdrawn. Where the execution of these works are left entirely to private enterprise and private sagacity, no consideration that does not conduce to their *intrinsic* strength, will have any influence.

The public enterprizes of this country, for the reasons stated must rest upon a better basis than those of other countries. They are better conceived, and respect better their legitimate objects. They are more intimately identified with the ordinary operations of business. Their success must equal that of the ordinary enterprize, in which the community in which they are located are enjoyed, the purchaser of them consequently, becomes a *partner* in the general condition of the country. If that be prosperous, he shares in this prosperity. If the reverse be the fact, he becomes a co-sufferer.

As far as the material interests of this country is concerned, its history has been one of eminent success, and in no one thing is this success more the market than in that which has attended the Railroad enterprise.

Railroad Consolidation.

A meeting of the Stockholders of the Cincinnati, Cambridge and Chicago, and the Cincinnati, New Castle and Michigan Railroad Companies, was held at New Castle, Indiana, on the 12th inst., to consider the propriety of consolidating the two Companies. A vote was taken upon the question; and over fourteen thousand votes were cast in favor of consolidation, and none against it.—The consolidation was accordingly perfected, and the consolidated Company assumed the name of the "Cincinnati and Chicago Railroad Co."

The following Board of Directors was then elected: Col. H. Hanna, of Wabash county, Indiana; James Switzer, Grant county, Ind.; Judge W. March and T. J. Sample, Delaware county, Ind.; Judge M. L. Beurdy, Henry county, Ind.; S. Meredith, Wm. Butler, John Crum and Jesse Hiatt, Wayne county, Ind.; George M. Onalt, Indianapolis; Robert M. Moore, Richard M. Corwine and Caleb B. Smith, Cincinnati.

The officers elected were as follow: Caleb B. Smith, President; S. Meredith, Vice President; Thomas Newby, Secretary.

Sale of the Main Line of Public Works of Pennsylvania.

A bill has passed the Legislature of Pennsylvania, authorizing a sale of that portion of the public works belonging to the State, lying between Philadelphia and Pittsburgh. The price named is \$10,000,000.

A great step would undoubtedly be gained both for Philadelphia and for the commerce of the country, by having the public works of the State go into private hands. The difficulty in the way of accomplishing such a result may be to find a purchaser. Such we apprehend will be the fact in the present case.

Increase of Population and Wealth of New York.

We give in another column certain statistics showing the value of taxable property of this city.

The increase of the population of the city undoubtedly keeps pace with the increase of its wealth. In 1840, the population of New York, Brooklyn and Williamsburgh, was 358,000; in 1845, 442,000, and in 1850, 642,000. The annual increase from 1840 to 1845, was 17,000; from 1845 to 1850, 40,000. The same ratio could give an increase of 90,000 annually from 1850 to 1855. While the ratio of increase for the past 5 years may be maintained, the absolute increase will be very much greater. There is no doubt that in 1860, the population of New York, with its suburbs, will be more than double what it was in 1850. The causes that have given it its recent impulse, the Railroads of the country have hardly begun to be felt. It is now the great point for the business of 17,000 miles of Railroad in operation, which number will be more than doubled during the present decade.

Railroad Affairs in Connecticut.

The New Haven Journal gives the following intelligence in reference to Railroad affairs in that quarter;

"The Air Line Road will petition the next Legislature for power to issue bonds. Similar power has been granted to most of our railroads, and was to this by the last Legislature, but Governor Seymour vetoed the resolution, and it was defeated. We understand that the Governor afterwards expressed his regret at the veto, not understanding at the time the true state of the case.

"The Middletown and Hartford Railroad will also petition for an extension of powers, and the New Haven and Hartford road will probably try to get permission to amalgamate with the New York and New Haven—a permission which two Legislatures have successively refused to grant, for fear it would create a powerful corporation with a close charter, which might over-ride all the other roads in the State.

"Persons interested in the Norfolk County road will petition for three charters of roads, starting from Willimantic and connecting with the Norfolk road at some point in Massachusetts or Rhode Island.

"From Norwich there will be a petition for a road from Norwich to Lisbon, connecting with the New London and Willimantic, or Fishkill and Providence roads.

"The Norfolk County road is trying to obtain a connection with the Air Line, near Woonsocket, R. I., and on the other hand, the Air Line is trying to connect with the Charles River road near the same point. Each opposes the other, and between the two the Massachusetts Legislature will probably grant neither.

"The Springfield branch to the Canal road is considered dead, for at least one year.

"The Canal road is doing a steadily increasing business. The plank road connection secures it a considerable travel from Waterbury, and it is sup-

posed it will soon become a source of handsome profit to the New York road, as it is already to its stockholders.

"The Boston connection with the New London road will be perfected in May, when the company will have a right to expect a large through travel. The Canal road extension to Northampton is expected to be completed about the same time."

Boston and Providence Railroad.

The stockholders of the Boston and Providence Railroad held their annual meeting in Boston on the 24th inst. The report of the Directors was read by the President:

The receipts for the year ending Nov.

30, 1853, were.....\$508,326 59
Expenses.....281,687 12

Net receipts.....\$226,639 47

One dividend of 3 per cent. and one of 3½ per cent. have been declared, amounting to.....\$205,400 00

Carried to credit of income account.. 31,239 47

This exhibits an increase of receipts from 1852 of.....78,841 13

And of expenses, including interest on bonds each year, of.....44,828 20

New iron has been laid down during the year for four or five miles, and within the last three years ten or twelve miles of the road have been renewed, the cost of which has been carried in all cases to the ordinary expense account. The following Board of Directors were elected: C. H. Warren, John Barstow, Joseph Grinnell, George R. Russell, William Amory, Samuel T. Dana and George W. Hallett.

St. Louis--Its Growth and Resources.

From the Annual Review, a pamphlet recently published by the Missouri Republican, the following statistical information is gathered:

The population of St. Louis in 1830 was 6,694, in 1840, 16,649, in 1850, 74,439, in 1852, 94,090, and is now estimated to be considerably over 100,000. In 1833 the taxable property was only two million dollars, and the whole tax \$2,745 84. It has now taxable property, at a very low estimate, of over thirty-nine millions, and its revenue for the year, ending in August last, from real and personal property, merchants' and water licenses, and other sources, over one million dollars. In 1833 the tonnage owned there was not 2,000 tons. It is now 37,000; and the total number of steamboat arrivals there the past year, was 3,307, or 835,397 tons, the wharfage fees on which were over \$60,000.

The direct foreign importations, which were nothing a few years since, were \$917,000 the past year—and the course of trade, which in 1833 showed a movement of produce and goods valued at five millions, now brings the materials of a commerce estimated at one hundred millions; the value of the flour, tobacco, lead, hemp and provisions alone, bring near twelve and a half millions, and of the sugar, coffee and molasses, received there for the consumption of the country, over six million dollars. The exchange furnished by the banks and bankers to merchants and others as remittances the past year, amounted to over thirty-eight millions. The city debt is near three millions, issued mostly for public improvements, water works, sewers, &c., which are mostly charged, in some shape, with its liquidation. The property owned by the city is estimated at two and a half millions, and the school lands within the city limits, at half a million. In the public schools are 4,000 children, at an expense of \$42,000.

The city has 53 miles of paved streets; 35 miles water pipes; 14 miles large public sewers; 3¼ miles of gas pipes. During the past year the merchants have erected a spacious edifice for the use of the Mercantile Library Association, at a cost of \$120,000. But a few years since, there were no manufactures of account in St. Louis—now the value of our manufactured articles is estimat-

ed at nearly ten millions. The Assistant Treasurer of the United States has a deposit of over two millions in specie.

The county of St. Louis, which includes the city of St. Louis, has a population now estimated at 135,000. Assessed value of real estate, over 54 millions; revenue, \$239,000; debt, little over one million, issued mostly for macadamized roads, the income from which, it is expected, will provide the interest, independent of which the county revenue is more than sufficient for all expenses, and interest on its bonds, and leaves a large sum to devote to country improvements.

Fitchburgh Railroad.

The following statement shows the operations of this road for a series of years:—

The cost of the road January 1, 1846, was \$1,416,861. January 1, 1851, \$3,716,870. Increase, \$2,300,009.

The gross earnings in 1845, were \$203,996. In 1846, \$286,645. In 1847, \$390,736. In 1848, \$486,265. In 1849, \$493,060. In 1850, \$551,607. In 1851, (eleven months,) \$516,012. In 1852, \$574,574. In 1854, \$656,659.

The running expenses in 1845 were \$78,333. In 1846, \$117,447. In 1847, \$161,433. In 1848, \$286,046. In 1849, \$255,160. In 1850, \$257,083, (including \$6109 paid for interest.) In 1851, \$310,376, (interest, \$5268.) In 1852, \$341,787, (interest, 6199.) In 1853, \$411,026, (interest, \$9911.)

It will be seen that while the expenses in 1845 were only about 38 per cent. of the gross receipts, in 1853, they were nearly 66 per cent.

The price of the Company's shares for the above period have ranged as follows:

Years	Paid	Years	Paid
1845	131	1850	109
1846	123	1851	111
1847	117	1852	103
1848	109	1853	94
1849	106	1854	87

The Fitchburgh Railroad was for many years, regarded as the most successful experiment of the kind ever attempted in New England. The route of the road is favorable to cheap construction. The business appears to be ample for the support of a first class road. An analysis of the causes that have reduced the profits of the Company, and the price of the stocks, some 50 per cent., would be very interesting and very instructive. Has the steady depreciation in the net earnings and market value of the Massachusetts road, which have been going on for several years past, been the result of an inherent weakness, or bad management? Will not some person familiar with their history attempt to answer this question?

Lyons (Iowa) Central Railroad.

An election of Directors for the Lyons (Iowa) Central Railroad was held at Lyons on the 14th February, and resulted as follows:

Thomas T. Davis, Syracuse, N.Y., President.
Thomas A. Walker, For Des Moines, Iowa.
James H. Gower, Iowa City, "
John Gulberston, Tipton, "
Wm. G. Haun, Lyons, "
Derrick Adams, "
H. P. Adams, New York,
David McCartney, "
S. M. Allen, Boston.
Abel Chandler, New York.
Hiram A. Tucker, Chicago.
Thomas Dyer, "
Paul B. Ring, "

SAM'L McCoy, Secretary.

We learn from those in Chicago who are interested in this road, that it is making good progress towards completion. By the first of October next it is to be completed fifty miles west of the Mississippi river. The Galena Air-Line is to be finished to Fulton City the first of August next, making the second point at which Chicago railroads will

tap the Mississippi. Our readers already know that the Lyons Iowa Central is an extension of the Galena Air-Line, so that by the first of October we shall be in direct railroad communication with Tipton fifty miles towards the centre of the magnificent State of Iowa.

Mississippi and Atlantic Railroad.

The following is the opinion of the Supreme Court of Illinois, in reference to the validity of the Charter of the above company.

The people, &c., ex. rel. Eldridge S. Janney vs. the Mississippi and Atlantic Railroad Company; appeal from Clark. Opinion of the Court, by TREAT, Chief Justice.

It becomes necessary to determine whether the defendant had authority to construct the road in question, by virtue of the provisions of the "act to provide for a general system of Railroad incorporations." Even if it possessed no such authority under that law, ample power has been given it by the legislation. The "act recognizing and authorizing the construction of the Mississippi and Atlantic Railroad," approved the 23d of February, 1854, not only declares that the defendant "to be a valid and subsisting corporation," but expressly invests it with power to construct the road. This act removes all difficulty in the case.

The right of the above Company to build its road is at length established beyond cavil.

We learn that the work of construction will be commenced about the 1st of May, and prosecuted with an energy that will secure its early completion.

If the Company had not the right originally to construct the road, the Legislature has expressly conferred it. If there were defects in its organization, they are clearly cured by this act. If this Company had forfeited its franchises, the State has waived the forfeiture. This Court has now no power to declare a forfeiture for any cause existing prior to the passage of this act, as the State alone may insist upon or waive a forfeiture. It is manifestly the duty of the Court to affirm the judgment entered below, and thus leave the Company to prosecute the enterprise to completion. The judgment must be affirmed.

Chicago and Milwaukee Railway.

The Chicago Free Press states that the contractors have broken ground on this road north of that city, and were preparing to commence efficient operations along the whole line as fast as possible. The ties and timber for the whole road have been contracted for and are now being delivered. All the arrangements of the company are made with reference to completing the road before the close of navigation, and they have the means and the energy to accomplish all they have undertaken. The same paper states that an efficient force has been put upon the whole line and that it will be pushed forward as fast as men and money can build it. The original contractors for the whole line, Messrs. Stone & Witt, have sub-let the first twenty-two miles north of the city to Messrs. Kearney, Hirsch and Lynch, and the balance of the road to the State line, twenty three miles, to Messrs. Camp & Gibbons, who are to take hold of the work immediately.

EDGEFIELD AND KENTUCKY RAILROAD.—The following gentlemen were, on Friday last, elected Directors of the Edgefield and Kentucky Railroad Company for the ensuing year, viz: Sam'l Watson, W. B. A. Ramsey, S. R. Anderson, John Shelby, A. W. Johnson, Washington Barrow and P. W. Maxey.

At a meeting of the Directors, Col. Ramsey having declined a re-election, Sam'l Watson, Esq., was elected President of the Board, and General Washington Barrow Secretary and Treasurer.

Mr. Watson, (now and for many years past a citizen of Robertson county,) formerly resided in this city, where he has ever maintained a very high position as a gentleman of character and business capacity; and is exceedingly well qualified, by his general intelligence and practical busi-

ness tact and energy, for the important and responsible duties of President.

The prospects of the road, we understand, are regarded as flattering by its friends.—*Nashville Evening Whig.*

Illinois Central Railway.

At the annual meeting of the shareholders of this company, held on the 3d Wednesday of March, 1854, the following gentlemen were elected to serve as officers:

William P. Burrall, President.

David A. Neal, Vice President; Mathias B. Edgar, Treasurer; John F. Bunce, Secretary.

Solicitors—W. H. Bissell, of Belleville, Illinois; Mason Brayman, of Springfield, Illinois.

Engineer in Chief—Roswell B. Mason, of Chicago, Illinois.

Directors—His Excellency Joel A. Matteson, Governor of the State of Illinois, *ex officio*. Joseph W. Alsop, New York; Jonathan Sturges, New York; Thomas W. Ludlow, New York, until March, 1855; George Griswold, New York; Gouverneur Morris, of Morrisania, N. Y.; David A. Neal, Boston, until March, 1855; John F. A. Sanford, New York; Leroy M. Wiley, New York; Franklin Haven, Boston, until March, 1857; Robert Schuyler, New York; Morris Ketchum, New York; W. P. Burrall, New York, until March, 1858.

Springfield, Mt. Vernon and Pittsburgh Railroad.

The late report of this Company furnishes the following statement in reference to this road:

Length.....	112 miles.
Completed.....	60 miles.
Capital Stock of the Company.....	\$2,000,000
Subscriptions.....	1,504,450
Convertible Bonds issued.....	500,000
Convertible Bonds authorized, but not yet issued.....	700,000

The Eastern terminus is Lakeville, on the Ohio and Pennsylvania road, six miles east of Loudonville; western terminus at Springfield; completed from Springfield to Delaware on the 29th ult., and laid with heavy T rail. Between Delaware and Lakeville, the line is under contract. Contracts have been made with the Little Miami and the Ohio and Pennsylvania roads, by which the former subscribes \$200,000, and the latter \$100,000, to the stock of this company. The latter subscription will probably be doubled. By agreement this road is run by the Little Miami Railroad Company.

Peoria and Hannibal Railroad.

This road has been organized by the choice of the following persons as directors, viz:

Myron Phelps, of Lewiston; W. K. Johnston, of Vermont; L. D. Erwin, of Rushville; J. F. Hawkins, of Hannibal, and A. D. Reed, of Farmington.

The board subsequently elected Myron Phelps, President; L. D. Erwin, Vice President; George Phelps, of Lewiston, Treasurer; Thomas Hanna, of Vermont, Secretary; and Lewis W. Ross, of Lewiston, Attorney for the Company.

Subscriptions to the stock of the Company, to amount of \$142,600 have been obtained in the following places, viz:

Lewistown.....	43,300
Peoria.....	25,000
Rushville.....	21,700
Vermont.....	22,300
Hannibal.....	28,300
Farmington.....	2,000
	\$142,600

Cleveland and St. Louis Straight Line Railroad.

At the annual election of the stockholders of this Company, held at Lebanon, Indiana, on the 12th inst., the following Board was elected for the ensuing year, viz:

Directors.—Erastus Hopkins, Massachusetts;

Jos. A. Wright, Indianapolis; W. H. Harding, W. G. Coffin, Park county; Jesse Fordice, Putnam county; John Milligan, Montgomery county; Geo. W. Bateham, Jay county; J. W. Dodd, Grant county.

Officers.—Erastus Hopkins, President; W. H. Harding, Vice President and Secretary; O. Bowen, Treasurer.

New York Locomotive Works.

These Works bid fair to start with a reputation second to no other, for the character and efficiency of their locomotive engines. The first and only order which this new concern has yet filled, was the "Superior," of which we gave the readers of the Journal a beautiful lithograph in the number of March 4th. As stated at that time, the "Superior" was constructed for the Hudson River Railroad Company, and it must be gratifying to Messrs. BREESE & KNEELAND, her builders, to know that so far, she has proved herself "superior," to all the rest of the stock upon the road in speed and efficient working.

Famous as New York has long been for her manufacture of superior marine engines, we believe she has never before had the honor of constructing locomotive engines, as a separate and distinct branch the business. Messrs. BREESE & KNEELAND, however, intend to confine the "New York Locomotive Works" exclusively to this species of machinery, and we know of no good reason why they should not be as successful in this field, as other numerous machine works in the City have hitherto been in the manufacture of engines and machinery for Steamers. In this latter branch the New York Works are now here surpassed, either in capacity, efficiency or style and beauty of finish; so it is with the locomotive "Superior." Her style of finish is rarely excelled in beauty; while, we learn from engine men of large experience and acute observation, who have witnessed her operations on the Hudson River road, that her performances are greatly in advance of what was expected upon the first trials of a new engine, and considerable improvement may yet be looked for in her speed and efficiency when she becomes perfectly smooth.

North Missouri and Iowa Extension Railroad.

This company was organized on the 15th ult., at Ottumwa, Iowa, by the election of the following gentlemen as a Board of Directors, viz: George Gillaspay, C. C. Warden, Joseph Hayne, J. W. Heydrick, E. Washburn, J. W. Ellis, H. W. Briggs, H. H. Trimble, and Joseph J. Earheart.

The object of the company is to construct a road from the termination of the North Missouri road, at the north line of Schuyler county in Missouri, to Ottumwa, Wapello county, Iowa, via Bloomfield, in Davis county. The office of the company will be located at Bloomington.

Belleville and Murphysboro' Railroad.

This road is to run from the city of Belleville, through Sparta, in Randolph county, and Murphysboro', in Jackson county, to a point on the Illinois Central Railroad, about 40 miles above Cairo.—The entire length of the road is about seventy-four miles. A preliminary survey of the route has been made, which proves that the line is of an easy grade.

The following are the names of the present officers of the road: L. P. Sanger, President; H. L. Stewart, W. Truesdale, John A. Logan, John A. Wilson, Wm. Roseborough, A. J. Kuykendall, S. B. Chandler, W. C. Kinney, W. W. Roman, J. W. Hughes, H. D. Bacon, John Cavender and Alexander Kaiser, Directors.

Oswego and Syracuse Railroad.

The total cost of this road on the 1st of Oct. last was \$633,592 87, as follows:

Stock.....	\$350,000 00
Bonds.....	206,000 00
Earnings paid to contractors.....	77,597 82
	\$633,597 82

The passenger receipts	
For March 1854 were.....	\$4,759 78
" " 1853 "	8,544 76

Increase.....	\$1,215 02
For the three months of the present year	
the passenger receipts have been.....	\$12,305 00
Same time in 1853.....	9,517 00

Increase in 1854.....\$2,788 00

This road has been in operation five years, and there has been paid to the stockholders three dividends, amounting, in the aggregate to 11 per cent which, with the 22 per cent. as above stated, is 33 per cent., or a little over 6½ per cent. net earnings per annum. And the cost of the 35 miles of road is a trifle less than \$18,000 per mile. The Directors have resolved to extend a branch track to the harbor in the City of Oswego; and there has been expended, previous to the present date, for the right of way, grading, iron and materials for the superstructure, \$25,000; and a like sum will be required to complete the branch track and purchase ground for the depot building, and should there be no unforeseen difficulty, this track may be completed by the 1st day of August next.

Sunbury and Erie and Lake Railroad.

The President of the Sunbury and Erie Railroad, the Hon. James Cooper, has addressed a memorial to the Legislature of Pennsylvania, praying that the company of which he is President may be vested with the Franklin Canal Company's road, the charter of which has recently been declared perpetual. The reasons urged in favor of the petition are as follows:

The ownership of the line of road leading from Erie to the Ohio State line, will in a great measure control the destination of the trade and travel passing over it by means that are perfectly familiar to every one acquainted with the practical operations of railroading. If the same therefore is owned by parties foreign or hostile to the interests of our State, almost the whole of the trade and travel coming from the West, may receive a direction towards the New York roads, and thus deprive the Sunbury and Erie railroad, and the city of Philadelphia, of a large portion of the advantages expected from the construction of this long and expensive line of road.

It is therefore deemed of the utmost importance that this link in the line of travel between the east and west, being wholly within the State, should be under the influence and control of Pennsylvania interests and Pennsylvania capital, and thus be prevented from ever becoming injurious to the Commonwealth under the protection of whose laws it must exist.

The undersigned therefore, in behalf of the Sunbury and Erie railroad company, respectfully pray your honorable bodis to pass an act authorizing the said company to extend their road from the western terminus of the same, at the harbor of Erie, to the line of the State of Ohio, with power to take possession of, hold, use and enjoy, the road now in operation between the said points, lately declared forfeited to the Commonwealth.

For these privileges they propose to pay Commonwealth such bonus as may be deemed just and equitable, no less than any sum now offered in any of the bills pending before the Legislature by foreign companies, or others, for this right of way, and to make such compensation to the parties interested in the late Franklin Canal Company, as the Legislature, in its wisdom, may deem right and proper.

Operations of the Post Office Department.

Among the remarkable changes in the Post Office system of the country is the largely increased transportation of the mails by railroads. Instead of 4,327,400 miles as in the fiscal year 1847-8, the transportation of mails by railroad last year was no less than 12,986,705 miles. The changes are observable mostly in New York, Ohio and Michigan. The former having increased from 735,076 miles in 1847-8 to 3,009,958 miles in the year 1852-3, and in Michigan from 149,760 miles to 602,368 in the same period; and in Ohio from 69,928 miles to 1,225,992 miles. In order to show the changes within the short period, 1848-1854, (five years, we furnish a recapitulation of the railroad service in each State in both years, and cost in 1852, also the mail routes by steamboat in 1852-3:

STATES.	Steamboat Mail routes Miles.	Total miles 1847-48.	Total miles 1852-53.	Total cost 1852-53.
Maine.....		70,824	223,704	\$18,357
N. Hampshire	60	44,768	280,176	18,418
Vermont.....	65	..	393,588	42,884
Massachusetts	65	906,284	1,289,808	102,205
Rhode Island	..	30,264	86,112	8,612
Connecticut..	..	230,444	580,029	48,586
New York....	268	735,076	3,009,958	303,209
New Jersey..	..	208,728	361,608	55,367
Pennsylvania.	..	356,720	907,946	108,196
Maryland....	..	391,768	725,504	156,495
Ohio.....	247	96,928	1,225,992	213,203
Virginia.....	1,268	118,248	612,490	85,007
N. Carolina..	311	179,816	299,208	59,475
S. Carolina..	990	150,696	510,328	61,812
Georgia.....	1,958	404,196	923,634	134,075
Florida.....	1,630	..	..	..
Michigan....	1,219	149,760	602,368	76,341
Indiana.....	91	53,664	22,768	23,211
Illinois.....	100	..	210,552	31,349
Kentucky....	2,240	..	136,864	8,840
Tennessee....	489	..	139,360	12,800
Alabama.....	229	70,512	160,160	26,487
Mississippi..	484	28,704	43,316	5,950
Louisiana....	768	..	11,232	450
Wisconsin....	50	..	..	..
Missouri.....	1,456	..	..	..
Arkansas....	741	..	..	..
Texas.....	1,170	..	..	..
California....	219	..	..	..
Oregon.....	276	..	..	..
Total.....	16,329	4,327,400	12,986,705	1,601,329

The Mississippi and Atlantic Railroad.

At a meeting of the stockholders of the Mississippi and Atlantic Railroad, at Vandalia, on the 25th ult., the following gentlemen were elected Directors, viz: Messrs. Winslow, Palmer, McMartin, Sandford, and Lanier, of New York; Brough of Indiana; Archer, Young, Starkweather, Washford, McCurdy, Walter and Allen, of Illinois.

Officers—John Brough, President; T. R. Young, Vice President; W. S. Waite, Treasurer; Edward King Secretary.

**OGDEN & DELAFIELD'S,
Late OGDEN & MARTIN.
Rosendale Cement.**

WE are prepared to enter into arrangements for supplying our cement for public works or other purposes. We warrant the cement equal in every respect to any manufactured in this country. It attains a great degree of hardness, sets immediately under water, and is a superior article for masonry coming in contact with water, or requiring great strength.

For sale in tight barrels, well papered, on application at their office, by
OGDEN & DELAFIELD, 104 Wall st.
The above cement is used in most of the fortifications building by government.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass.

Chilson, Richardson & Co.,

Air Warming and Ventilating Warehouses,
NO. 374 BROADWAY, NEW YORK, AND NOS.
101 AND 103 BLACKSTONE-ST., BOSTON.

MANUFACTURERS and dealers, wholesale and retail, of CHILSON'S World's Fair Prize Medal FURNACES, which, after having been subjected for the past five years to the most severe practical tests, are now most favorably known and extensively used throughout the United States and Canada; particularly approved for the quality of the air obtained, special provision being made for the supply of a large amount of pure warm air, entirely free from the effect of contact with red hot iron. N. A. BOYNTON'S VENTILATING HEATER; an entirely new article, combining strength and durability, simplicity of construction, and economy in the use of fuel, with perfect efficiency in operation. Is entirely of cast iron, and so constructed as to prevent the escape of gasses and smoke. Four sizes adapted for brick work; five sizes of portable. BOYNTON'S VENTILATING WOOD FURNACE; a new and complete ventilating furnace, expressly designed for burning wood, adapted to all classes of public and private buildings, possessing peculiarities worthy the examination of those who require a first class wood furnace. EMERSON'S PATENT VENTILATORS of all sizes, and ventilating apparatus in every variety.

A complete assortment of Iron, Bronzed, Plated and Enamelled Registers, including Three Sizes of a New and Improved Pedestal Register; together with all sizes of the METROPOLITAN COOKING RANGE, A New and Superior Range, embracing all the modern improvements, equally fitted for the use of Anthracite, Bituminous Coal, Coke or Wood. Agents in New York for the sale of the Peurhyn and Mirror Marble Mantels.

Referenced to parties having our apparatus in use in all parts of the country, with explicit directions for setting the furnaces, and all information necessary for properly warming and ventilating public and private buildings, may be gratuitously obtained by application at either of our Warehouses.

17,11

To Contractors.

PHILADELPHIA, WILMINGTON AND BALTIMORE RAILROAD OFFICE—PHILADELPHIA, April 21st, 1854.—PROPOSALS will be received at this office until May 25th, 1854, for driving the piles, protecting the foundations, and for the Masonry above and under water, of the proposed Bridge across the Susquehanna River at Havre-de-Grace, Maryland.

Also, for the Grading and Masonry of the new location of the Road adjoining the Bridge, and of the Port Deposit Branch Railroad.

Plans, profiles and specifications may be seen at the Engineer's Office, in Havre-de-Grace.

S. M. FELTON,

17,4t

Pres. P. W. and B. R. R.

Railroad Iron For Sale.

ABOUT 800 tons Rails of most approved Welsh patterns, for sale by
CLARK & JESUP,
35 Exchange Place, New York.

Back Numbers of the Journal.

Those who wish back numbers of the JOURNAL for binding are requested to order them at once, as we shall be able to supply them but a few weeks longer.

We can furnish BOUND VOLUMES for any or all years complete since 1831—price \$5—per year.

Our RAILWAY MAP in sheets will be sent by mail to any address on the receipt of \$1.00—price on rollers \$2.00.

We have a few copies of Mr. JOHNSON'S valuable work on the Northern route to the Pacific—price by mail \$1—with maps.

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—special red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

Ogdensburg, N. Y., April, 1853.

G. PARISH.
15,3m***Cast Iron Chilled Slip Tires for Engine Driving Wheels.**

THE undersigned, principal Agent for the above improvement, offers it, with the right of use, to Railroad Companies and others. The cost of these Tires is less than one-third that of wrought iron, the cost of renewing one-quarter; and the adhesion, strength, and durability equally as great, as will be proved to the satisfaction of any party. Over two hundred locomotives of the heaviest class, (25 to 30 tons), upon the Baltimore and Ohio Road, are shod with cast iron, with an acknowledged saving over wrought iron equal to \$50,000 per annum. Address
15,1f ZERAH COLBURN, Paterson, N. J.

Chambers' Wrought Iron Car Wheels and Axles.

THE advantages of these wheels, in connection with their comparative cheapness, are their strength, lightness, and durability, being wholly of wrought iron, and the set of four wheels and two axles weighing only about one ton. They are now used on the London and Northwestern and other principal lines of English Railways, carrying greater weights than other wheels, say 12 to 15 tons, and in no instance has one given way. Samples, testimonials, &c. may be seen on application to the manufacturer's agents,

NAYLOR & CO.,
99 & 101 John street
151f

New York, 12th April, 1854.

Notice to Contractors.

Office of the Milwaukee and Horicon R. R. Co.,
Milwaukee, Wis., March 15th, 1854.

PROPOSALS will be received at this office till the first day of May next for the construction of the second division of the Milwaukee and Horicon Railroad, from Horicon to Berlin a distance of forty-two miles or sections thereof.

Maps, profiles and specifications will be ready for the examination of bidders on and after the tenth day of April next.

JOHN B. SMITH,
Pres't M. & H. R. R. Co.**Railroad Car Works.**

THE undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hoard Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.
Maysville, Ky., Sept. 29, 1853.**Railroad Iron.**

1,300 TONS superior quality Yorkshire rails 56 pounds T pattern can be immediately delivered at New York, Savannah, or New Orleans.
For sale by

NAYLOR & CO.

New York, April 1st, 1854.

HEAVY FORGINGS.

(ALGER'S FORGE.)

ALGER & REED, Proprietors,

MANUFACTURERS OF

STEAM BOAT WORK,

Shafting, Cranks, Cross Heads, Beam Straps, Connecting Rods, Piston Rods, Crank Pins, &c.

RAILROAD WORK,

Cranks, Truck and Car Axles, Connecting Rods, and Frames.

SHIP WORK.

Anchors, Knees, Trusses, Davits, Toggles, &c., &c.

Also—Sugar Mill Shafts, Shapes, and all kinds of Forged Work.

CYRUS ALGER, Jr.,
EDWARD REED,

BOSTON.

\$1,700,000**LOAN OF THE MORTGAGE BONDS OF THE NEW YORK AND HARLEM RAILROAD COMPANY.**

This Company will receive proposals for one million seven hundred thousand dollars of their First Mortgage Bonds, issued in sums of one thousand dollars each, payable at the office of the Company, in the City of New York, on the first day of May, 1873, with coupons attached for the payment of interest at the same place semi-annually, on the 1st of May and 1st of November, at the rate of seven per cent. per annum.

These Bonds are secured by a First and only Mortgage, to Thomas W. Ludlow and R. M. Blatchford, Trustees, on the road and its appurtenances, made under special authority of an Act of the Legislature and vote of the Stockholders.

The whole amount of Bonds which can be issued under the Mortgage is \$3,000,000, and will be the first and only lien upon the road, and will constitute the sole debt of the Company. The Company reserve \$1,300,000 of this Mortgage for the exchange of all the outstanding plain Bonds of the Company now in existence, and propose to dispose of the residue, One Million Seven Hundred Thousand Dollars, for the purpose of discharging all their floating debt, and of payment of the expenditure necessary for the full completion of the improvements now in progress upon the road.

The capital of the company paid in is \$1,500,000 of Preferred Stock and \$3,600,000 of Common Stock, upon which regular dividends have been earned and paid for the last five years of Eight (8) per cent. per annum on the former and Four (4) per cent. on the latter.

The receipts of 1853 amounted to 964,467, being an increase of twenty-six (26) per cent over 1852, and there is no doubt a still larger business will be done the present year.

The public have therefore now offered them a home security of the most reliable character.

The Acceptances of the Company will be received in payment for the Bonds.

Twenty (20) per cent. is required to be paid on acceptance of bids, and Twenty (20) per cent. every thirty days thereafter, for which Bonds will be given; Ten (10) per cent. however of the first instalment being reserved by the Company until completion of the contract; interest to be adjusted from the 1st of May.

Parties have the privilege of making payment in full and receiving their Bonds.

Sealed Proposals will be received at the office of BLATCHFORD & RAINSFORD, No. 58 Wall street, on or before the 10th day of May next, at 3 o'clock P. M.

LOCOMOTIVE ENGINES.A. & W. Denmead & Son,
BALTIMORE, MD.

HAVING THEIR IRON FOUNDRY & MACHINE SHOP in complete operation, are prepared to execute, faithfully and promptly, orders for

Locomotive or Stationary Steam Engines,
Woolen, Cotton, Flour, Rice, Sugar, Grist or Saw Mills,
Machinery for cutting all kinds of Gearing,
Hydraulic, Tobacco, and other Presses,
Car and Locomotive patent Ring-Wheels, warranted,
Bridge and Mill Castings, of every description,
Gas and Water Pipes, all sizes, warranted,
Railroad Wheels, with best flanged axle, furnished and fit up for use, complete.

Estimates for Work, in any part of the United States, furnished at short notice. ap.14-15

Kropp's Best Cast Steel

SUITABLE FOR

MINT AND PLANTERS' ROLLERS.

A LEO of large size (72 by 18 inches diameter) for rolling Iron, Copper or Brass.

PISTONS of Steam Engines and Shafts for steamboats, not exceeding six tons weight in one piece.

Also the celebrated

CAST STEEL AXLES AND TIRE

made from a solid bar without welding. Agents

THOMAS PROSSER & SON,
28 Platt street, New York.

161f

Railroad Iron.

470 TONS 47 lbs. per yard of best quality now in store at New Orleans. For sale by

1m16

VOSE PERKINS & CO
South-William street.**Notice to Contractors.**

Proposals will be received for all the heavy work on the Blue Ridge Rail Road, South Carolina; Blue Ridge Rail Road, Georgia; Tennessee River Rail Road, North Carolina; Knoxville and Charleston Rail Road Tennessee. The above lines of rail-way are consolidated and under the management of one Company, Extending from Anderson South Carolina, via Clayton, Georgia, Franklin North Carolina, to Knoxville Tennessee; a distance of 194 miles. That part of the road from Anderson South Carolina, to the Turniptop Mountain, a distance of 40 miles is principally earth excavation, of about equal quantities of cut and fill, with several bridges. From the Turniptop Mountain to the Rabun Gap, a distance of 24 miles, the work is very heavy, there being on the line one tunnel of 5800 feet, one of 1400 feet, and one of 400 feet in length; a suspension bridge across the Chatanga River 500 feet long, with some very heavy earth and rock cuts. The rock in the Tunnels is gneiss stratified. From the Rabun Gap to twenty miles below Franklin, a distance of 50 miles, the line follows down the Tennessee River; the class of work is principally side hill excavation, some of which is rock; their will also be several bridges. From the point 20 miles below Franklin to Hardens, a distance of 35 miles, the line follows the Tennessee River the entire distance, causing heavy side rock excavations. On this portion of the line will be several expensive bridges, and a tunnel of about 1000 feet. From Hardens to Knoxville, a distance of 45 miles, the line follows the river about eight miles, then leaves it, running across the Chilhona mountains almost a north line to Knoxville; this portion of the road is heavy work, with about equal quantities of cut and fill, an expensive bridge 1000 feet long and 45 feet high, crossing the Holston River at Knoxville. The character of the rock from Knoxville to Hardens is limestone, and from Hardens to Franklin gneiss rock stratified, and from Franklin to Anderson, stratified sandstone and gneiss rock. The character of the earth is sandy and clay loam. The line for the whole distance runs through high table lands, well settled, remarkable for its health, good water and ample resources for subsistence. The above line of railway offers great inducements to experienced contractors. The undersigned will be prepared to receive proposals and enter into contracts for the graduation, bridging, tunneling and masonry for the heavy portion of the line, from and after the 1st day of May next, at Knoxville Tennessee, Franklin North Carolina, and Pendleton South Carolina, and will continue at such places, until the same is under contract. Profiles and maps of approximate location can be seen at each of the above places after the 1st day of May. Proposals are asked with cash payments, also eighty per cent cash and twenty per cent in the Capital Stocks or Bonds of the Company. All communications prior to may 1st must be addressed at Pendleton South Carolina.

4,13

ANSON BANGS & Co.

**ZERAH COLBURN,**

CIVIL AND MECHANICAL ENGINEER.

OFFERS his services to Railroad Companies and others, in designing and constructing Locomotive Engines of superior adaptation and efficiency.

Refers to CHAS. MIXOT, Supt. N. Y. and Erie Railroad; WM. RAYMOND LEE, Pres't, Ogdensburg railroad; G. W. WHISTLER, Esq., Vice Pres't. New Haven railroad; ROGERS, KETCHUM & GROSVENOR, Paterson, N. J., O. M. HYDE, Esq., Detroit.

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.
 WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their SYSTEM of LOCOMOTIVE ENGINES in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture *Five different kinds of Engines* and several classes or sizes of each kind.

Particular attention paid to the strength of the machine in the plan and workmanship of all the details. Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowling Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
 ILLINOIS CENTRAL RAILROAD.
 Vandalia, Ill.

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of
Bolts and Bolt Ends

for Sale by
 BRIDGES & BROTHER,
 64 Courtland st., N. Y.

New York and Erie R. R.

PASSENGER TRAINS

leave Pier foot of Duane street,
 as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the B. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAY EXPRESS, at 12¼ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAY PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.

These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

CHAS. MINOT, Sup't.

Railroad Iron.

2000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and Crawshaw's manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by P. CHOUTEAU, Jr., SANFORD & CO.,
 December 4, 1852. No. 51 New street.

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality
 by THOMAS HUNT,
 No. 53 Fulton Street,
 New York.

1y10*

To Railroad Companies and Contractors.

SECOND hand engines for sale in good running order and condition.

2 engines, 10 in. X 20 in. cylinder, 4 drivers 51 inch diameter, about 16 tons weight.

2 engines, 10 in. X 18 in. cylinder, 2 drivers 51 inch diameter, weight about 14 tons.

For terms, &c. apply to

CLARK & JESUP,
 General Railroad Agents,
 38 Exchange Place.

Brass Tubes for Locomotive and Marine Boilers.

THE undersigned having been appointed Agent for the highest respectable manufacturers Messrs. Allen, Everitt & Son or Birmingham, is prepared to take orders, at fixed prices, in Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to

March 1854.

JOHN H. HICKS,
 90 Beaver str.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

BOORMAN, JOHNSTON & CO.,
 90 Broadway, New York.

MANUFACTURERS' AGENCY

FOR

RAILROAD FURNISHING,

Office 18 Dearborn St., Chicago, Ill.

E. R. T. ARMSTRONG, Agent,

KEEPS constantly on hand Railroad Spikes, Burden's make, Railroad Wrought Iron Chairs, superior quality, Ames manufacture of Locomotive Tires, Cranks, &c. Washburn, Pond & Co.'s Car Wheels, of best Salisbury and Stirling Iron, mixed under direction of Mr. Washburn, and warranted.

Orders invited for Locomotive and Car Rolled or Hammered Axles—Locomotive Lamps—Superior Pumps, for Stations, Switch Stands, Levers, and Targets—Locomotive Drivers and Cylinders—Boxes and Pedestals—Screw Cutters and Drilling Machines—Frog's Heads and Heel Blocks—Screw Presses, for forcing Wheels and Axles.

Oils of a superior quality, made expressly for railroads, and free from gums.

Refer to—Illinois Central railroad, Ohio and Mississippi river railroad, Michigan Southern railroad, Galena and Chicago Union railroad, Milwaukee and Mississippi river railroad, Little Miami railroad, Cincinnati, Hamilton and Dayton railroad, Central Ohio railroad.

14 6mo's.

S. SEYMOUR & O. GENERAL RAILROAD

AGENCY, Office, Metropolitan Bank Building,
 No 110 Broadway, have to dispose of at private

sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years

OHIO AND MISSISSIPPI R.R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R.R. STOCK.

SCIOTO AND HOCKING VALLEY R.R. STOCK.

SCIOTO AND HOCKING VALLEY R.R. FIRST MORTGAGE CONVERTIBLE BONDS, at 11 years.

LOUISVILLE AND NASHVILLE R.R. STOCK.

BUFFALO AND STATE LINE R.R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Notice to Contractors.**PACIFIC RAILROAD OF MISSOURI.**

SEALED proposals will be received by the undersigned, at their office in the city of St. Louis, until six o'clock, P. M., of the 15th day of May next, for the Grading, Masonry, etc., of the first division of the South-west Branch of the Pacific Railroad, extending from Franklin Depot, the present terminus of the road, some 40 miles West of St. Louis, to the crossing of the Gasconade River, a distance of about 78 miles. The line will be divided into sections of about one mile each, and proposals may be made for one or more sections. The line, plans, profiles, specifications, form of contract, etc., will be ready for inspection on and after the first day of May next. The work to be let is quite heavy, situated in a healthy country, and is easy of access.

The undersigned reserve to themselves to reject all proposals that are not satisfactory.

A. S. DIVEN & CO.

March 24th, 1854.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,
 287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.

THE

New Yorker Handels-Zeitung

A GERMAN Commercial Paper, containing Prices Current, Market Reports, Exchange and Stock Rates, Shipping List and Correspondences from all parts of the world, appears twice a week in two separate editions, viz: one for home circulation, published each Wednesday and Saturday morning; the other for circulation in Europe,—the only German Paper published in the United States admitted to the German States—appears before the departure of each mail steamer for Europe. Terms:—The paper, per annum, at New York \$5, for Germany, full Postage included, \$11, and for all other parts of Europe, the U. S. Postage inclus., \$3. Advertisements taken at liberal terms.

Howland, Burgess & Smith,

MANUFACTURERS of PURE SPERM OIL for Railroad Engines and Lamps, of Refined Whale Oil now so generally used for car wheels.—Works, New Bedford Mass.—Store, Albany, N. Y.

Orders (directed to either place) respectfully solicited from Superintendents.—All Oil warranted pure and perfectly satisfactory.

Pneumatic Pile Driving.**FOUNDATIONS FOR BRIDGES, PIERS & C.**

BY THE PNEUMATIC process hollow cylindrical piles or tubes from eight inches to ten feet diameter can be driven through sand, mud, clay or other material to any required depth. The complete success which has attended the operations of this process shows it to be eminently practicable in, and much the best method known for, the construction of railroad bridges across deep and rapid rivers where permanent foundations of great strength are necessary, and have to be secured at great depth.

Applications for license for the use of the invention in any part of the United States may be made to H. V. POOR, Esq. Editor of the American Railroad Journal, 9 Spruce street; or for contracts for pile driving, or licenses as above to

CHARLES PONTEZ,

March 25th, 1854.

New York.

To Contractors.**PACIFIC RAILROAD OF MISSOURI.**

THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.

Thos. S. O'SULLIVAN, Chief Eng.

Pacific R.R. Office, St. Louis, Feb. 1854.

Railroad Iron:

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by
BOORMAN, JOHNSTON & CO.,
 69 Broadway, New York.
 June 9, 1853.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to
THOS. CHAMBERS, President,
 September, 1850.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.
VOSE, PERKINS & CO.,
 9 South William St.
 New York, June 1, 1851.

Knox & Shain,

**MANUFACTURERS OF
 LEVELS, TRANSITS AND SURVEYING
 COMPASSES.**
 No 72 Dock st. first door south of Walnut, west side
PHILADELPHIA.
 First Premium awarded by the Franklin Institute.

Stuart, Serrell & Co.,**CIVIL ENGINEERS,**

Rooms 22, 24, 26 & 27,
 157 Broadway, New York.

**CHARLES B. STUART,
 DANIEL MARSH,**

**EDWARD W. SERRELL,
 SAMUEL McELROY.**

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these Improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

**South-Western Car Shops,
 Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West,
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
 feb. 18. 1m.

**Ontario, Simcoe & Huron R.R.
 CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connection with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kiskadee) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
 Superintendent.

Railroad Iron Via Quebec.**JOHN ANDERSON & CO.**

**COMMISSION MERCHANTS,
 SHIPPING AGENTS AND BROKERS,
 Quebec and Montreal.**

PARTICULAR attention given to the Transshipment of Iron, &c., in Transit for the Western Lake Ports, and to the Shipment of Rails in Great Britain.
 Quebec, Dec. 2, 1853.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops—in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,

No. 61 Camp Street,

New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
 17 Burling Slip, New York.

February 15, 1850.

SHANAHAN & LOEBER,

181 William-st.,
 (1st floor—Up Stairs.)
NEW-YORK.



MANUFACTURERS OF

THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
 Chains, Scales, Levelling Rods, &c. 1y10

Notice to Contractors.

MEMPHIS & OHIO RAILROAD.

SEALED proposals will be received at the office of the Memphis and Ohio Railroad Company, at Memphis, Tenn., until the 15th day of April next, for the grubbing, clearing, gradation, and masonry of the first 65 miles, from Memphis to Cherryville.

Contractors must give the most undoubted security for the completion of the work at the time, and in the manner specified; and contracts will be let in sections, or for the entire work, as may be deemed best by the Directors.

The Directors reserve the right of rejecting all bids, should none prove satisfactory; and it is desirable that all propositions should be submitted, with the view of preparing the whole work for the iron as soon as possible. Bids of that character and otherwise equally favorable, will have preference.

Maps, plans and specifications may be seen at the office of the company, after the first of April.

E. PEABODY,
 Engineer in charge.

Notice To Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND TEXAS RAIL ROAD COMPANY }
Monroe, La., March 8th, 1854.

SEALED PROPOSALS will be received at this office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty mile, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the entire sections, or any portion thereof, not less than one mile, and those proposing to take stock of the Company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the Company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract; or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,
President.
P. J. TOURNADRE,
Chief Engineer.

7t14

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

JOHN H. HICKS,
 90 Beaver street.

2d Feb'y.

H. SAWYER

(of the late firm of SAWYER & HOBBS),
 Manufacturer of Transits and Levels,

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 18]

SATURDAY, MAY 6, 1854.

[WHOLE No. 942, VOL. XXVII.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Wilmington and Manchester.....	274
Sinking piles by pneumatic pressure.....	274
Junction Railroad.....	277
Ruttan's Car Ventilator.....	277
Pennsylvania Railroad.....	279
New Jersey Central Railroad.....	279
Harlem Railroad.....	279
Manufacture of railroad iron in the U. States.....	281
Lacrosse and Milwaukee Railroad.....	282
Law of Patents—Winans vs. Denmead.....	+282
Journal of Railroad Law.....	284

American Railroad Journal.

Saturday, May 6, 1854.

Pacific Railroad.

It is certainly singular that while the subject of a railroad to the Pacific is of such paramount interest and importance, so little has been done toward presenting it in that intelligent shape by which some reasonable estimate might be formed of the magnitude of the work, the probable cost of its construction and maintenance, the length of time required for building it, the facilities which exist for supplying it with wood and water, the capacity of the country, upon the several routes proposed, to support settlements, etc., etc. The necessity that exists for the road being admitted, its construction would appear, in popular estimation, to involve no problem different from those already solved in the success of the more important of our roads already built. The difference in the two cases is looked upon as one in degree, not in kind. If \$35,000,000 has constructed the Erie road of 500 miles, it seems to be assumed, on all hands, that \$140,000,000 will construct a railroad across the continent, of 2000 miles: or, if a grant of 2,500,000 acres of land has constructed the Illinois Central Railroad of 700 miles, it is supposed that a similar grant would furnish the means to build one to the Pacific.

These points being assumed, everybody becomes equally wise upon the subject, and talks with an authority suitable only to the person fitted to take charge of this stupendous enterprise. The assurance of every person is just in proportion to his ignorance; and were the former, in the

present case, to be measured by the latter, certainly the difficulties that surround it have not made the first impression upon the popular mind.

It is greatly to be regretted that so little pains have been taken to derive the greatest amount of information from the explorations that have been made of the country to be traversed by either of the proposed roads. Nothing is more provoking than to take up a report of the governmental exploring parties. These parties give you approximate elevations of certain points on their routes; the range of the thermometer, the kinds of grasses, trees, reptiles, insects met with, the state of the weather at particular summits, the distances "between water," and the "double altitudes of *a* Aquarii, *b* Lyrae, *c* Andromedae, *d* Polaris, etc.," all very useful and interesting to savans; but helping very little to demonstrate the practicability of a railroad. All that is useful in such reports, as far as such a work is concerned, might be brought into a single page. If, on the other hand, there had been attached to each party a practical engineer, familiar with the construction of railroads, the public might, at the present day be in the possession of information, to obtain which years will be required.

Such a person would have mastered all the physical peculiarities of the route to which he was detailed, and by taking the Erie railroad, for instance, as a standard, could at once have intelligibly shown the relative magnitude of a railroad to the Pacific. He would have been able to have shown how far the proposed work corresponds to that of a road with which every body is familiar, and where the parallel ceases. This is the kind of information wanted. We can only measure what we do not see by what all have seen. The government engineers give us no such information, which would have been ten times more valuable, in a pecuniary point of view, than all they have told us. We must know how the amount and cost of graduation, bridging, masonry, etc., etc. on the proposed road will compare with similar items on other roads. We want to know from what sources, and at what cost, fuel and water can be supplied. Such details as these would have given us something tangible to work upon, and we should now have been engaged in devising a practical plan of operations, instead of wasting time in 'talking big'

upon a subject upon which we know next to nothing.

While we are without the data necessary for the purpose of estimating the probable cost of the road, and the time required for its construction, we are enabled to form a pretty correct idea of the physical characteristics of the greater part of the country through which any road must pass. From the fact that these are so different from what they are generally supposed to be, and from the importance that they should be thoroughly understood, we will refer to one or two that are most peculiar, and at the same time constitute the greatest obstacles to the construction of a railroad.

One of the most striking physical features of the North American continent, is the great elevation of its Western half above the sea. From the Isthmus of Tehautepec, nearly to the Arctic Ocean, the lowest depression in this great elevated range does not fall much below 5000 feet above the sea level. The lowest point over which it is proposed to carry a railroad from the Mississippi basin to the Pacific, is probably by the Northern route, where the range, by barometrical measurement, is 4808 feet high. The next lowest point probably, is near latitude 32, and is about 5000 feet high. On the South Pass route the lowest point in the Rocky Mountain range is 7490 feet, and in the Bear Mountain range further West, 8430 feet. Gunnison makes the *Cochetopce* Pass on the Central or Benton's route, 11,082 feet high. The summit of the *Raton* in crossing from the head waters of the Arkansas to those of the Del Norte, is 7754 feet high. Santa Fe, in the valley of the last named river, is 6846 feet above tide. The lowest pass been the Del Norte and the Gila, is 6167 feet. About latitude 32° 30', the great mountain ranges suddenly subside into a vast plain, from 100 to 150 miles wide, and extending from the Del Norte to the Colorado. The most elevated portions of the plain are about 5000 feet above the sea. Throughout its whole extent are detached ranges of mountains, rising from one, to three thousand feet above the plain. Upon the South of the plain commence the Sierra Madre ranges, which embrace the loftiest mountains on the continent. This range cannot be traversed even by mule trains, for several hundred miles after it commences in latitude 31.

Several necessary consequences naturally result from the extraordinary facts which we have recited. The *higher* the general elevation of a country, the *less* the quantity of rain that falls. In addition, this natural law, which would reduce the quantity of rain falling upon the great elevated plateau of the continent, is assisted by the lofty mountains that flank this plateau on both sides, the Rocky Mountains on the East, and the Sierra Nevada on the West. These lofty ranges intercept the moisture that otherwise would be borne from the sea to the interior, and precipitate it upon their summits, robbing the great valley lying between of the very first condition necessary to their fertility. This valley is consequently a vast desert, and must always remain such. Within this desert nothing can be raised without irrigation, which is limited to the narrow valleys of rivers. These are few in number, and often for a long distance flow through *canons*, impassible both to man and beast.

This great American desert not only fills up the space between the two great mountain ranges described, but extends far down the Eastern slope of the Rocky Mountains. The boundary line between the fertile lands and the desert commences on the Arkansas, near long. 98° West from Greenwich, or from 150 to 200 miles West of the boundary line of Arkansas, from 200 to 300 feet from the base of the mountains. Throughout the whole extent of this vast desert, all the running water is supplied from lofty mountains. Many of the rivers that descend from the mountains lose themselves in the sandy plains at their feet. These plains are destitute of timber; the greater part of their area of running or stagnant water, or grass. The river bottoms are occasionally fringed with scanty groves of cotton wood, a timber entirely unfit for the construction of a railroad.

Such are *some* of the conditions, under which a railroad to the Pacific must be built. The road, whatever route be taken, must be built and sustained from the *base* of operations at either end. That the work is *possible* there is no doubt. That for some years to come it is practicable, with such force as can be brought to bear upon it, by individual enterprise, or grants of lands, we do not believe. We admit we entertained a different opinion some time since, but a pretty thorough examination of the subject has convinced us that we were entirely mistaken. We believe our error is still shared by a great majority of the community. Our object is to dispel any erroneous view that may prevail. It is only when the magnitude of the work is fully understood, that our people and Government will devise means adequate to the task before them.

Mobile and New Orleans Railroad.

Messrs. Erastus Corning & Co., of Albany, it is stated, have proposed to take the construction bonds to the Mobile and New Orleans Railroad Company, which has been organized to build the road.

Rails for Sale.

Parties in want of *Rails* will do well to bear in mind that a sale of 1,500 tons is to be made by Messrs. Hoffman & Co., at the Merchants' Exchange, on the 10th inst. An opportunity for a good bargain is undoubtedly offered to parties in want.

Wilmington and Manchester Railroad.

SINKING PILES BY THE PNEUMATIC PROCESS.

This important road having been completed, and its Chief Engineer, Col. GWYNN, being about to sever his connection with it, he has, in view of this fact, submitted his final report, a portion of which we give below. This road forms the connecting link between the roads of South Carolina and Georgia, and other southern states, and the northern system. Probably no road has added more to the convenience of the travelling business public, by enabling them to avoid the long and dangerous voyage by sea from Wilmington to Charleston and Savannah.

The great obstacle to the construction of the above road was the Pee Dee River. This river flows over a bed of loose, shifting sand, and is subject to sudden and excessive floods, which occur at the *healthy* season of the year.

The great difficulty and expense of constructing piers ordinarily in use, lead to the adoption of the *pneumatic process* of sinking iron piles, which, we are happy to say, has been entirely successful, as will be seen by Mr. Gwynn's report.

The cylinders, air pump, engine to work it, etc., etc., were furnished by the West Point foundry of N York, the Principal of which, R. P. PARROTT, Esq., is highly commended for the excellence of the material and apparatus furnished by him, and for the important aid rendered in introducing into this country this novel and valuable improvement.

The resident engineer of the company, L. J. Fleming, who has been identified with the road from the first, rendered efficient service, as did Mr. Holstrom, who at the commencement, superintended the operations, sinking the *piles*.

Subjoined are the material portions of Mr. Gwynn's report. Col. Gwynn desires us to convey an apology to several gentlemen who have written him, desiring information upon the subject of the foregoing process. He was unable promptly to reply to their favors, in consequence of a delay in the publication of his report, which he intended as an answer to such.

To the President of the Wilmington and Manchester Railroad:

You were, shortly after my entering your service, apprised of the difficulty of crossing the Great Pee Dee river, not on account of its breadth of water line, or the extent of the bordering swamps, but owing to the treacherous character of the bed of the river, involving difficulties in obtaining secure foundations for the piers, of which the experience in our country afforded no example. It had been my province to construct bridges across all the water courses from Portsmouth, in Virginia, to Wilmington, North Carolina, and, in some instances expedients, novel in their character, were resorted to, all, however, attended with success, I am happy to say, as time has proven. But in all my experience I have encountered nothing like the difficulties presented at the Great Pee Dee. The bed of the river, as far as it could be ascertained by the ordinary appliances for boring, proved to be an unbroken stratum of sand, into which piles could not be driven to a sufficient depth to ensure their permanency; cribs, or caissons, would have been undermined unless placed below the action of the current on the bottom of the river, and to effect this by the usual mode of coffer-damming with timber, would not have been practicable at an admissible cost. But for the necessity of making a draw for the passage of steamers, these difficulties might have been avoided in a great measure, by a bridge of a single span, stretching entirely across the river. In this dilemma, my attention, which had been drawn to this subject by publica-

tions in scientific journals, was now more particularly directed to the novel and interesting process of Dr. Potts, of England, for sinking hollow piles, by the pressure of the atmosphere.

In this process, which is one of the most beautiful and simple applications of a natural element to the uses of man yet discovered, "An air pump is employed, which, being connected with the head of the hollow pile, the air is exhausted, and a stream of water, sand, shingle, and gravel, sucking up from below, the pile sinks gradually into the displacement. It is therefore a kind of sub-aquatic excavation, the lower end of the hollow pile being converted into a kind of scoop, worked by the air pump on the platform above."

After mature consideration, and thorough examination of the subject, my mind was brought to the conviction, that the process could be successfully applied in sinking hollow piles, or cylinders, in such material as composed the bed of the Great Pee Dee. Of this I could entertain no doubt after reading the accounts of what had been accomplished by the "Pneumatic Process" in England. But the sickness of the locality, its remoteness from the seaboard, whence the only means of transporting the heavy cylinders and apparatus (which had to be obtained at the North) were, by uncertain and irregular lines of steamers, hostile and unfriendly to the improvement, all conspired to create a painful anxiety and apprehension, not of the ultimate success of the work, but of delay and detention, which, in the prosecution of new plans and designs, lead to distrust, and sometimes to a withdrawal of that confidence so cheering and animating to a public agent, and without which his will may be palsied and the best schemes fail.

The bridge consists of two spans, one a hundred and thirty feet in the clear, the other, one hundred and thirty-five feet, and a draw, with an opening of seventy feet for the passage of steamboats, resting on four supports, as follows: commencing on the east side of the river—first, the draw-pier of timber, to be replaced with stone; secondly, four cylinders driven in pairs, close together, longitudinally, and ten feet apart transversely; thirdly, a pier composed of three columns of cylinders, two feet apart; and fourthly, a temporary abutment of timber, behind which it is designed to erect one of stone.

The outer diameters of the cylinders are six feet, the inner diameters are five feet eight inches, giving a circular ring of cast-iron two inches thick; each column (except the caps, which vary with the depth to which the columns are sunk) is composed of sections nine feet long, bolted together through flanges two inches thick: the bottom length has its lower edge bevelled so as to facilitate its sinking through the sand.

The machinery and apparatus employed, were an eight-horse high pressure engine, two air pumps, with a stroke of one foot, and with leather valves twelve inches in diameter, a receiver, or voider, composed of two sections of cylinders bolted together, and the ends closed by cast-iron caps bolted to the flanges, with an exhaust pipe communicating with the cap on the head of the cylinder, and the necessary sheers and appliances for lifting and handling the sections, all resting on two camels securely fastened together, their united width being thirty-two feet, and length fifty-two feet, the hold five feet. The process of sinking the cylinders was as follows. The sections forming the column to be operated upon, being placed in position, the cap bolted on, the exhaust pipe attached, and the receiver exhausted, the communication between the two was opened, when a vacuum was effected, and the result was found to be as hitherto described. The pressure of the atmosphere on the surface of the water in the river, combined with the hydrostatic pressure.*

* In the various descriptions of the "Pneumatic process," by the English engineers, it is remarkable that its efficacy is ascribed entirely to atmospheric pressure, and that no allusion is made to the hydrostatic pressure, its inseparable and important adjunct.

produced such a rush to fill the vacuum in the cylinder, that it caused an excavation under the bottom edge, into which the column sunk by its own weight, combined with that of the atmospheric pressure on the cap. The extent of the useful effect of each, as well as the sum of the applications of the atmospheric pressure, measured by the depth which the cylinders sink, is dependent, in general terms, upon the tenacity of the material forming the bed of the river. In the sand, clean and sharp—such as forms the bed of the Great Pee Dee River—the effect of the atmospheric pressure varied from six to eleven feet, obtained by repeated applications or blows of the exhaust, the repetition being dependent upon the varying character of the stratum of sand. When the pressure of the atmosphere ceases to act, it is necessary to get into the cylinder and excavate the obstructing materials. For this purpose, when the cylinder cannot be freed of water by pumps, the operation is reversed; the air, instead of being rarified is compressed, and the cylinder is virtually converted into a diving bell—a process which will be more fully described hereafter. In clay or compact gravel, the "Pneumatic Process" cannot be applied at all. In such material it will be necessary to excavate by manual labor from beneath the cylinder, and rely upon its gravity combined if needs be, with the pressure of the atmosphere on the cap, for driving it down.

Upon the first trial, the cylinder, which was in two sections, sunk five feet, it then became necessary to put on another section, which increased the space to be voided in so great a ratio to the exhauster, that a sufficient vacuum could not be produced, and the sinking of the cylinder under application of the exhaust was by very small increments.

In order to reduce the relative proportion between the capacity of the cylinder and the exhauster, and thereby obtain a more perfect vacuum, I caused the cylinder to be filled with logs. The pressure of the atmosphere was thus increased, and with the weight of the logs superadded thereto, the cylinder was readily sunk two feet ten inches more, when it ceased to obey the influence of the pressure applied, and would go no farther. Upon examination, it was found that its progress was arrested by the trunk of a tree. This check to our operations was an unexpected event, as in the borings to ascertain the character of the bed of the river no such obstruction had been discovered. It was particularly unfortunate that we should have to contend, in the beginning, with so serious an obstacle, which happily did not again present itself.

It was not until the first of May that the existence of the obstacle was fully established, and it was made manifest that its removal called for a reversal of the process heretofore employed, viz. instead of rarifying the air, it now became necessary to condense it in the cylinder, so that the water could be driven out, and the impediment cut away.

For the purpose of forcing the water out, should the ordinary process of pumping fail, and of enabling us to enter the cylinder and excavate the sand, should its friction counterbalance the atmospheric and hydrostatic pressure, I had provided an air lock, the application of which, for the removal of the hindrance caused by the trunk of the submerged tree, now became indispensably necessary. For its proper adjustment, however, much work was required to fit it up, and some additional hose and connections were wanting. But with every effort that could be made, it was not until the 10th of July that the air lock was finally bolted on the top of the cylinder and ready to be applied.

The air lock is simply a cap (bolted to the top of the cylinder) provided as in this case, with two chambers formed by projections above and below the top of the cylinders, into which any excavation from them is lifted and deposited preparatory to its final removal. At the top of each chamber there is a circular opening for the entrance of the men and the discharge of any material placed therein. This opening is closed by a flap lid when the air is compressed. In the portion of the

chambers beneath the covering, which is formed by a flange encircling them, bolted to a circular rim with a plate across the centre; there is also an opening in each, secured by an iron door, suspended on horizontal hinges. Each chamber is provided with cocks, which afford a communication between the cylinders and the chambers, and between the chambers and the atmosphere. In future operations, I would recommend but one chamber to the air lock.

Every thing being in readiness, as before stated, on the 10th of July, the air pumps, converted into compressing pumps, were put in motion, and the air condensed in the cylinder to a degree sufficient to force the water beneath the lower edge, and at the same time upwards through a syphon; thus, by continuing a compression equal to the column of water outside, the interior of the cylinder was kept dry, and the men entered, excavated the superincumbent sand, and cut away the obstacle, which proved to be the trunk of a cypress tree covering one-half the bottom area of the cylinder, when the "pneumatic process" was resumed and the cylinder sunk to its place.

The use of the air lock, however, did not cease here. It was found that the pressure of the atmosphere, aided as it always is in the "pneumatic process," by the hydrostatic pressure,* the cylinders could not be sunk with a column of sand in them much exceeding six feet in height. To remove this impediment, as the water rose so rapidly in the cylinders that it could not be otherwise kept down, the air lock was resorted to, the water forced out, as before described, and the sand excavated, when upon letting off the compressed air in the cylinder, gradually, as was usual, it was observed to settle more than seemed to be due to its gravity alone. This led to the experiment (the credit of which belongs to Mr. Fleming, the resident engineer, who I omitted heretofore to state was placed in charge of the work in July) of allowing a rapid escape of the compressed air, when the same physical effect was produced as in the "pneumatic process," though proceeding now from hydrostatic pressure alone. The column of water on the outside, opposed by no resisting medium within the cylinder, rushed in, seeking its level, with a scouring impetus, which excavated the sand beneath the edge of the cylinder, when it sunk into the displacement by the force of its gravity. The success of this process, however, supposing always a sufficient depth of water, is mainly dependent upon the character of the material operated upon. If it be other than open sand, or sand intermixed with vegetable matter, mica, or other light substance of a compressible or yielding nature, little or no effect would be produced.

In the operations in England, owing, as I suppose, to the incompressible character of the beds of the streams in which the "pneumatic process" was applied, no mention is made of any settlement of the cylinders by hydrostatic pressure alone, but only that they descended when the compressed air was eased off through the space excavated below the edge of the cylinder.

In the management of another operation similar to that at the Great Pee Dee, I would so construct the air lock as to make it answer the double purpose of a cap for exhausting and compressing the air in the cylinder, and thus, upon the escape of the compressed air, by a timely application of the

* In the "pneumatic process," the pressure of the atmosphere on the surface of the water around the cylinder, combined with the hydrostatic pressure, destroys the friction within and without, and acting on the bed of the river, causes the suction and the excavation displacement, before spoken of, under the bottom edge of the cylinder, while the pressure of the atmosphere on the cap, added to the weight of the cylinder and cap, forces it down, so that we have the force of air, water, and gravity, all combined; the force of the first being dependent upon the perfection of the vacuum in the cylinder and the area of the cap; the second, on the depth of the river, and the third, on the weight of the cylinder and cap.

exhaust, always combine both the pneumatic and the hydrostatic pressure.

Many other modifications of the apparatus and imperfections, suggested and disclosed by our experience at the Great Pee Dee might also be made and remedied, which would lessen the cost and facilitate the process, which for the sake of brevity I have omitted.

Each column has been sunk on an average, thirteen feet in the sandy stratum of the bed of the river. On the 29th of December the seventh and last cylinder was sunk to this depth. It is my purpose if possible to sink them to the clay or shale formation which underlays the sand, or into the sand until a resistance is attained equal to the weight of the cylinders and superstructure of the bridge. In addition to this work, the labor now to be performed, comprises the putting on of the sections and caps, to raise them to the required height—the bracing and silling—every thing required in the place except the caps, and they have been ordered.

Contracts have been made for the wooden supports for the draw and western end of the bridge heretofore referred to, and also for the stone to take the place of these temporary structures. The superstructure of the bridge and draw was contracted for some time since, and the contractor is now engaged in procuring the materials and framing them. The arrangements which have been made, bid fair, should no untoward event occur, to insure the completion of the bridge, and the passage of the trains by the 1st of September.

The cost up to this time as furnished by the treasurer, for the cylinders, apparatus and labour is \$31,889 39 to which may be added for the caps yet to be purchased, the filling, bracing, outstanding bills and contingencies \$10,000 or in even numbers \$42,000, for the cost of the seven columns of cylinders when ready for the reception of the superstructure of the bridge. The cylinders and most of the apparatus were obtained at the West Point Foundry, to whose scientific and accomplished proprietor R. P. Parrott, Esq., I take this occasion to acknowledge my indebtedness for many valuable hints and suggestions, and my obligations to him for his liberality in making the experiment of the "Pneumatic Process" at his foundry, which satisfied some doubts and influenced in a great degree my adoption of the plan. It is worthy of remark that not the slightest accident has occurred.

The material for filling the cylinders is a subject which has occupied my most serious and anxious consideration.—The more so, in consequence of its having been stated in the reports of the company that they would be filled with concrete, when it has from the beginning been my purpose to place the superstructure on the rims of the cylinders and fill them with sand, or as future developments may direct, with a column of concrete at the bottom sufficient to resist the statical pressure from without. In arriving at this determination, while the comparative cost of different materials and plans was kept in view, it had but little weight, in my estimation, compared with permanency and durability, the essential pre-requisites in all works, and especially so in the important work under consideration.

My inquiries therefore were mainly directed to the discovery of the elements which would impart these important desiderata and then their application to the most economical plan. This investigation led me to consider—first, whether I would place the superstructure on the metallic ring of the cylinders or on some material with which the cylinders might be filled: the consideration of this question necessarily involved the diameter of the cylinders, which for prudential considerations, as I was making the first experiment in the country of sinking large cylinders, I fixed at six feet exterior, and for reasons that will hereafter be given, five feet eight inches interior diameter. I will state in this place, that one of my reasons for deciding upon six feet external diameter was that whatever internal diameter might be determined upon, sufficient space would be left in the hollow part for the men to work in, should it become ne-

cessary to enter the cylinder to remove obstructions. Six feet being then the limit of the diameter the question arose whether columns of masonry or concrete would afford a sufficient support for the bridge, in the event that the iron casing should in the lapse of time crumble away. I came to the conclusion that they would not possess sufficient stability, and if, after all, reliance had to be placed on the durability of the metal composing the cylindrical rings, it was unnecessary, if a cheaper substance would answer as well, to incur the expense of masonry or concrete; secondly, it now became necessary to consider the resistance opposed by the sand and gravel or clay on which the cylinders will rest, to their sinking therein, also whether the cylinders possess sufficient stability; and resistance to compression and flexure. Under the first head, we have the experiments of Mr. Charles Fox as given in evidence before the select committee of the House of Commons on the Westminster Bridge. The experiment was made upon cylinders six feet in diameter, and to use Mr. Fox's own words "we put on the top of the cylinder 100 tons of rails, but we could get no depression, except some three quarters of an inch, which was done by the little compression that you would have from the weight of the edge of the cylinder on the gravel." Now as a hundred tons will never be thrown upon any of the columns, and as the bottom upon which they will finally rest, will be as incompressible as that experimented upon by Mr. Fox; other things being equal the cylinders actually require no filling. By the practical formula* of Aodgkinson in Mr. Edwin Clark's work on the Britannia and Conway Tubular bridges, it will be found that cylinders six feet in diameter, two inches thick and fifty-five feet in height, (in round numbers, the height of the columns, at the Great Pee Dee,) possess a resistance to compression, flexure and crushing, six hundred and seventy-seven times greater than they will ever be subjected to by the dead weight of the bridge, combined with that of the passing trains. Hence the determination to give to the cylinders an internal diameter of five feet eight inches, and consequently a thickness of two inches. Third, the stability of the piers: upon this subject I had fully satisfied my mind, before the work was commenced. But without referring to the evidence or entering upon the train of reasoning which wrought this conviction, it will suffice to state, in the August fresh, the first cylinder, the one that had caused so much anxiety and apprehension, withstood a lodgment of drift thirteen feet deep where it rested against the cylinder, four hundred feet long and in breadth more than half the width of the river, a slight inclination being the only effect produced. This accumulation was caused by the camel which was moored just below and touching the cylinder, with its square corners stretching out on each side, and as a similar cause will probably never again exist there is no danger of such a mass being ever heaped up against the piers, and if it should be, as a single column stood the trial of this immense pressure, no danger can be apprehended from a failure of their combined action and power of resistance. Therefore the stability of the piers may be considered as placed beyond all question.

Fourth, and a very important consideration—the durability of the piers: although the duration of cast iron submerged for long periods in fresh water is not precisely fixed, enough is known of the effects of immersion to establish the belief that it extends to an indefinite period. The action of air and water whether fresh or salt, clear or

foul, and at various temperatures, upon cast iron, wrought iron and steel has been experimentally investigated by Mr. Robert Mallet, civil engineer and Mr. R. I. A. at the request of the British Association for the advancement of Science; and the results published among the reports of the association for the years 1838, 1840. Amongst his experiments, he subjected a large number of specimens of cast iron to the action of clear fresh water for the space of 381 days, viz: from the 4th of August 1838 to 20th of August 1839. The specimens each five inches square and one inch thick, were arranged in a box and sunk to the bottom of the river Liffy above tidal limits, in a running stream varying with the season from 3 to 6 feet in depth—bottom fine granite sand—temperature from 32° to 68° Fahrenheit.

The specimens weighed on an average 42,000 grs., and the following are the average results of the corrosive action of the air and water, upon the square inch of surface expressed in grains, and decimals of a grain:

	Clear Water.	Foul Water.
Chilled Cast Iron.....	1,372	5,478
Cast in green sand	1,027	4,283
No. 2 bar iron	1,34	7,3
Cast iron, skin removed	2,59	6,83

Mr. Mallet also subjected specimens to the action of foul water, within tidal limits, in mid stream of the Liffy at Dublin, opposite the junction of Poddle river therewith; depth 4 feet at ebb and 15 to 20 feet at flood tide—the water fresh at ebb tide, and very brackish at flood—bottom soft putrid mud—temperature 36° to 61° F't. The results for 389 days are placed in the second column above.

When the surfaces of the cast iron were protected, the protectors were the following:

	1st.	2nd.
Caoutchouc varnish.....	7	8
Best white lead paint.....	8	7
Copal varnish.....	4	1
Asphaltum varnish.....	8	2
Mastic varnish.....	10	9
Swedish tar.....	9	10
3 parts wax and 2 parts tallow...	2	4
Coal tar laid on hot.....	1	3
Turpentine varnish	5	6
Drying oil.....	6	6

The order of protective power against the action of clear water is given in the first column, and against the action of foul water in the second.

Taking the mean effect of exposure of cast iron to clear and foul water as given in the second item of the foregoing table, which is 2,655 grains per square inch for 381 days—as a fair parallel case to the exposure of the cylinders at the Great Pee Dee, and the depth of corrosion in a century on the supposition that the corrosive process is not in time accelerated, would be about one twentieth of an inch on the outer surface when unprotected. As I propose to seal the columns hermetically, there will be no corrosion on the inside. The preservative means intended to be applied, with the farther consideration of the constant rapid current of the Great Pee Dee, and the thickness of the cylinders, both conditions unfavorable to oxidation, the corrosion after the lapse of a century would be still less, if at all appreciable.

Mr. Mallet found in his experiments that the size of castings in iron, influences their rate of corrosion. With castings a fourth of an inch thick the amount of corrosion was "greatly more" than in castings one inch thick.

The thinner castings cool faster and more irregularly than the thicker, hence they are much less homogeneous and contain dispersed veins and patches harder than the rest of their substance; and hence as he supposes, the formation of voltaic couples and accelerated corrosion.

For the protection and preservation of those portions of the cylinders, exposed alternately to the action of air and water occasioned by frequent swells and freshes, it is proposed to use a coating of zinc paint: for those parts exposed to the effect of the atmosphere alone, a coat of coal tar or lead

paint will be sufficient. Other expedients to prevent oxidizing may be resorted to if found necessary. For instance if there should be any perceptible decomposition at the circle of "wind and water," which I do not apprehend if care is taken to renew the coating of zinc paint, it may be checked, and the metal preserved by a belt of gutta percha. So that having it in our power to counteract by the most simple applications any tendency to oxidation, no fears need be apprehended of a speedy dissolution. The cylinders will stand for ages to come, proud monuments of your enterprise and perseverance.

Fifth, as to the material for filling the cylinders, the preceding arguments and citation establish the fact that no filling is absolutely necessary, nevertheless out of abundant precaution, I propose to fill them principally with sand, which by its lateral pressure, will present nearly the same power of resistance to the weight of the bridge, whether it be thrown directly on the column of sand, or on the metallic ring which upholds it.

Those who have a curiosity for investigating the properties of sand, some of which are strikingly paradoxical, will find it amply rewarded by turning to an article on the resistance of sand to motion through tubes, Vol. 18, Journal of the Franklin Institute.

Sixth, there is one other mode of constructing the piers which passed under review, and was duly examined. That is, to make the cylinders subservient alone to the uses of coffer-dams, and erect the piers of stone. But it proved upon enquiry that the masonry alone would cost \$22 per cubic yard, besides subjecting the work to great delay. This plan was therefore discarded, and instead of assigning to the cylinders the subordinate part of shells in the construction of the piers, or as coffer-dams, bury them in the water and conceal them for ever from view, I determined to rear them up in all their stately proportions, and give them a share in sustaining the superstructure, thus combining, beauty and strength, economy and usefulness.

I have shown, I think, that the cylinders possess durability, and that the dimensions given them in all their parts, insure and combine sufficient stability and resistance to compression and flexure. They will be sunk to a depth believed to be below the influence of the current of the river on the bottom; if however, any washing or abrasion should be observed, it is proposed to arrest it, by covering the bed of the river around and between the piers with a layer of concrete. This remedy has been frequently resorted to elsewhere always with success; and should recourse to it become necessary it will surely be attended with a like result. It should be made the duty of the superintendent of the road, to make careful soundings after each fresh for next two years, and compare them with the soundings on file in the office, which show the present depth of water referred to a given level, and it would be well to make these examinations periodically for a series of years.

The road being now nearly completed, I consider it proper to offer a few remarks on the subject of "working it" as it is called. My attention has been long devoted to this important branch of railroad operations, and some views on the subject were presented by me in my report of 1840, at the time when the Wilmington and Raleigh Railroad had just been completed under my supervision.

These views might be greatly enlarged, and it would be my pleasure to extend them, had not this report already reached a length which I fear will be considered tedious. I will therefore decline the general discussion of the question, and beg permission simply to transcribe a leaf from the report above referred to, relating particularly to the current expenditures and the importance of details and minutiae in those expenditures. This important division of the subject of railroad management of "working," as I observed on the occasion above alluded to, "comprises the purchase of rails, spikes, &c.; the renewal of them—the levelling up of the road—the filling up of the abra-

* For hollow cast iron columns of any length exceeding twenty-five times their diameter, and of any diameter, the practical formula for the breaking weight is $44.3 \frac{D^3 - d^3}{L}$ D. and d. representing the external and internal diameter in inches, and L, the length in feet:—44.2, the constant. This formula applied to the columns at the Great Pee Dee, the external and internal diameters of which are 72 and 68 inches, and length 55 feet—gives 44,023 tons for the breaking weight.

sions and washes in the embankments and slopes of the excavations—the cleaning out and opening of the ditches—the contracting for labor and provisions—collecting and arranging under different heads a monthly exhibit of the materials on hand, the quantity consumed, the cost and expenditures, the amount of labor rendered and the particular objects to which directed. The locomotive expenditures should exhibit the number of miles traveled by each engine; the wages of engine runners, machinists, blacksmiths, firemen and laborers; the cost of materials, waste, tools, wood, oil, tallow, brass, copper, iron; the repairs, and nature thereof, which should also be shown in the car and coach repairs.

In the transportation department the expenditures should show the pay of assistants, clerks, train agents, train hands; the cost of stationary, advertising, printing, losses, &c.; every item should be distinctly and clearly specified. Then follows the classifying and arranging of them under appropriate heads, so as to exhibit the receipts and expenditures in each department; and finally the income should be brought down and laid before the board on a balance sheet. At first view these details may seem to be onerous, and to involve an expenditure and consumption of time without any corresponding advantage; but with printed forms these multifarious and apparently complicated particulars are recorded with more facility, and with less reflection than is required to make an entry in a merchant's day-book—simply a few figures in the proper column registering the facts; without which the company cannot judge of the economy and propriety of the expenditures of the agents.

Nothing will tend so much to keep down the expenses of the company, as a periodical exhibit of these statistics. They are to the company, what the day-book, journal, and ledger are to the merchant. They show the cost, the receipts and expenditures in detail, the only way in which extravagance and bad management can be made apparent; and it would be well if the railroad companies throughout the country were to unite in some form of account presenting the receipts and expenditures in the detail which I propose. This would act as a salutary check, and incite a spirit of emulation among the managers, that would prove beneficial to them, and to the whole railway system."

These recommendations were the result of much practical experience at the time they were made—subsequent experience and observation of fourteen years fully confirm them. With proper forms and headings, they can be carried into practical operation without the addition of a single agent over and above those ordinarily employed on railroads. I commend them to your favorable consideration, being fully convinced that great saving would be effected by their adoption.

In conclusion, allow me, gentlemen, to congratulate you on the near completion of your road. Like nearly all of our southern works, it owes its origin and success to the determined will and untiring energy of a few public spirited individuals. And to none is it more indebted for its existence than to yourselves; there have been occasions of frequent occurrence where the least despondency would have proved fatal to the enterprise. In hands less bold, determined, and fruitful of expedients, and resources, it would have been long before this last important "link in the chain of railroad communication between the north and the south" would have been completed.

The benefits conferred by railroad facilities now so well known and understood, as to render it unnecessary to dwell upon them here, have already to a great extent been relished by your road. Lands have advanced in its vicinity to an amount exceeding its cost; capital and labor have been attracted from Virginia and the north eastern portions of North Carolina to the line of the railroad, the products of which it is estimated, will furnish fifty thousand tons of transportation, and this is said to be but a small portion of the accumulated

wealth which will seek investments in the country bordering on the road.

The prospects therefore, are that the way business and travel will sustain the road and make the stock productive. Rival roads may turn off a portion of the through travel, but with what may be termed the "air line" connection with Augusta at the Camden Branch, and the railroad communication direct to Savannah from Branchville, both of which have been chartered, and will doubtless be accomplished, your road cannot fail to command a large portion of the travel from the southwest. So that there can be no doubt of ample remuneration to the stockholders.

Having been retained and continued in your service for some time past, particularly on account of the important work at the Great Pee Dee, the principal difficulties of which are now overcome, I respectfully tender my resignation of the office of Chief Engineer of the company, to take effect on the 1st of February.

I beg leave to avail myself of the occasion of my retiring from your service, to express my high appreciation of the confidence which you, as well as the stockholders have always manifested towards me, and to offer my good wishes for the prosperity of the company.

I am gentlemen, very respectfully,

Your obedient servant,

WALTER GWYNN,

Chief Eng. W. & M. R. R. Co.

Junction Railroad.

We copy from the Connersville Times the following account of the condition and prospects of the above road.

The Junction railroad, extending from Indianapolis by way of Rushville, Connersville, Liberty and Oxford to Hamilton, where it connects with the Cincinnati, Hamilton and Dayton railroad, has been under contract and in process of construction for more than a year past. It was originally incorporated by the Legislature of Indiana in February, 1848. In March, 1849, the Legislature of Ohio granted the right of way to the company to extend its road to Hamilton, and granted to the company all the rights and privileges conferred by the general law of Ohio, passed in February, 1848. In February, 1853, the road was extended from Rushville to Indianapolis under the general railroad law Indiana; and in March, 1853, the Legislature of Indiana conferred upon the company additional special privileges. The charter of this company is of the most liberal character. It is not restricted by individual liability, or any other illiberal provisions, which must destroy the value of the stock in any road organized under the new constitution of Ohio. A portion of the Junction road was put under contract in January, 1853; and at a subsequent period, the residue of the road from Indianapolis to Hamilton was placed under contract. There is now a large force upon every division of the road, and work to the amount of more than \$300,000 has been done by the contractors.

The citizens of Cincinnati have taken more than six hundred thousand dollars of stock in the Junction road, a considerable portion of it in cash subscriptions; and the citizens of Indianapolis have about one hundred thousand dollars of stock in the road.

The Junction railroad from Hamilton Indianapolis, less than one hundred miles in length, will cost, when finished in complete running order, \$2,130,000. There are no tunnels, sharp curves, or high grades upon this road. Eighty-five miles between Hamilton and Indianapolis are straight lines.

The local business of the road, passing as it does through flourishing towns surrounded by a rich and highly cultivated country, cannot certainly be exceeded by any other road between Cincinnati and Indianapolis. The contract of the company with the Cincinnati, Hamilton and Dayton road, secures the conveyance of passengers and freight between Indianapolis and Cincinnati without change of cars or delay.

The whole amount of stock subscribed to the Junction railroad is now more than two millions of dollars, of which the stock taken by the contractors, and the cash subscriptions amount to six hundred thousand dollars. The right of way has been obtained upon nearly the whole line, and the work is progressing so as to give assurance that it will be completed at an early day.

Ruttan's Patent Railroad Car Ventilator.

There is one car running on the direct route between New York and Buffalo, to which we would invite the attention of the world, as the most complete and perfect traveling vehicle yet devised. The width allows ample room for the fullest comfort of every passenger, and the elegance and luxury of its furnishing, common to all the express passenger cars of that line, raise it at once fully to the level of any traveling equipage extant, while the perfect operation of the ventilator, fitted only to this single carriage, entirely removes the sense of fatigue usually attendant on a protracted journey. The inventor of this arrangement, Henry Ruttan, Esq., of Coburg, Canada West, without laying claim to great scientific acquirements, or to any extensive experience in constructing such devices, has practically solved the problem of perfect ventilation without too much cooling the interior of a car in severe cold weather. The air is received, warmed, and expelled by a simple combination of fixed apparatus, without any delicate mechanism liable to be disordered, and in such a manner as to insure a proper and very nearly even temperature in all parts of the car. On the occasion of a recent journey over this road our attention was attracted to this ventilator, which elicited the warmest commendation from the passengers and from all employed on the train. It is intended to supply in summer a plenty of pure cool air, free from dust or other annoyances; but of its performances in that respect we can speak but theoretically, not having, as in its winter application, any positive proof of its efficiency. In this individual case it appears somewhat more cumbersome and powerful than is necessary in winter, though none too much so for summer weather. The fresh pure air is caught by a projecting box or cap on the center of the roof, and conveyed down a passage on the inside of the car, through the floor, to a shallow tank beneath. Spreading out here, it deposits its cinders, and to a considerable degree its smoke and dust, after which it rises through the stove—which is of peculiar construction, on the principle of a hot-air furnace—and is projected in every direction from the top of the stove into the car. The opening for its escape again from the interior to the open air is near the floor, and the current of warm foul air is conveyed under the entire length of the car, completely protecting the feet of the passengers from the influence of the external cold. Having completed this circuit, it is carried up through suitable passages and allowed to escape from a cap on the top. These ejecting caps are at each end of the car, to allow of running in each direction, and are closed by light self-acting valves, opening outward. The current induced by the rapid motion through the air closes the valve on the forward and opens that on the hinder one, and each valve is so balanced by a short loaded lever or tumbling bob, that the weight tends equally to hold either open or closed. It results from this contrivance, (which may appear paradoxical to some, but is easily constructed by any mechanic,) that whichever position the valves may assume in the most rapid motion, will be maintained until the motion is reversed. The openings from these ejectors or exhausting boxes into the cars are controlled by hand, but the only effect of exhausting direct from either end may be an unpleasant cooling of the floor. The temperature at the front, middle and rear, on one occasion, was respectively 65, 75 and 69 degrees, and on another, 72, 90, and 79 degrees, the thermometers being in the first trial exposed at each end of the car to an intimate contact with the cold window, and in the second exposed in the middle to direct radiant heat from the stove. A third trial, under favora-

ble conditions for testing the actual temperature of the air, gave 72, 72, 72 degrees, in the three locations, above the heads of the passengers, while a thermometer laid in the passage way near the end—in the location usually occupied by a stratum of cold air flowing from the crack under the door—indicated 65 degrees Fahrenheit. Another trial gave 62, 65, 65 degrees at the top, and 66 degrees on the floor, the increased temperature being probably due to some accidental chance. We have been thus particular, because facts rather than theories are what is now required in regard to ventilation, and the feelings cannot well be trusted. A few comparisons having established the evident offensiveness of the unventilated cars in the train, the senses alone might perhaps be ready to accord unmerited praise to Mr. Ruttan's invention.

The apparatus is capable of various modifications in the details and location of the parts, several of which the inventor proposes soon to introduce. The shallow water tank underneath should in summer be of the greatest practicable area, and provided with gratings or their equivalents, to be kept wet by motion of the car, so as to present the largest possible amount of water surface to collect the dust from the air. If this portion of the apparatus can be worked as efficiently as the warming and ventilating is now performed, railroad traveling in summer will begin to assume the comfort and character of a respectable and dignified employment, instead of, as at present, inducing the appearance of a sheep stealer, or at least of a coal heaver, in every unfortunate who is compelled to travel either for business or pleasure. From present appearances, any company adopting these ventilators will have little difficulty in monopolizing all the pleasure travel, provided they are always as successful as the one under consideration.

Condition of the Cumberland Coal and Iron Company.

Andrew Mehaffey, Esq., the President of this company, has issued a circular, dated April 20th, which contains the following interesting statement of its present condition:

Railroad, Rolling Stock, Mine Cars, Machinery, &c.,.....	\$575,816.65
Canal Boats, Steamers, Schooners, Barges, and other Personal Property, Real Estate, in the cities of Cumberland, Alexandria and Baltimore,.....	464,079.42
Mining Lands, Improvements at the Mines, &c.,.....	4,595,897.71
Cash Assets, Bills Receivable, and Balances due on Accounts,.....	267,197.82

\$5,902,491.60

2,822 Shares of the capital stock belong to the company.

The property comprises 12,000 acres of coal lands, on which 5 mines have been opened and worked; 11 miles of locomotive railroad, extending from the company's mining village of Eckhart to Cumberland, and connecting with the Chesapeake and Ohio canal and the Baltimore and Ohio railroad; mine railways extending from main track into each opening; 5 locomotives; 70 hopper and gondola cars; 400 mine cars; horses, implements and machinery for mining 2,000 tons of coal daily; several acres of land in Baltimore and town of Cumberland; extensive wharves and wharf-room at Alexandria; 44 barges, of 200 tons, plying inland from Baltimore to Philadelphia and New York, built by the company within the past year; 54 canal boats on the Chesapeake and Ohio canal; and 12 sailing vessels, of from 200 to 600 tons burthen.

The company has no floating debt. Its bonds, originally \$825,000, were anticipated, paid and cancelled to the amount of \$288,000, leaving outstanding \$537,000.

Since the resumption of work, the company has already dispatched a daily average of 833 tons of coal to market, and is constantly increasing the quantity.

Report of the Pennsylvania Railroad.

The following statement shows the tonnage of articles received at, and sent from Philadelphia, via the Pennsylvania Railroad, during the year 1853. The statement will constitute an interesting comparison with the business of similar routes.

LIST OF ARTICLES.	Sent from Philadelphia to Pittsburgh.	Received at Philadelphia from Pittsburgh.	Sent from Philadelphia to Way Stations.	Received at Philadelphia from Way Stations.
	Pittsburg.	Pittsburg.	Way Stations.	Way Stations.
Agricultural Implements,.....	.....	113,088	43,638	31,622
Boots, shoes, hats, &c.,.....	5,102,305	.....	457,889	.....
Books and stationery,.....	1,831,008	105,115	133,990	26,276
Butter, eggs, &c.,.....	502	856,067	.....	1,602,100
Brown sheeting and bagging,.....	2,547,250	.....	164,277	.....
Bark and sumac,.....	.....	.....	.....	993,085
Cedarware,.....	81,908	10,407	112,281	.....
Confectionery and foreign fruits,.....	809,768	.....	294,046	.....
Coffee,.....	1,232,574	.....	961,048	.....
Cotton,.....	.....	893,036	13,203	.....
Coal,.....	.....	4,500	18,087	6,385,480
Camphine and burning fluid,.....	.....	.....	51,915	.....
Copper and tin,.....	192,061	63,437	192,519	.....
Dry goods,.....	33,070,486	440,680	2,640,919	61,919
Drugs, medicines and dyestuffs,.....	2,782,757	55,492	829,681	145
Fresh meats, poultry and fish,.....	.....	6,000	.....	223,394
Flour,.....	.....	29,125,144	.....	11,906,470
Feathers, furs and skins,.....	.....	677,368	.....	15,616
Furniture and oil cloth,.....	551,442	39,246	209,521	49,117
Glass and glassware,.....	442,881	271,709	203,288	610
Green and dried fruits,.....	.....	3,210,915	.....	392,883
Grass and other seeds,.....	.....	549,829	4,207	915,178
Grain of all kinds,.....	.....	166,047	.....	2,973,660
Groceries, (except coffee,).....	1,894,202	109,743	3,573,679	8,368
Ginseng,.....	.....	99,120	.....	.....
Hardware,.....	4,885,946	540,704	1,224,759	229,896
Hides and hair,.....	.....	209,932	1,784,718	75,890
Hemp and cordage,.....	124,110	1,257,429	173,625	.....
Iron, rolled, hammered, &c.,.....	227,500	174,058	1,239,598	457,417
Iron, blooms and pig,.....	.....	.....	11,200	1,264,351
Live stock,.....	326,305	6,320,100	59,115	3,855,695
Lead and shot,.....	9,862	21,544	5,727	.....
Leather,.....	855,898	409,871	155,964	2,291,856
Lard, lard-oil and tallow,.....	.....	5,292,295	.....	94,632
Lumber and timber,.....	.....	12,490	.....	1,837,168
Machinery, castings, &c.,.....	2,491,490	325,272	1,718,337	.....
Marble and cement,.....	778,019	25,289	683,842	.....
Malt and malt liquors,.....	48,405	6,291	181,586	3,175
Nails and spikes,.....	2,000	.....	367,920	544,080
Oil,.....	675,885	.....	442,066	.....
Oysters,.....	218,849	.....	12,728	.....
Paper of all kinds, and rags,.....	657,833	14,758	.....	150,572
Plaster,.....	8,055	.....	89,636	.....
Potatoes, turnips, &c.,.....	50,451	.....	64,227	45,819
Pot, pearl, and soda ash,.....	879,197	45,317	.....	.....
Queensware and earthenware,.....	1,517,487	276,219	451,569	1,185
Salt meats and fish,.....	759,955	21,034,944	1,261,023	133,716
Soap and candles,.....	13,202	784,131	72,554	7,225
Tobacco,.....	611,076	905,335	286,636	4,126
Tar, pitch and rosin,.....	44,570	1,465	56,665	.....
Wines and liquors, foreign,.....	702,374	16,450	637,026	.....
Whisky and alcohol,.....	5,185	965,231	1,345	583,856
Wool and woolen yarn,.....	36,135	2,189,109	53,858	214,568
Miscellaneous,.....	914,187	66,437	196,603	53,998
Total First Class,.....	48,044,035	2,258,401	4,650,423	2,049,436
Total Second Class,.....	17,036,824	8,984,118	9,333,668	1,971,958
Total Third Class,.....	6,315,885	9,280,954	3,844,904	6,041,400
Total Fourth Class,.....	2,207,773	57,151,131	3,476,290	27,530,264

Total during year. Pounds,..... 68,604,217 77,674,604 21,305,285 37,593,158

The following is a statement of the monthly receipts and expenditures of the Pennsylvania Railroad.

Date.	Gross Rec'ts	Expenditure.	Net Rec'ts.
January,.....	\$235,383 28	\$124,729 25	110,654 03
February,.....	285,068 49	128,163 20	156,905 29
March,.....	311,591 92	168,206 07	143,385 85
April,.....	260,334 43	140,637 62	119,696 81
May,.....	185,767 01	121,945 27	63,822 64
June,.....	150,320 73	114,986 41	36,322 32
July,.....	148,560 84	*170,545 78	*21,984 94
August,.....	225,312 57	128,764 97	96,547 60
September,.....	248,528 10	130,489 51	118,038 59
October,.....	234,193 99	131,862 19	102,331 80
November,.....	237,536 76	132,247 58	105,289 18
December,.....	252,282 35	*181,993 44	70,288 91

*Including State Tax.

\$2,774,889 37 \$1,678,681, 29 \$1,101,208 08

THE TREASURER REPORTS

	Dolls.	C.
Amount received from Stockholders, in payment of Instalments,.....	11,228,020	00
Amount received on account five million loan,.....	4,491,654	82
Amount received from Passengers, Freight, Mails, Expresses, &c.,.....	2,768,769	72
Temporary Loans,.....	593,293	59
	19,081,737	63

AMOUNT EXPENDED.

EASTERN DIVISION.

Graduation and Masonry,.....	\$1,956,642	87
Superstructure, Ballast, Chairs, Rails, Ties, Spikes, Sills, &c.,.....	1,908,235	35
Engineer Department,.....	174,686	34
Land Damages, Real Estate, Right of Way, &c.,.....	325,175	09
Real Estate in Philadelphia County,.....	344,341	62
Repairs Harrisburg and Lancaster Rail Road,.....	7,173	41
	4,716,254	68

WESTERN DIVISION.

Graduation and Masonry,.....	4,315,063	03
Superstructure, Ballast, Chairs, Rails, Ties, Spikes, Sills, &c.,.....	1,145,378	30
Engineer Department,.....	202,140	10
Land damages, Real Estate, Right of Way,.....	149,509	06
	5,812,090	49

SECOND TRACK.

Graduation,.....	429,369	05
Superstructure, Ballast, Chairs, Rails, Ties, Spikes, Sills, &c.,.....	723,483	54
	1,152,852	59
Machine Shops, Repair Shops, Stations, Warehouses, &c.,.....	991,966	36
Locomotives and Cars,.....	1,660,710	01
Subscription to		
Marietta and Cincinnati Rail Road,.....	\$650,000	00
Maysville and Big Sandy Rail Road,.....	100,000	00
Ohio and Pennsylvania Rail Road,.....	150,000	00
Ohio and Indiana, Rail Road,.....	300,000	00
Springfield, Mount Vernon, &c.,.....	100,000	00
	1,300,000	00
Transportation Expenses, State Toll, Harrisburg and Lancaster Rail Road Toll, Interest, Expenses, &c.,.....	2,466,209	50
To credit of cost of construction,.....	302,560	22
	2,768,769	72
Cost of construction, balance on Stockholders' Interest List,.....	26,768	51
	6,748,209	60
	18,429,407	36

Balance in hands of Treasurer and Agents,.....

652,330 27

[E. E.]

GEORGE V. BACON, Treasurer.

Philadelphia, January 1, 1854.

New Jersey Central Railroad.

The annual meeting of the stockholders of the Central railroad of New-Jersey was held at Elizabethport on the 1st inst. The annual report was read, which gives the following statement, exhibiting the condition of the company:

STATEMENT.

Total Receipts for last year	\$365,832	72
Ordinary Expenses.....	186,622	63
Net Earnings.....	\$179,210	09
Paid in on Capital Stock.....	\$2,679,935	
Mortgage Bonds.....	1,500,000	
Other indebtedness.....	77,006	
Unpaid Dividend.....	53,131	
Cost of Road.....	\$1,527,928	35
Station-houses, Shops, &c.....	83,000	00
Lands and works at Elizabethport.....	70,663	52
Ferry interest and boats	189,650	00
Equipment.....	263,931	00
Other property and materials.....	55,049	41
Renewals.....	37,048	88
Interest.....	32,211	22
Cash and cash items.....	45,590	84
	\$3,311,073	

The stockholders then took into consideration

a supplement to their charter, passed by the last Legislature, which was read and accepted.

The following board of directors for the ensuing year were chosen: John S. Johnston, Jno. C. Greene, Benj. Williamson, Fred. T. Frelinghuysen, Wm. E. Dodge, Adam Norris, John O. Stearns, H. D. Maxwell, Alfred Vail. The work of laying a double track is progressing. The Lehigh extension is in a state of forwardness and it is probable that the connection will be made so as to bring down coal before the next winter.

Sandusky and Louisville Railroad.

SANDUSKY AND LOUISVILLE RAILROAD—CONTRACT LET TO A. DEGRAFF.—We have just learned that the contracts for the completion of the first section of the Sandusky and Louisville road, from Huntsville to Piqua, were let Thursday, to A. DeGraff, at a price entirely satisfactory to the company. The bids were numerous. Energetic and responsible contractors from Kentucky, Indiana, and other States were among the bidders; and their estimate of the importance of the enterprise was evinced by offers to receive a large proportion of the stock of the road in payment.

The first 11 miles, from Huntsville to DeGraff, is to be completed in six months, and to Piqua in ten months more. From Piqua to Eaton, 36 miles, the work is well advanced and will be ready for opening at an early day. This will leave but 12 miles in Ohio, to be built; and this 12 miles will,

of course, be completed to connect with the Indiana portion of the line, soon to be let.—*Sandusky Register.*

New York and St. Louis.

It is almost incredible that these two cities, the one in the Mississippi Valley near the mouth of the great Missouri; and the other at the mouth of the Hudson, on the Atlantic, some thirteen hundred miles, or more apart, should now be placed within less than sixty hours of each other. It is but a few years since the same journey occupied as many days, and involved an expense in money besides, which none but the "favored few" could afford. But, now, three days and twenty-five or thirty dollars are all the requisitions necessary for the trip. For particulars we invite attention to the card of Mr. JOHN F. PORTER, agent of the Michigan Southern Railway, in another column.

Mortgage Bonds of the Harlem Railroad.

This Company are about to consolidate their entire indebtedness by an issue of \$3,000,000 of bonds which are to constitute a first and only lien upon the road and the property of the Company. Of this loan, the Company reserve \$1,300,000 for the exchange of all the outstanding plain Bonds of the Company now in existence, and propose to dispose of the residue, One Million Seven Hundred Thousand Dollars, for the purpose of discharging all their floating debt, and of payment of the expenditure necessary for the full completion of the improvements now in progress upon the road.

The capital of the Company paid in is \$1,500,000 of Preferred Stock, and \$3,000,000 of Common Stock, upon which regular dividends have been earned and paid for the last five years of Eight (8) per cent. per annum on the former and Four (4) per cent. on the latter.

The receipts of 1853 amounted to \$964,476, being an increase of twenty-six (26) per cent. over 1852, and there is no doubt a still larger business will be done the present year.

The amount paid in dividends on stock the past year, after paying interest on the debt, was \$264,000, or \$54,000 more than the interest on a funded debt of \$3,000,000.

It would be difficult therefore to find a better security than the one about to be created, taking the past earnings of the Company as a criterion.

But the value of the position occupied by the Harlem road, in this city, has neither begun to be fully understood by the public, nor felt in the receipts of the road. While the upward progress of the city threatens to drive back the locomotive upon all other existing, or proposed routes, the Harlem will always form an exception to other lines. This road can be so constructed as to allow the trains to run, at all times, at full speed, to 32d street, even should the whole island be covered with as dense a population as is found in the lower wards. This invaluable privilege, secured to it by the peculiar location of its line, and its capacity for future improvement, in our opinion renders that portion of the Company's road on Manhattan Island, worth more than the whole funded debt. Between the two tunnels, the track can, at comparatively trifling expense, be raised sufficiently to be above the reach of the ordinary travel. When this shall be done, the depot will be located on the elevation through which the lower tunnel is constructed. From that point, branch roads will radiate to every part of the city. The Company

have paid for this advantage by the depreciated value of the stock for a long term of years. But this advantage is secured, and will soon begin to yield its fruits. The privilege of running a locomotive train from the head of the island to 32d street, and through what must soon be one of its most densely inhabited portions, is one, the value of which can hardly be over estimated.

American Railroad Journal.

Saturday, May 6, 1854.

Railway Furnishing Agency, Chicago, Ill.

Chicago has become, within the last five years, one of the greatest railway centres in the world, and all the roads terminating within her bounds have located there machine and repair shops. It is a natural consequence that the demand for almost all kinds of stock and all classes of equipment, is constant and large; and much inconvenience has no doubt been experienced from the fact, that there has been no furnishing establishment at hand, from which they could be obtained at once.

There is no longer any difficulty on this point, however, as Mr. E. R. T. Armstrong has recently established there an agency, for the express purpose of aiding both railway and manufacturing companies.

It will be seen by reference to his card, that Mr. Armstrong designs keeping on hand such articles as are most required by railway companies, of the best manufacture. There can be no doubt that he can serve beneficially both interests, with which he is most intimately connected, at the same time that he will serve himself.

Stock and Money Market.

The Share market for the past week has been heavy, though without an excessive decline in prices. Money is in more active demand from the wants of the mercantile community at this period of the year. There is only a nominal business doing in railroad bonds on stock for investment. In fact, for no time for several years previous has there been such a general dullness in the share and bond market, and such an indisposition to enter into new engagements involving the use of large sums.

The coinage at the Philadelphia Mint for the first four months of the present year is thus reported:

Gold.	
Double Eagles	\$9,790,920
Eagles	365,640
Half Eagles	333,585
Quarter Eagles	554,025
Dollars	470,881
Gold	\$11,515,051
Silver.	
Half Dollars	\$654,000
Quarters	1,678,000
Dimes	135,000
Half Dimes	50,000
Silver	\$2,517,000
Total	\$14,032,051

The receipts of California gold this year thus far compare as follows with those of last year:

	1853.	1854.
January	\$4,962,962	\$4,201,000
February	3,548,523	2,514,000
March	7,533,752	3,982,000
April	4,766,000	3,442,000
Totals	\$20,811,238	\$14,139,000

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,748	118,520	none	83
Androscoggin and Kennebec.. "	55	824,863	1,043,540	2,036,140	177,003	80,053	none	30
Kennebec and Portland.. "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	6	98	
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	30
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	37
Northern	82	3,016,634	.....	.....	328,782	163,075	5	52
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	6	85	
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	108½
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	873,500	.....	.....	none	12½
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	26
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9½
Vermont Central	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	9½
Vermont and Canada	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	97½
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	90
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	103½
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6½	81
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	418,289	7	99
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	55
Eastern..... "	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	84
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	95½
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	88½
New Bedford and Taunton.. "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,815	35,214	none	68
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,897	122,866	none	96½
Taunton Branch..... "	11	250,000	none.	307,186	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	15½
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	62
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	96½
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	66
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	122
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	39
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	90
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	54
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna..... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	70
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	64
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	50
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	104½
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	19
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga..... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington..... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington..... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,708	8	93
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,326	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	74½
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	73½

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn. 250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton....	" 30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	" 47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio.....	Md. 381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	62
Washington branch.....	" 38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..	" 57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....	Va. 65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	" 27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	" 64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	" 73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg....	" 22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	" 76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	" 62	1,357,773	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	" 107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	" 73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac....	" 32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.....	N.C. 161	1,338,878	1,134,698	2,965,574	610,038	153,898	6	.....
Charlotte and South Carolina.	S.C. 110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.....	" 140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina.....	" 242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..	" 100	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central.....	Ga. 191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia.....	" 211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western.....	" 101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee.....	" 71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western.....	" 50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River	Ala. 55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.....	" 93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	" 33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..	" 88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern.....	Miss. 60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..	Tenn. 80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga...	" 125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington....	Ky. 38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.....	" 29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.....	" 65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.....	" 100	1,979,100	1,142,200	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.....	Ohio. 147	2,000,000	1,600,000	3,279,908	432,682	267,278	10	81½
Cleveland and Toledo.....	" 95	.....	.....	.....	.....	.....	93	92
Cleveland, and Erie.....	" 135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Cleveland and Columbus.....	" 46	.....	.....	2,000,000	.....	.....	.....	65
Columbus, Piqua and Indiana..	" 61	.....	.....	.....	.....	.....	.....	.....
Columbus and Lake Erie.....	" 60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati, Ham. and Dayton	" 40	310,000	550,000	925,000	.....	.....	.....	62
Cincinnati and Marietta.....	" 20	.....	.....	In prog.	.....	.....	.....	75
Dayton and Western.....	" 36	.....	.....	In prog.	.....	.....	.....	56
Dayton and Michigan.....	" 31	.....	.....	.....	.....	.....	.....	.....
Eaton and Hamilton.....	" 37	.....	.....	In prog.	.....	.....	.....	.....
Greenville and Miami.....	" 84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Hillsboro.....	" 167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Little Miami.....	" 57	.....	.....	In prog.	.....	.....	.....	79
Mansfield and Sandusky.....	" 187	1,750,700	2,450,000	.....	.....	.....	.....	.....
Mad River and Lake Erie....	" 44	750,000	300,000	.....	.....	.....	.....	.....
Ohio Central.....	" 54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Ohio and Mississippi.....	" 81	.....	.....	In prog.	237,506	.....	.....	77½
Ohio and Pennsylvania.....	" 131	.....	.....	.....	.....	.....	.....	.....
Ohio and Indiana.....	" 83	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley...	" 90	1,128,486	1,289,000	1,869,932	.....	.....	.....	90
Columbus and Xenia.....	" 62	.....	.....	.....	.....	.....	.....	76
Cincinnati and Cincinnati...	" 159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Lafayette and Indianapolis...	" 72	632,387	663,100	1,353,019	105,944	71,446	4	108
Madison, Indianapolis & Peru	" 135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Terre Haute and Indianapolis	" 92	.....	500,000	In prog.	473,548	286,152	.....	130
Rock Island and Chicago.....	" 315	3,741,564	7,276,616	1,200,922	586,929	.....	17	112½
Chicago and Mississippi.....	" 282	3,977,563	8,618,505	1,145,598	582,816	.....	8	103½
Illinois Central.....	" 38	non	In prog.	.....	.....	.....	.....	.....
Galena and Chicago.....	" 38	.....	.....	In prog.	.....	.....	.....	.....
Michigan Southern and Ind. N. Mich.	" 38	.....	.....	.....	.....	.....	.....	.....
Michigan Central.....	" 38	.....	.....	.....	.....	.....	.....	.....
Pacific.....	" 38	.....	.....	.....	.....	.....	.....	.....

This shows a great falling off, but does not indicate the actual amount received. Large amounts of gold are shipped to Europe in bars from the San Francisco Assay Office, which do not come to the Philadelphia Mint.

The deposits at the Mint for the same period have been as follows:

	1853.	
	Gold.	Silver.
January.....	\$4,962,097	\$14,000
February.....	3,543,523	13,000
March.....	7,533,752	70,000
April.....	4,766,000	2,550,000
Total.....	\$20,810,372	\$2,647,000
	1854.	
	Gold.	Silver.
January.....	\$4,215,579	\$108,000
February.....	2,514,000	1,166,000
March.....	3,932,000	147,000
April.....	3,442,000	129,000
Total.....	\$14,153,579	\$1,550,500
The shipments of specie from January 1, have been.....		
Same time in 1853.....		\$7,366,061
" " 1852.....		5,390,370
" " 1851.....		9,067,564
" " 1850.....		12,631,148
		1,573,298

The Bank statement for the week ending April 29th, 1854, is as follows:

	April 29.	April 22.
Loans.....	\$90,245,049	\$90,376,346
Specie.....	10,951,135	10,526,976
Circulation.....	9,377,678	9,353,854
Deposits.....	59,719,381	59,225,902

Manufacture of Railroad Iron in the United States.

A correspondent in *The Philadelphia Bulletin* furnishes a list of sixteen iron establishments which will this season turn out 160,000 tons of railroad bars, representing in production \$5,650,000 for labor and 1,826,000 tons of raw material, as follows:

	tuns.
Pig iron required. 1½ tun per tun of rails..	213,333
Coal used..... 5½ tun per tun of rails..	340,000
Iron ore..... 3½ tun per tun of rails..	560,000
Limestone..... 1½ tun per tun of rails..	213,333

Total number of tons raw material. 1,826,666

The capital employed in these establishments is reckoned \$10,000,000. They support a population of 92,500 persons, and consume \$4,625,000 in breadstuffs, besides affording a profit to all the various branches of business in and around the mills, other than to the owners, of \$1,949,000, participated in by coal lands, coal operators, ore lands, transporters and storekeepers. The following is the list of the mills and their production of rail in 1854:

Montour Iron Works, Danville, Pa.....	13,000
Rough and Ready, Danville, Pa.....	4,000
Lackawanna, Scranton, Pa.....	16,000
Phoenix Iron works, Phoenixville, Pa.....	20,000
Safe Harbor, Safe Harbor, Pa.....	15,000
Great Western, Brady's Bend, Pa.....	12,000
New Works, Pittsburgh, Pa.....	5,000
Pottsville Iron Works, Pottsville, Pa.....	3,000
Cambria Iron Works, Cambria, Pa.....	5,000
Trenton Works, Trenton, N. J.....	15,000
Massachusetts Iron Works, Boston, Mass.....	15,000
Mt. Savage Iron Works.....	12,000
Richmond Mill, Richmond, Pa.....	5,000
Washington Rolling Mill, Wheeling, Va.....	5,000
Crescent Works, Wheeling, Va.....	5,000
New Mill, Portsmouth, Ohio.....	5,000
Total.....	100,000

New York Canals.

The New York canals were opened for business on the first instant.

La Crosse and Milwaukee.

Circular to the Stockholders of the La Crosse and Milwaukee Railroad in Wisconsin.

An auspicious period in the history of our operations having arrived, it is appropriate, in view of progress made and difficulties surmounted, that we should interchange congratulations with our coadjutors, and for the information of those who are not cognizant of our current operations, present some of the reasons for mutual encouragement.

The Second Annual Report of the Board of Directors exhibits the condition of the Company on the 31st of December, 1853.

As at that time, so ever since, and now, the work of grading the road bed has been and is progressing with efficient forces; the first eighteen sections under Messrs. Cooke & Sherwin, and from that point to Horicon, fifty miles from Milwaukee, under Messrs. Bradley, Whittemore & Co., with every prospect of being in readiness for the iron rail in the month of June next.

The consolidation of the Milwaukee, Fond du Lac & Green Bay Railroad Company with ours, increases our nominal Capital from Four Millions to six Millions Eight Hundred Thousand Dollars.

This arrangement was negotiated and agreed upon between the Companies in the month of January last, and confirmed by the Legislature of the State of Wisconsin on the 9th of March ultimo. The advantages derived from uniting the interests, present means, and resources of the two Companies are—

1st, It restores to this Company the control of the lake terminus of the Road—the entrepot of our route.

2d, It transfers to the La Crosse and Milwaukee R. R. Co. the entire subscription to the Capital Stock of the Mil. F. du L. & G. B. R. Co. made in the city of Milwaukee, and by parties elsewhere, amounting in the aggregate to over Two Hundred Thousand Dollars.

3d, The iron rails for 20 miles of track, purchased by the M. F. du L. & G. B. R. Co., become the property of this Company, which is delivered at the dock and ready for our use.

4th, Valuable real estate in the fourth and fifth wards of this city, purchased by that Company for Depot grounds, at the cost of \$30,000, becomes the property of this Company, with every prospect of increasing in value.

5th, The current expenses of carrying forward the enterprise by a plurality of organizations are reduced to those incident to only a single one; and thus in all the governmental, fiscal, executive and engineering departments, greater economy and more efficiency are secured to an undertaking, which, however it might be divided and subdivided, is, after all, a unit.

In this view of the subject we feel confident that all our associates and co-laborers at home will approve our course, as it meets the approval of our friends abroad. Its favorable influence upon our position in the money market is already perceptible.

Our Stock Agents along the line, as Mr. Clinton's report shows, are meeting with unprecedented success, so that we begin already to see our way clear for a million dollars of that class of securities; over 100,000 dollars of which have been negotiated, and all of which will be made available for the construction and equipment of the Road.

The fiscal condition of our Company, we may without boasting say, has been an enviable one. Our contractors have at every monthly estimate been paid their cash in full for all labor performed and materials furnished, and it is still the policy of the Company to avoid, to the utmost, contracting debts at Bank, or incurring, for any purpose, heavy and embarrassing liabilities.

Help, however, we must have, in order to post pone, to the most favorable period, (which we think has not yet arrived), putting a mortgage upon our road; we therefore improve the present occasion, to urge the prompt attention of Stock-

holders to installments called for upon subscribed shares.

The near approach of the period when our road must be in operation, and the necessity of extensive preparations for that earnestly-desired event, have justified the Executive Committee in authorizing contracts for Depots, Locomotives and Cars, which will call for their share of investment during the current year—say 2 twenty-four ton machines in the months of June and July, and five more between August and December.

In providing the rolling stock of our road, the Superintendent recommends, and our Committee have authorized, contracting for such only as is of the highest repute for efficiency and safety, and especially that all passenger cars be provided with six-wheel trucks—i. e. twelve wheels to each.

True, the expense will be a few hundred dollars greater than for those usually employed, but the additional safety to passengers, as well as comfort in greater breadth of seats inside, we think warrants this increased primary expenditure.

A negotiation for twelve hundred tons more of iron rails, on satisfactory terms, is now pending, which, if closed, as we expect it may be within a few days, will provide for the extension of our track to Hartford; and vigorous efforts will continue to be put forth to reach our Horicon Depot by October next.

The final location of the route from Fox Lake to Portage City is now being made by Chief Engineer Sill, and contractors are ready to put forces on to that division of the line so soon as the means in hand will justify the commencement of the work.

Altogether, then, we say, our condition and our prospects are good; our success, thus far, has more than realized public expectations, though it has not exceeded our own purposes.

Our heart and hope are yet unabated, and, sustained by you in the future, as we have hitherto been, a bright, good day, not distant, will witness the consummation of our wishes, the triumph of complete success.

STODDARD JUDD, President.

Millwaukee, April 6, 1854.

Patent Law. Winans vs. Denmead.

The following important decision is published in advance of the volume of the Supreme Court reports, in consequence of its interest to patentees generally. It was argued at the present term of the Supreme Court, Mr. Latide for plaintiff, Mr. L. Mason Campbell for defendant.

Mr. Winans had patented a car for carrying coal, made of thin sheet iron, in the form of the frustum of a cone, substantially as described in his specification. The car of the defendant was made of iron of the same thickness, but was in the form of the frustum of an octagonal pyramid. The excellence of both cars was due to their being self-sustaining—dispensing with framing, and carrying more coal, in proportion to dead weight, than had ever been carried before. In a word, they accomplished the same useful results, in the same way. But one was a cone and the other a pyramid. The horizontal section of one was a circle, and the other an eight-sided figure; and as the specification claimed the conical form only substantially, the district judge ruled that the pyramidal form was no infringement. And there was an appeal, and the Supreme Court, availing of the occasion, had laid down the principles upon which specifications are to be construed, in a manner that establishes the law in this respect more fully than has yet been done, and reversing the decision of the district judge, sent back the case, that it might be determined by a jury whether the defendant substantially embodied the patentee's mode of operation,

and attained the same kind of result as was reached by his invention.

SUPREME COURT OF THE UNITED STATES.

No. 43—December Term, 1853.

Ross Winans, plaintiff in error, vs. Adam, Edward and Talbot Denmead. In error to the Circuit Court of the United States for the District of Maryland.

Mr. Justice CURTIS delivered the opinion of the Court.

This is a writ of error to the circuit court of the United States for the district of Maryland. The plaintiff in error brought his action in that court, for an infringement of the exclusive right to make use and sell "an improvement in cars for the transportation of coal, &c." granted to him by letters patent, bearing date on the twenty-sixth day of June, 1847; and, the judgment of that court being for the defendants, he has brought the record here by this writ of error.

It appears by the bill of exceptions that the letters patent declared on were duly issued, and that their validity was not questioned; but the defendants denied that they had infringed upon the exclusive right of the plaintiff.

On such a trial, two questions arise. The first is, what is the thing patented; the second, has that thing been constructed, used, or sold by the defendant.

The first is a question of law, to be determined by the court, construing the letters patent and the description of the invention and specification of claim annexed to them. The second is a question of fact, to be submitted to a jury.

In this case it is alleged the court construed the specification of claim erroneously, and thereby withdrew from the jury questions which it was their province to decide. This renders it necessary to examine the letters patent and the schedule annexed to them, to see whether their construction by the circuit court was correct.

In this, as in most patent cases, founded on alleged improvements in machines, in order to determine what is the thing patented, it is necessary to inquire:

1. What is the structure or device described by the patentee as embodying his invention.
2. What mode of operation is introduced and employed by this structure or device.
3. What result is attained by means of this mode of operation.
4. Does the specification of claim cover the described mode of operation by which the result is attained.

Without going into unnecessary details, or referring to drawings, it may be stated that the structure described by this patent, is the body of a burden railroad car, made of sheet iron; the upper part being cylindrical and the lower part in the form of a frustum of a cone, the under edge of which has a flange secured upon it, to which flange a moveable bottom is attached. This bottom is made moveable, in order to discharge the load through the aperture left by removing it.

To understand the mode of operation introduced and employed by means of this form of the car-body, it is only necessary to state, what appears on the face of the specification and was testified to by experts at the trial as correct, that by reason of the circular form of the car-body the pressure of the load outwards was equal in every direction, and thus the load supported itself in a great degree; that by making the lower part conical, this principle of action operated throughout the car, with the exception of the small space to which the moveable bottom was attached; that, being conical, the lower part of the car could be carried down below the track, between the wheels, thus lowering the centre of gravity of the load; that the pressure outwards upon all parts of the circle being equal, the tensile strength of the iron was used to a much greater degree than a car of a square form; and, finally, that this form of the lower part of the car facilitated the complete discharge of the load through the aperture when the bottom was removed.

It thus appears that, by means of the change of form, the patentee has introduced a mode of operation not before employed in burden cars, that is to say, nearly equal pressure, in all directions, by the entire load, save that small part which rests on the moveable bottom; the effects of which are that, the load, in a great degree, supports itself, and the tensile strength of the iron is used; while at the same time, by reason of the same form, the centre of gravity of the load is depressed and its discharge facilitated.

The practical result attained by this mode of operation is correctly described by the patentee; for the uncontradicted evidence at the trial showed that he had not exaggerated the practical advantage of his invention. The specification states:

"The transportation of coal, and all other heavy articles in lumps, has been attended with great injury to the cars, requiring the bodies to be constructed with great strength to resist the outward pressure on the sides, as well as the vertical pressure on the bottom, due not only to the weight of the mass, but the mobility of the lumps among each other, tending to 'pack,' as it is technically termed. Experience has shown that cars, on the old mode of construction, cannot be made to carry a load greater than its own weight; but by my improvement I am enabled to make cars of greater durability than those heretofore made, which will transport double their own weight of coal, &c."

Having thus ascertained what is the structure described, the mode of operation it embodies, and the practical result attained, the next inquiry is, does the specification of claim cover this mode of operation by which this result is effected.

It was upon this question the case turned at the trial in the circuit court.

The testimony showed that the defendants had made cars, similar to the plaintiff's, except that the form was octagonal instead of circular. There was evidence tending to prove that, considered in reference to the practical uses of such a car, the octagonal car was substantially the same as the circular. Amongst other witnesses upon this point was James Millholland, who was called by the defendants. He testified:

"That the advantage of a reduced bottom of the car was obtained, whether the car was conical or octagonal; that the strengthening of the bottom, due to the adoption of a conical form, was the same whether the octagonal form was adopted or the circular; that the circular form was the best to resist the pressure, as, for instance, in a steam boiler, and an octagonal one better than the square form; that the octagonal car was not better than the conical car; that, for practical purposes, one was as good as the other; that a polygon of many sides would be equivalent to a circle; that the octagon car, practically, was as good as the conical ones; and that, substantially, the witness saw no difference between the two."

The District Judge who presided at the trial, ruled:

That while the patent is good for what is described therein, a conical body in whole or in part, supported in any of the modes indicated for a mode of sustaining a conical body on a carriage or truck; and drawing the same, and to those principles which were due alone to conical vehicles, and not to rectilinear bodies, and it being admitted that the defendants' car was entirely rectilinear, that there was no infringement of the plaintiff's patent.

The substance of this ruling was, that the claim was limited to the particular geometrical form mentioned in the specification; and as the defendants had not made cars in that particular form, there could be no infringement, even if the cars made by the defendants attained the same result by employing, what was in fact, the same mode of operation as that described by the patentee. We think this ruling was erroneous.

Under our law a patent cannot be granted merely for a change of form. The act of February 21, 1793, sec. 2d, so declared in express terms; and though this declaratory law was not reenacted in the patent act of 1836, it is a principle

which necessarily makes part of every system of law granting patents for inventions. Merely to change the form of a machine is the work of a constructor, not of an inventor; such a change cannot be deemed an invention. Nor does the plaintiff's patent rest upon such a change. To change the form of an existing machine, and by means of such change to introduce and employ other mechanical principles, or natural powers, or, as it is termed, a new mode of operation, and thus attain a new and useful result, is the subject of a patent. Such is the basis on which the plaintiff's patent rests.

Its substance is, a new mode of operation, by means of which a new result is obtained. It is this new mode of operation which gives it the character of an invention, and entitles the inventor to a patent; and this new mode of operation is, in view of the patent law, the thing entitled to protection. The patentee may, and should, so frame his specification of claim as to cover this new mode of operation which he has invented; and the only question in this case is, whether he has done so; or whether he has restricted his claim to one particular geometrical form.

There being evidence in the case tending to show that other forms do in fact embody the plaintiff's mode of operation, and, by means of it, produce the same new and useful result, the question is, whether the patentee has limited his claim to one out of the several forms which thus embody his invention.

Now, while it is undoubtedly true, that the patentee may so restrict his claim as to cover less than what he invented, or may limit it to one particular form of machine, excluding all other forms, though they also embody his invention, yet such an interpretation should not be put upon his claim if it can fairly be construed otherwise, and this for two reasons.

1. Because the reasonable presumption is, that having a just right to cover and protect his whole invention, he intended to do so. *Howorth vs. Hardcastle* Web. P. C. 484.

2. Because specifications are to be construed liberally, in accordance with the design of the constitution, and the patent laws of the United States, to promote the progress of the useful arts and allow inventors to retain to their own use, not any thing which is matter of common right, but what they themselves have created.

Grant vs. Raymond 6 Peters R. 218; *Ames vs. Howard* 1 Sum. 482, 435. *Blanchard vs. Sprague* 3 Sum. 585, 589; *Davol vs. Brown* 1 Wood and Minot 53, 57; *Parker vs. Haworth* 4 McLean's R. 372, *Le Roy vs. Tatham* 14 How. 181, and opinion of Parke, Baron, there quoted. *Nelson vs. Harford* Web. P. C. 341, *Russell vs. Cowley* Web. P. C. 470, *Burden vs. Winslow*, decided at the present term, 12 How.

The claim of the plaintiff is in the following words:

"What I claim as my invention, and desire to secure by letters patent, is making the body of a car for the transportation of coal, &c., in the form of a frustrum of a cone, substantially as herein described, whereby the force exerted by the weight of the load presses equally in all directions, and does not tend to change the form thereof, so that every part resists its equal proportion, and by which, also, the lower part is so reduced as to pass down within the truck frame and between the axle, to lower the centre of gravity of the load without diminishing the capacity of the car as described."

"I also claim extending the body of the car below the connecting pieces of the truck frame, and the line of draught, by passing the connecting bars of the truck frame, and the draught bar, through the body of the car, substantially as described."

It is generally true, when a patentee describes a machine, and then claims it as described, that he is understood to intend to claim, and does by law actually cover, not only the precise forms he has described, but all other forms which embody his invention; it being a familiar rule, that to copy the principle, or mode of operation described, is an

infringement, although such copy should be totally unlike the original in form or proportions.

Why should not this rule be applied to this case?

It is not sufficient to distinguish this case to say that, here the invention consists in a change of form, and the patentee has claimed one form only.

Patentable improvements in machinery are almost always made by changing some one or more forms of one or more parts, and thereby introducing some mechanical principle or mode of action not previously existing in the machine, and so securing a new or improved result. And in the numerous cases in which it has been held that to copy the patentee's mode of operation, was an infringement, the infringer had got forms and proportions not described and not in terms claimed. If it were not so, no question of infringement could arise. If the machine complained of were a copy, in form, of the machine described in the specification, of course it would be at once seen to be an infringement. It could be nothing else. It is only ingenious diversities of form, and proportion, presenting the appearance of something unlike the thing patented, which gives rise to questions; and the property of inventors would be valueless, if it were enough for the defendant to say, your improvement consisted in a change of form, you describe and claim but one form, I have not taken that, and so have not infringed.

The answer is, my improvement did not consist in a change of form, but in the new employment of principles or powers, in a new mode of operation, embodied in a form, by means of which a new or better result is produced; it was this which constituted my invention; this you have copied; changing only the form; and that answer is justly applicable to this patent.

Undoubtedly there may be cases in which the letters patent do include only the particular form described and claimed. *Davis vs. Palmer* 2 Brock 309, seems to have been one of those cases. But they are in entire accordance with what is above stated.

The reason why such a patent covers only one geometrical form, is not that the patentee has described and claimed that form only; it is because that form only is capable of embodying his invention; and consequently, if the form is not copied the invention is not used.

Where form and substance are inseparable, it is enough to look at the form only. Where they are separable, where the whole substance of the invention may be copied in a different form, it is the duty of courts and juries to look through the form for the substance of the invention, for that which entitled the inventor to his patent, and which the patent was designed to secure; where that is found, there is an infringement; and it is not a defence that it is embodied in a form not described and in terms claimed by the patentee.

Patentees sometimes add to their claims an express declaration, to the effect that, the claim extends to the thing patented however its form or proportions may be varied. But this is unnecessary. The law so interprets the claim without the addition of these words. The exclusive right to the thing patented is not secured, if the public are at liberty to make substantial copies of it, varying its form or proportions. And therefore, the patentee, having described his invention, and shown its principles, and claimed it in that form which most perfectly embodies it, is in contemplation of law, deemed to claim every form in which his invention may be copied, unless he manifests an intention to disclaim some of those forms.

Indeed it is difficult to perceive how any other rule could be applied, practicably, to cases like this. How is a question of infringement of this patent to be tried. It may safely be assumed that neither the patentee, nor any other constructor, has made, or will make a car, exactly circular. In practice, deviations from a true circle will always occur. How near to a circle then must a car be, in order to infringe? May it be slightly elliptical or otherwise depart from a true circle, and if so, how far?

In our judgment the only answer than can be

given to these questions is, that it must be so near to a true circle, as substantially to embody the patentee's mode of operation, and thereby attain the same kind of result as was reached by his invention. It is not necessary that the defendants' cars should employ the plaintiff's invention to as good advantage as he employed it, or that the result should be precisely the same in degree. It must be the same in kind, and effected by the employment of his mode of operation, in substance. Whether, in point of fact, the defendants' cars did copy the plaintiff's invention, in the sense above explained, is a question for the jury, and the court below erred in not leaving that question to them upon the evidence in the case, which tended to prove the affirmative.

The judgment of the court below must be reversed.

Journal of Railroad Law. THE BROUGH CASE.

In this case, more properly entitled the *People of Illinois vs. the Atlantic and Mississippi Railroad Company*, Chief Justice TREAT, of the Superior Court, has affirmed the decision previously rendered in a lower court. The Chief Justice held that it was unnecessary to determine whether or not the above mentioned railroad company had the right to construct their road by virtue of the Illinois statute, providing generally for railroad associations, even, if the proceedings of defendants had not been authorized by the act in question, the subsequent legislation of Illinois would have afforded them a sanction.

If any irregularity or defects belong to the original organization of the Atlantic and Mississippi Railroad Company, the same are cured by the subsequent act of the legislature in relation to defendants, by which act the validity of such organization is fully admitted and recognised.

Even if the defendants had, before the passage of the act last above mentioned, subjected themselves to a forfeiture of their charter, the court was not at liberty to take notice of any such matters; for it belonged to the state to avail themselves of the right of forfeiting a charter, or to waive such right at their discretion, and by simply recognizing the legal existence of the defendants, the state had waived any right of depriving them of their charter for matters which arose before the legislative act in question.

THE LEGAL CONSEQUENCES OF SUBSCRIPTIONS TO STOCK COMPANIES.

This subject has, as appears from the 34th volume of Maine Reports, been of late discussed pretty fully in the Supreme Court of that state.

In the case of the Kennebec and Portland railroad vs. Jarvis, that court held that a subscriber to railroad stock cannot, when prosecuted for the price of his shares, object that he promised gratuitously and without consideration.

So did Justice Hubbard of our own Supreme Court, in 6th Howard, p. 392, in the case of *O. & S. Plank Road Company vs. Rust et al.* declare that the shares subscribed for in a stock company are personal property, and may be sold as such, and may be reached by the judgment creditors of the party who subscribed for them. And to allege, therefore, that a defendant subscribed to so many shares of stock is, in legal effect, an allegation that it was done upon the consideration of the ownership of those shares.

The Supreme Court of Maine also decided, in the case first above mentioned, that when the amount of stock which a corporation may hold is

not fixed by its charter, and the corporation has determined what the amount shall be, it is not requisite to a valid assessment upon the shares of a member that the whole amount of stock should have been subscribed for, although his subscription was made before the amount of stock was determined.

A different decision would have doubtless been made if the directors of the railroad company, in this case, had not been able to justify their proceedings by the charter of the company; for where a fundamental change is made in a charter, on application of a board of directors, or even a majority of stockholders, there is abundance of reason and of legal authority to show that a stockholder cannot be bound without his consent. See 5th Hill, 383-8, Mass. R. 268, 2 Watts & Sarg. 156, also North River railroad Co. vs. Duane, Am. Law Journal for 1850, p. 481, etc.

In the Maine case, above recited, it was also held that the company might sue a delinquent subscriber, without first selling his shares, for the purpose of raising the amount of his assessments.

So in our state, in Massachusetts, and Pennsylvania, the statute remedy of declaring the stock of a delinquent subscriber forfeited for non-payment of assessments, is declared to be merely cumulative, and no wise intended to prevent the company from suing for the amount due, as in the case of an ordinary debt.

In the Kennebec and Portland Railroad Company vs. Waters, reported 34 Maine R., p. 369, the court held that a subscriber to the stock of that company, could not allege that he subscribed upon a condition not expressed in the paper or book in which his subscription was contained.

A written contract cannot be frittered away by parol testimony.

DAMAGES IN CASE OF A BODILY INJURY UNSKIPFULLY TREATED.

Newell against The New-York and New-Haven Railroad Company.—This action for a railroad injury was tried in our superior court last week before Judge Slosson. The plaintiff is one of the victims of the Norwalk accident, in May last, almost the only one remaining, we believe, whose claim has not been amicably adjusted and paid by the company; and in this case some attempts, unfortunately unsuccessful, have been made at a compromise between the parties. At the time of the accident, the plaintiff was on his way from his place of residence, which is in Georgia, to visit friends in New-England. He was in the front car, and was precipitated into the water; his leg was broken near the ankle, by which he was rendered permanently lame, his face was badly cut, his back was injured, and he received several other minor cuts and bruises. About a fortnight after the accident, he left Norwalk, and proceeded on his journey, having been advised by his physician that it was safe for him to do so.

The accident and the negligence of the company were admitted; the only question raised was as to the amount of damages. In mitigation of them, it was shown that the plaintiff had suffered no direct pecuniary loss; his bill for surgical attendance having been paid by the company; and the evidence of several very distinguished medical men was introduced to show that if the fracture of the leg, which was the principal injury, had been properly treated, and Mr. Newell had been pri-

dent and careful and had not walked too soon, the fracture might have entirely healed. The question was, simply, how far the company was responsible for the injury, and how far it resulted from the plaintiff's negligence.

His Honor, Judge Slosson, instructed the Jury substantially as follows: In actions of this nature the general rule is that the party is entitled to a compensation for all such loss or damage as is the necessary or natural result or consequence of the act complained of. It will include the plaintiff's expenses and his loss of time. There may be, also, fair and just compensation for the plaintiff's bodily sufferings. By loss of time I mean, such a compensation as the Jury may think proper for the actual bodily sufferings endured by him, so far as they are attributable to the injury for which the defendants are liable.

There is another class of damages which is sometimes allowed in addition to the above; it is called *exemplary or vindictive damages*. Such damages are allowed upon the principle of punishing the offence, as the other are allowed upon the principle of compensation only. The two unite where the injury is accompanied by malice directly alleged and proved, or by circumstances of such aggravation as are sufficient to raise a presumption of malice. In the present case, under the pleadings, evidence of malice would probably be altogether inadmissible. It is not alleged. 'Negligence and carelessness' are all that are alleged, and these are not denied by the defendant's answer. It is not, therefore, a case for the infliction of *exemplary damages*.

But the case presents the simple issue, and the only one for the Jury to pass upon, viz., what is the amount of compensation due to the plaintiff for his actual damage and loss, including the personal sufferings attributable to the disaster.

The extent of the general catastrophe, and the supposed or remembered horrors attending that deplorable event, should not be permitted to influence the mind of the Jury in assessing the plaintiff's damages. Justice would certainly be perverted if they allowed themselves to indulge in considerations which were not legitimately before them.

Another rule to be borne in mind is, that if the plaintiff might, by the exercise of ordinary care, have diminished the damages originally caused by the defendants negligence; or if by his own imprudence and want of ordinary precaution and care he had greatly aggravated the injury, the defendants should not be made liable for the increased damages consequent upon such imprudence.

All the physicians testify that the injury to the leg in its present condition is incurable. They also pretty uniformly concur in the opinion that the original fracture was not one of unusual severity, and was easily curable: so that the limb with proper care and treatment could have been perfectly restored, unless there was some combination of injury which had escaped detection. The main question in dispute therefore is, what is the cause of the present condition of the limb? Is it the result of the accident itself;—the necessary and natural result? or is it owing to the plaintiff's own imprudence? or to the bad treatment of the physician? The defendants theory is, that it is attributable to one or the other, or both combined, of the latter causes;—that is, his own imprudence,

or his physician's unskillness, or both. If you are satisfied upon the evidence that the injury has been aggravated or increased by the plaintiff's own imprudence, then the defendants will not be liable for such aggravation of damage. But the imprudence of the plaintiff which will excuse the defendants, must be a *wilful imprudence*. If, for example, he acted under the advice and with the consent of a physician, then he would not be guilty of wilful imprudence, though he might have been badly advised. But if he had used the injured limb too soon under the advice of a surgeon whom he himself employed, or if he had done so without advice, wilfully and recklessly, then the defendants ought not to be held liable for the aggravation or increase of injury consequent upon such imprudence; but if the physician was employed by the company, then the company would be responsible for any aggravation of the injury which arose from his bad treatment or mistaken advice.

As to who employed these physicians, there is no distinct evidence. It is probable, that at the time of the accident, each rendered what assistance he could, from motives of humanity, and without any specific employment by any one. They were all, however, subsequently paid by the company, who paid the expenses of all the sufferers. But I am not prepared to say that this fact, that the company afterwards paid them for their service, will throw upon the defendants the increased damages, resulting from any bad treatment on the part of the physicians. I shall, therefore, leave it to you to decide, as a matter of fact, in whose employ they were; if that question should become material, which it does not, except on the theory of want of skill on their part, of which the Jury also are to judge.

If, therefore, you shall be of opinion that the present difficulty is owing to the plaintiff's *wilful* imprudence, or to the bad advice or bad treatment of a physician employed by him, then the defendants will not be liable for the aggravated damages. But if it is a natural result of the accident, or is attributable to the bad treatment of a physician employed by the defendants, then the defendants will be liable to the full extent.

In estimating the amount of damages, you are to take into consideration the circumstances in the life and the occupation of the plaintiff, and the nature and extent of the injury, whether temporary or permanent; and liberal allowance may be made to the plaintiff, including a fair and just compensation for bodily suffering, but carefully excluding all idea of exemplary or vindictive damages. The Judge here reviewed the evidence.

Verdict was rendered for the plaintiff for \$5,000.

Superintendent of the Erie Railroad.

Mr. Chas. Minot has resigned the office of General Superintendent of the New York and Erie Railroad, and Mr. D. C. McCallum has been appointed as his successor, the resignation and appointment to take effect on the first day of May.

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors' Compasses Manufactured on the most improved principle and of the Best Quality by THOMAS HUNT.

1y10*

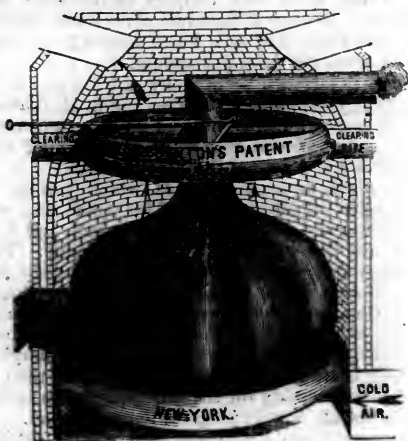
No. 63 Fulton Street, New York.

Boiler and Tank Rivets, Nuts and Washers; Bolts and Bolt Ends

All Sizes of

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

N. A. BOYNTON'S Ventilating Heater for Wood.



Length, 4 ft. 3 in.; width, 1 ft. 10 in.; height, 3 ft. 8 in.; occupies in brick-work, 5 ft. 6x7 ft.

A new and complete Ventilating Heater, designed expressly for burning wood, combining strength and durability, simplicity of construction and economy in the use of fuel, with perfect efficiency in operation.

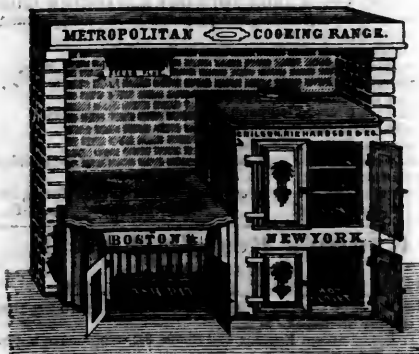
Is entirely of cast iron, with but one joint (the body being cast whole), thereby preventing the escape of gases and smoke.

The fire chamber is capacious, will receive wood four feet in length, and is so formed as to admit a large amount of fuel, without choking or smouldering the fire.

The entire radiating surface of the body is large, corrugated in form, and brought in the closest possible contact with the fire at all points; provision being made for the expansion and contraction of the iron, without danger of cracking and breakage.

The radiator is of approved construction, located entirely above the body, occupies less space, and affords a larger amount of effective radiating surface than the corresponding part of any heater in present use.

The above is adapted to all classes of public and private buildings can be set in low cellars, and possess peculiarities worthy the examination of those who require a first-class wood heater.



METROPOLITAN COOKING RANGE.

A NEW and SUPERIOR ARTICLE. Embracing all the modern improvements, equally fitted for the use of anthracite or bituminous coal, coke, or wood.

By burning its fuel in a stratum over a large surface, and having its extra large oven elevated to a level with the top of the fire chamber, heated

by the upward natural draft, and having a revolving grate that clears the fire chamber, without dust, and powerful water back, affording hot water for all purposes, with a provision for hot air fixtures, for heating other rooms without extra fuel-it becomes at once the most convenient and economical range in use.

Examinations respectfully solicited.

CHILSON, RICHARDSON & CO.

374 Broadway, New York,
Also, 101 and 103 Blackstone-St. Boston.
181t

Railroad Iron.

2000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and Crawshaw's manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by P. CLOUTEAU, Jr., SANFORD & CO., December 4, 1852. No. 51 New street.

To Railroad Companies and Contractors.

SECOND hand engines for sale in good running order and condition.

2 engines, 10 in. x 20 in. cylinder, 4 drivers 54 inch diameter, about 16 tons weight.

2 engines, 10 in. x 18 in. cylinder, 2 drivers 54 inch diameter, weight about 14 tons.

For terms, &c. apply to

CLARK & JESUP,
General Railroad Agents,
38 Exchange Place.

4t16

Brass Tubes for Locomotive and Marine Boilers.

THE undersigned having been appointed Agent for the highest respectable manufacturers Messrs. Allen, Everitt & Son or Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines. For further particulars and inspection of patterns, please apply to

JOHN H. HICKS,
90 Beaver str.
March 1854.

C. Floyd-Jones.

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

L. M. HOFFMAN, Auctioneer.

Railroad Iron at Auction.

L. M. HOFFMAN & CO. will sell on WEDNESDAY, 10th inst., at 12 o'clock, at the Merchants' Exchange—

1,570 Tons Railroad Iron,

T pattern, weighing 55 lbs. per yard.

For further particulars, apply at the office of the Auctioneers.

May 8. 1t

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio), issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburgh, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

RAIL ROAD CAR FINDINGS,**BRIDGES & BROTHER,**

64 Courtlandt Street, N. Y.

WHEELS AND AXLES,**JAWS, BOXES, AND CASTINGS FITTED.****WROUGHT NUTS, BOLTS AND WASHERS,****ENGINE AND CAR SCREW BOLTS, all SIZES,****COACH LAG AND TELEGRAPH SCREWS,****LOCOMOTIVE ENGINE LANTERNS,****From the BEST Manufacturers and at their Prices.****CAR, HAND and SIGNAL LANTERNS.****COTTON DUCK, FOR CAR COVERING,**

of any required width to 124 inches.

ENAMELED HEAD LININGS,

The best article made in this country.

PLUSH, and CURLED HAIR.**HAND CARS AND BAGGAGE BARROWS.****PASSENGER, FREIGHT-CAR, AND SWITCH****LOCKS, DOOR KNOBS AND BUTTS.****BRASS and IRON WOOD SCREWS.****BRASS AND SILVER PLATED TRIMMINGS**

For Windows and Seats.

VARNISH, COACH JAPAN, AND GLOSS,

Paints, Varnish and Gloss Brushes.

SILVER PLATED AND WHITE METAL LETTERS.**ENGINE and SIGNAL BELLS.****ANTI-FRICTION, OR BABBITT METAL.****PORTABLE FORGES & JACK SCREWS.****HEMP PACKING, AMERICAN, RUSSIA AND ITALIAN.****CONDUCTOR'S BADGES AND BAGGAGE CHECKS.****Iron Bronzed and Brass Hat Hooks.****VENTILATORS AND WHITE METAL RINGS,**

And all other Articles pertaining to Cars.

ALBERT BRIDGES, Late Davenport & Bridges, Car Manufacturers, Cambridgeport, Mass.**ALFRED BRIDGES,** Late Davenport, Bridges & Co., Fitchburg, Mass.**To Contractors.**

The Virginia Central Railroad Co. proposes to contract for taking up about 36 rails of superstructure now laid with the strap rail, and relaying with a heavy rail, the contractor furnishing every thing except the ties which will be distributed by the company.

Sealed proposals will be received at the office of the company in Richmond, until the 24th day of May next, at 9 o'clock.

The Rail to be used must weigh from 55 to 60 lbs. to the yard. Payments to be 50 per cent. cash, and 50 per cent. in the Bonds of the company running 30 years, and secured by a mortgage on the whole property of the company.

Specifications may be obtained at the Engineer's office at Richmond, after the 10th day of May.

CHARLES ELLET, Jr.
Chief Engineer.

April 26th 1854.

3t.18

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,European, American Employment Office,
287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.

\$1,700,000**LOAN OF THE MORTGAGE BONDS OF THE NEW YORK AND HARLEM RAILROAD COMPANY.**

This Company will receive proposals for one million seven hundred thousand dollars of their First Mortgage Bonds, issued in sums of one thousand dollars each, payable at the office of the Company, in the City of New York, on the first day of May, 1873, with coupons attached for the payment of interest at the same place semi-annually, on the 1st of May and 1st of November, at the rate of seven per cent. per annum.

These Bonds are secured by a First and only Mortgage, to Thomas W. Ludlow and R. M. Blatchford, Trustees, on the road and its appurtenances, made under special authority of an Act of the Legislature and vote of the Stockholders.

The whole amount of Bonds which can be issued under the Mortgage is \$3,000,000, and will be the first and only lien upon the road, and will constitute the sole debt of the Company. The Company reserve \$1,300,000 of this Mortgage for the exchange of all the outstanding plain Bonds of the Company now in existence, and propose to dispose of the residue, One Million Seven Hundred Thousand Dollars, for the purpose of discharging all their floating debt, and of payment of the expenditure necessary for the full completion of the improvements now in progress upon the road.

The capital of the company paid in is \$1,500,000 of Preferred Stock and \$3,600,000 of Common Stock, upon which regular dividends have been earned and paid for the last five years of Eight (8) per cent. per annum on the former and Four (4) per cent. on the latter.

The receipts of 1853 amounted to 964,467, being an increase of twenty-six (26) per cent over 1852, and there is no doubt a still larger business will be done the present year.

The public have therefore now offered them a home security of the most reliable character.

The Acceptances of the Company will be received in payment for the Bonds.

Twenty (20) per cent. is required to be paid on acceptance of bids, and Twenty (20) per cent. every thirty days thereafter, for which Bonds will be given; Ten (10) per cent. however of the first instalment being reserved by the Company until completion of the contract; interest to be adjusted from the 1st of May.

Parties have the privilege of making payment in full and receiving their Bonds.

Sealed Proposals will be received at the office of BLATCHFORD & RAINSFORD, No. 58 Wall street, on or before the 10th day of May next, at 3 o'clock P. M.

LOCOMOTIVE ENGINES.**A. & W. Denmead & Son,**
BALTIMORE, MD.

HAVING THEIR IRON FOUNDRY & MACHINE SHOP in complete operation, are prepared to execute, faithfully and promptly, orders for

Locomotive or Stationary Steam Engines,
Woolen, Cotton, Flour, Rice, Sugar, Grist or Saw Mills,
Machinery for cutting all kinds of Gearing,
Hydraulic, Tobacco, and other Presses,
Car and Locomotive patent Ring-Wheels, warranted,
Bridge and Mill Castings, of every description,
Gas and Water Pipes, all sizes, warranted,
Railroad Wheels, with best flanged axle, furnished and fit up for use, complete.

Estimates for Work, in any part of the United States, furnished at short notice.

Krupp's Best Cast Steel.

SUITABLE FOR

MINT AND PLATERS' ROLLERS.

ALSO of large size (72 by 18 inches diameter) for rolling Iron, Copper or Brass.

Pistons of Steam Engines and Shafts for steamboats, not exceeding six tons weight in one piece.

Also the celebrated

CAST STEEL AXLES AND TIRE

made from a solid bar without welding. Agents

THOMAS PROSSER & SON,
28 Platt street, New York.**Railroad Iron.**

470 TONS 47 lbs. per yard of best quality now in store at New Orleans. For sale by

VOSE PERKINS & CO
8 South William street.**Notice to Contractors.**

Proposals will be received for all the heavy work on the Blue Ridge Rail Road, South Carolina; Blue Ridge Rail Road, Georgia; Tennessee River Rail Road, North Carolina; Knoxville and Charleston Rail Road Tennessee. The above lines of railway are consolidated and under the management of one Company, Extending from Anderson South Carolina, via Clayton, Georgia, Franklin North Carolina, to Knoxville Tennessee, a distance of 194 miles. That part of the road from Anderson South Carolina, to the Turniptop Mountain, a distance of 40 miles is principally earth excavation, of about equal quantities of cut and fill, with several bridges. From the Turniptop Mountain to the Rabun Gap, a distance of 24 miles, the work is very heavy, there being on the line one tunnel of 5800 feet, one of 1400 feet, and one of 400 feet in length; a suspension bridge across the Chatunga River 500 feet long, with some very heavy earth and rock cuts. The rock in the Tunnels is gneiss stratified. From the Rabun Gap to twenty miles below Franklin, a distance of 50 miles, the line follows down the Tennessee River; the class of work is principally side hill excavation, some of which is rock; their will also be several bridges. From the point 20 miles below Franklin to Hardens, a distance of 35 miles, the line follows the Tennessee River the entire distance, causing heavy side rock excavations. On this portion of the line will be several expensive bridges, and a tunnel of about 1000 feet. From Hardens to Knoxville, a distance of 45 miles, the line follows the river about eight miles, then leaves it, running across the Chilhowee mountains almost a north line to Knoxville; this portion of the road is heavy work, with about equal quantities of cut and fill, an expensive bridge 1000 feet long and 45 feet high, crossing the Holston River at Knoxville. The character of the rock from Knoxville to Hardens is limestone, and from Hardens to Franklin gneiss rock stratified, and from Franklin to Anderson, stratified sandstone and gneiss rock. The character of the earth is sandy and clay loam. The line for the whole distance runs through high table lands, well settled, remarkable for its health, good water and ample resources for subsistence. The above line of railway offers great inducements to experienced contractors. The undersigned will be prepared to receive proposals and enter into contracts for the graduation, bridging, tunneling and masonry for the heavy portion of the line, from and after the 1st day of May next, at Knoxville Tennessee, Franklin North Carolina, and Pendleton South Carolina, and will continue at such places, until the same is under contract. Profiles and maps of approximate location can be seen at each of the above places after the 1st day of May. Proposals are asked with cash payments, also eighty per cent cash and twenty per cent in the Capital Stocks or Bonds of the Company. All communications prior to may 1st must be addressed at Pendleton South Carolina.

4,13

ANSON BANGS & Co.**To Contractors.**

PHILADELPHIA, WILMINGTON AND BALTIMORE RAILROAD OFFICE.—PHILADELPHIA, April 21st, 1854.—PROPOSALS will be received at this office until May 25th, 1854, for driving the piles, protecting the foundations, and for the Masonry above and under water, of the proposed Bridge across the Susquehanna River at Havre-de-Grace, Maryland.

Also, for the Grading and Masonry of the new location of the Road adjoining the Bridge, and of the Port Deposit Branch Railroad.

Plans, profiles and specifications may be seen at the Engineer's Office, in Havre-de-Grace.

S. M. FELTON,

Pres. P. W. and B. R. R.

17,4t

Railroad Iron For Sale.

ABOUT 800 tons Rails of most approved Welsh patterns, for sale by
CLARK & JESUP,
38 Exchange Place, New York.

17 17

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia,
 WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their SYSTEM OF LOCOMOTIVE ENGINES in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture five different kinds of Engines and several classes or sizes of each kind.

Particular attention paid to the strength of the machine in the plan and workmanship of all the details. Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowling Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

New York and Erie R. R.

PASSENGER TRAINS
 leave Pier-foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a. m. for Buffalo direct, over the N. Y. & E. R. R., and the R. & N. Y. City R. R., without change of baggage or cars.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. This train remains over night at Elmira, and proceeds the next morning.

WAY EXPRESS, at 12½ p. m. for Dunkirk, and intermediate stations.

ACCOMMODATION, at 3 p. m. for Delaware and intermediate stations.

NEWBURG EXPRESS, at 4 p. m., for Newburg.

WAY PASSENGER, at 4 p. m., for Piermont and intermediate stations.

NIGHT EXPRESS, at 5 p. m. for Dunkirk and Buffalo.

On Sundays only one Express Train—at 5 p. m.

These Express Trains connect at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

CHAS. MINOT, Sup't.

Great Western Mail Route.

SIXTY MILES DISTANCE SAVED TO CHICAGO AND ST. LOUIS. THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD LINE, carrying the Great Western United States Through Mail, have the following staunch first-class Steamers running on Lake Erie in connection with the NEW YORK AND ERIE RAILROAD from Dunkirk, touching at Cleveland, and connecting with their Road at Toledo; and connecting directly with the CHICAGO AND ROCK ISLAND RAILROADS at Chicago, in the same Depot, thus forming a Daily Line for Passengers and Freight from New York to the Mississippi River. NIAGARA, Capt. Miller; EMPIRE, Capt. Mitchell; KEYSTONE STATE, Capt. Richards; LOUISIANA, Capt. Davenport. Also A DAILY LINE FROM BUFFALO DIRECT TO MONROE, by those well-known magnificent Floating Palaces, EMPIRE STATE, J. WILSON, Commander, leaves Buffalo Mondays and Thursdays; SOUTHERN MICHIGAN, A. D. PERKINS, Commander, leaves Buffalo Tuesdays and Fridays; NORTHERN INDIANA, L. T. PHEATT, Commander, leaves Buffalo Wednesdays and Saturdays.

One of the above splendid Steamers will leave the Michigan Southern Railroad Line Dock, at 9 o'clock, P. M. every day, (except Sundays) and run direct through to Monroe without landing, in 14 hours, where the LIGHTNING EXPRESS TRAIN will be in waiting to take passengers direct to Chicago in 8 hours, arriving next evening after leaving Buffalo.

Running time from New York to Buffalo.....14 hours.
 Running time from Buffalo to Monroe.....14 hours.
 Running time from Monroe to Chicago..... 8 hours.

Total.....36 hours.

Connecting at Chicago with a fine line of Low Pressure Steamboats to all places north of Chicago to Green Bay; also with Chicago and Rock Island Railroad to La Salle, and there connect with Illinois Central and Chicago and Mississippi RAILROADS, or connecting at Rock Island with regular line of steamers for all points above and below, making the cheapest and most direct Route to St. Louis, Rock Island, Minnesota, and the Great West.

The AMERICAN LAKE SHORE RAILROADS from Buffalo and Dunkirk connect with this line at Toledo, forming the only direct and continuous line of Railroads from the Atlantic Seaboard to the Valley of the Mississippi.

Running time to Chicago, 36 hours; to St. Louis, 56 hours.

FOUR DAILY TRAINS by Railroad all the way.

TWO DAILY LINES by Steamers on Lake Erie.

Thus the Traveller and Shipper can see at a glance that no other Line can enter the lists as competitors.

Passengers Ticketed Through from New York with privilege of stopping over at any point on the route, and resuming seats at leisure, either by the New York and Erie Railroad, via Dunkirk, New York and Erie and Buffalo and New York City Railroad via Buffalo; People's Line of Steamboats, Hudson River or Harlem and New York Central Railroads, via Albany and Buffalo.

For any further information, Through Tickets, or Freight, apply at the Company's Office, No. 193 Broadway, corner of Dey st., N. Y.; to JOHN F. PORTER, General Agent, or L. P. DUNTON, Ticket Agent.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

Sept. 7.

BOORMAN, JOHNSTON & CO.,
90 Broadway, New York.**MANUFACTURERS' AGENCY**

FOR

RAILROAD FURNISHING,

Office 18 Dearborn St., Chicago, Ill.

E. R. T. ARMSTRONG, Agent,

KEEPS constantly on hand Railroad Spikes, Burden's make, Railroad Wrought Iron Chairs, superior quality, Ames' manufacture of Locomotive Tires, Cranks, &c. Washburn, Pond & Co.'s Car Wheels, of best Salisbury and Stirling Iron, mixed under direction of Mr. Washburn, and warranted.

Orders invited for Locomotive and Car Rolled or Hammered Axles—Locomotive Lamps—Superior Pumps, for Stations, Switch Stands, Levers, and Targets—Locomotive Drivers and Cylinders—Boxes and Pedestals—Screw Cutters and Drilling Machines—Frog's Heads and Heel Blocks—Screw Presses, for forcing Wheels and Axles.

Oils of a superior quality, made expressly for railroads, and free from gums.

Refer to—Illinois Central railroad, Ohio and Mississippi river railroad, Michigan Southern railroad, Galena and Chicago Union railroad, Milwaukee and Mississippi river railroad, Little Miami railroad, Cincinnati, Hamilton and Dayton railroad, Central Ohio railroad.

14 6mo's.

S. SEYMOUR & CO. GENERAL RAILROAD AGENCY, Office, Metropolitan Bank Building, No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years

OHIO AND MISSISSIPPI R.R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
 SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS, at 11 years.

LOUISVILLE AND NASHVILLE R. R. STOCK.
 BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Notice to Contractors.

PACIFIC RAILROAD OF MISSOURI.
 SEALED proposals will be received by the undersigned, at their office in the city of St. Louis, until six o'clock, p. m., of the 15th day of May next, for the Grading, Masonry, etc., of the first division of the South-west Branch of the Pacific Railroad, extending from Franklin Depot, the present terminus of the road, some 40 miles West of St. Louis, to the crossing of the Gascadenade River, a distance of about 78 miles. The line will be divided into sections of about one mile each, and proposals may be made for one or more sections. The line, plans, profiles, specifications, form of contract, etc., will be ready for inspection on and after the first day of May next. The work to be let is quite heavy, situated in a healthy country, and is easy of access.

The undersigned reserve to themselves to reject all proposals that are not satisfactory.

A. S. DIVEN & CO.

March 24th, 1854.

OGDEN & DELAFIELD'S,

Late OGDEN & MARTIN.

Rosendale Cement.

WE are prepared to enter into arrangements for supplying our cement for public works or other purposes. We warrant the cement equal in every respect to any manufactured in this country. It attains a great degree of hardness, sets immediately under water, and is a superior article for masonry coming in contact with water, or requiring great strength.

For sale in tight barrels, well papered, on application at their office, by

OGDEN & DELAFIELD, 104 Wall st.
 The above cement is used in most of the fortifications building by government.

17

Pneumatic Pile Driving.**FOUNDATIONS FOR BRIDGES, PIERS & C.**

BY THE PNEUMATIC process hollow cylindrical piles or tubes from eight inches to ten feet diameter can be driven through sand, mud, clay or other material to any required depth. The complete success which has attended the operations of this process shows it to be eminently practicable in, and much the best method known for, the construction of railroad bridges across deep and rapid rivers where permanent foundations of great strength are necessary, and have to be secured at great depth.

Applications for license for the use of the invention in any part of the United States may be made to H. V. POOR, Esq. Editor of the American Railroad Journal, 9 Spruce street; or for contracts for pile driving, or licenses as above to

CHARLES PONTEZ,

March 25th, 1854.

New York.

To Contractors.**PACIFIC RAILROAD OF MISSOURI****THIRD AND FOURTH DIVISIONS.**

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.

THOS. S. O'SULLIVAN, Chief Eng.

Pacific R. R. Office, St. Louis, Feb. 1854.

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—special red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

G. PARISH.

16,3m*

Ogdensburg, N. Y., April, 1853.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in the construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass.

17 tr

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.

VOSE, PERKINS & CO.,
9 South William St.

New York, June 1, 1851.

Knox & Shain,

MANUFACTURERS OF
LEVELS, TRANSITS AND SURVEYING
COMPASSES.

No 72 Dock st. first door south of Walnut, west side
PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
157 Broadway, New York.

CHARLES B. STUART,
DANIEL MARSH,

EDWARD W. SERRELL,
SAMUEL MOELROY.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West,
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
feb. 18. 1m.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloohah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

**Cast Iron Chilled Slip Tires
for Engine Driving Wheels.**

THE undersigned, principal Agent for the above improvement, offers it, with the right of use, to Railroad Companies and others. The cost of these Tires is less than one-third that of wrought iron, the cost of renewing one-quarter, and the adhesion, strength, and durability equally as great, as will be proved to the satisfaction of any party. Over two hundred locomotives of the heaviest class, (25 to 30 tons,) upon the Baltimore and Ohio Road, are shod with cast iron, with an acknowledged saving over wrought iron equal to \$30,000 per annum. Address
15, 17,
ZERAH COLBURN, Paterson, N. J.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Road Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.

Mayville, Ky., Sept. 20, 1853.

Railroad Iron.

1,300 TONS superior quality Yorkshire rails 56 pounds T pattern can be immediately delivered at New York, Savannah, or New Orleans.

For sale by

NAYLOR & CO.

New York, April 1st, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr. Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3 1/2 to 6 1/2 inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & R. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
17 Burling Slip, New York.

February 15, 1850.

Notice to Contractors.

MEMPHIS & OHIO RAILROAD.

SEALED proposals will be received at the office of the Memphis and Ohio Railroad Company, at Memphis, Tenn., until the 15th day of April next, for the grubbing, clearing, gradation, and masonry of the first 65 miles, from Memphis to Cherryville.

Contractors must give the most undoubted security for the completion of the work at the time, and in the manner specified; and contracts will be let in sections, or for the entire work, as may be deemed best by the Directors.

The Directors reserve the right of rejecting all bids, should none prove satisfactory; and it is desirable that all propositions should be submitted, with the view of preparing the whole work for the iron as soon as possible. Bids of that character and otherwise equally favorable, will have preference.

Maps, plans and specifications may be seen at the office of the company, after the first of April.

E. PEABODY,
Engineer in charge.

Notice To Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT, AND TEXAS RAIL ROAD COMPANY
Monroe, La., March 8th, 1854.

SEALED PROPOSALS will be received at this Office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty mile, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the entire sections, or any portion thereof, not less than one mile, and those proposing to take stock of the Company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the Company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract; or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,
President.
P. J. TOURNABRE,
Chief Engineer.

7114

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 50 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

21 Feb'y.

JOHN H. HICKS,
90 Beaver street.

H. SAWYER

(of the late firm of SAWYER & HOBBS),
Manufacturer of Transits and Levels.

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

Railroad Iron.

1250 TONS Erie Pattern Guest and Co's make, weighing 57 1/2 lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by

June 9, 1853.

BOORMAN, JOHNSTON & CO.,
90 Broadway, New York.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to

THOS. CHAMBERS, President,
September, 1850.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 19]

SATURDAY, MAY 13, 1854.

[WHOLE No. 943, VOL. XXVII.]

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Field Book for Railroad Engineers,.....	289
Railroad Equipments,.....	289
Tunnel on the Pennsylvania Railroad,.....	290
Pennsylvania Railroad,.....	295
Journal of Railroad Law,.....	291
Hollow Axles,.....	292
Savannah Valley Railroad,.....	292
Bellefontaine and Indiana Railroad,.....	294
Area of the United States,.....	295
Old Colony Railroad,.....	295
Statistics of Maine Railroads,.....	295
Wabash and Erie Canal,.....	295
Cincinnati, Peru and Chicago Railroad,.....	295
Henderson and Nashville Railroad,.....	295
Stock and Money Market,.....	296
Iron Bridges,.....	298
Railroad Runners,.....	299
Lake Shore Railroad,.....	292
Mississippi and Atlantic Railroad,.....	298
Erie Canal,.....	299
New Orleans, Jackson & Gt. Northern Rail'd,.....	299
Dayton & Michigan Railroad,.....	300

American Railroad Journal.

Saturday, May 13, 1854.

Field Book for Railroad Engineers.

Containing formulæ for laying out curves, determining frog axles, levelling, calculating earth work, &c., &c., together with tables of radii, ordinates, deflections, long chords, magnetic variations, logarithms, logarithmic and natural sines, tangents, &c., &c.—By JOHN B. HENCK, A. M. Civil Engineer.—New York,—D. Appleton & Co., 1854. 12mo. pp. XV. 243.

The title of this book gives a good synopsis of its contents. It is small, bound in a pocket book form, and readily carried in the pocket. The lithography is remarkably neat and clear, the paper good, but thin in order to diminish the bulk of the volume.

The treatise presents one of those rare instances in which a thoroughly scientific theory is applied in an eminently practical and common sense way. Mr. Henck's acquaintance with pure mathematics is sufficient to enable him to handle in an original way the most difficult problems presented to him, and his extensive experience in the field, leads him to put his results into such a form as will be

most readily available and capable of most rapid calculation. In addition to the subjects which one would naturally expect to find handled in a book with the above title page, we have a discussion of the parabolic curves said to be in such repute among French engineers, of the vertical curves necessary in passing from one grade to another, of the proper elevation of the outer rail on curves, and of the coning of wheels. Also tables of expansion by heat, properties of materials, of valuable miscellaneous formulæ, and of squares, cubes, square roots, cube roots, and reciprocals. The tables alone, if republished in a separate volume, like Blunt's edition of Bowditch's useful tables, would be a valuable treasure to civil engineers in every department, and also to architects, machinists, and all persons engaged in practical calculations. We believe indeed that with a few pages of examples for practice these tables, would be a valuable text book for high schools.

The whole treatise reminds us of Bowditch's practical Navigator, and seems to us destined to hold the same rank with Railroad engineers that the Navigator holds among shipmasters. The superiority is on the side of Mr. Henck's book on account of his rules being given in algebraic formulæ.

This may be thought an objection by those Assistant Engineers (unfortunately too numerous) to whom algebra is not a familiar language. But on examination they will find that the formulæ are very easily comprehended even by those who cannot follow the demonstration, which the condensation of the rules into formulæ enables Mr. Henck to insert. If this treatise becomes the indispensable *vade mecum* of every Assistant Engineer it will be of great service to the intellectual character of the profession as well as a great means of diminishing their labors.

We would offer but one adverse criticism, which is a passage in the preface, in which Mr. Henck expresses a wish to render a resort to "fudging" inexcusable. With all deference to Mr. Henck, we conceive that *fudging* is in many cases a legitimate, nay a necessary process. Instead of pouring contempt upon it, he had done better to have given a short chapter, showing when and how to use it. We suppose that by *fudging* he means *guessing and trying*. Now this is the legitimate

occupation of a finite mind, whether in politics, trade social life, or science. When there is no certainty make the best guess you can, and test the hypothesis by trial. This is the best advice that can be given on every subject. In arithmetic it takes the form of the rule of double position, an invaluable rule, strangely neglected in our modern school arithmetics.

But perhaps the author did not intend to condemn *fudging* in the sense of legitimate "guessing and trying," that is, when this is the only or the best process. He may have understood by "fudging" those botching and make-shift operations which are so often witnessed as the result of ignorance or want of time to devise correct methods on the spot. In this case we heartily agree with him, and are willing to part company with such "fudging" as soon as possible.

Railway Equipments.

There are many practical considerations which influence the selection of railroad equipments. *Price* is by no means the most important. In the purchase of a house, a watch or a horse, there is not expected to be an expenditure nearly equal to the purchase money, every year, for maintenance and repairs. With railroad equipments, and especially locomotives, however, this is a very important consideration. The cost of "running" and maintaining a locomotive is very large, and may often amount, in a single year, to all of the original value of the machine. The principal items of the operating expenditure are for *fuel* and *repairs*. With ordinary management, economy in these expenditures can be only secured by the best construction of the engine, and the best quality of its material. The arrangement and proportions of all the details of a locomotive boiler—furnace, grates, tubes, damper, chimney, etc., are as influential in economy of fuel as are the details of any kind of heating or evaporating apparatus. So are the proportions and adjustments of the valves, which are among the vital parts of the engine. Again, the durability of an engine, wherein any deficiency involves the long list of "repairs" which swell the running account, depends chiefly upon the proper proportion of its parts and upon their soundness. There are a great many failures and derangements constantly occurring to locomotives which could have been anticipated and provided

against in the builder's workshop. If, from a desire to cheapen an engine, it is left liable to breakage or failure, such as would require \$1000 to repair, to say nothing of the detention, and the derangement of business,—then it would certainly have been good policy to have added \$500 to the first price to pay for a better construction. It is a very important fact that the cost of providing against failures of machinery is nothing compared with the cost of repairing them. A difference of only \$25 in the cost of some part of an engine might determine the necessity of a renewal costing \$1000, or even more.

The relative efficiency of engines is also to be considered as well as their price. If the standard of power be taken as the capacity of cylinder, it is often the case that a cheap engine is made so only at the expense of boiler and steam room, which are among the most important elements of power. With a given size of cylinder, a wide difference often exists in the boilers of locomotives by different makers. Tube surface is especially important, while the cost of the whole work is materially affected by the extent of this single element.

There is another standard of power, also, that of *weight*, which may be readily turned to the advantage of the builder if it be regarded as the basis of price. Engines of the same weight may be unlike in the very nature of their material. Cast Iron may take the place of wrought in many essential parts, and at one half the price of the latter. Brass, especially, costs heavily, and weighs less than iron for equal strength.

It is a proper and profitable field, then, for the judgement of railroad agents to learn the relative efficiency of different engines, or at least the principal and real elements upon which their efficiency depends. Although conforming to either of the arbitrary standards which we have indicated, different engines may differ widely in their efficiency; while, at the same time, the means of superior efficiency, cannot reasonably be attained, except by a proportionate expense.

To secure proper economy in fuel, proper durability and efficiency, then, every company is safer in paying a liberal price for their equipments, being sure that the difference is placed not entirely in the seller's pockets, but principally in the objects purchased. It is a safer practice than in buying "cheap work," solely upon its merits as such. This doctrine has a sound application to a considerable extent, although we do not wish to be understood as advocating Pat's policy of paying double price to avoid all expense.

To apply the principle, however, as far as it may be properly supposed to extend, we will suppose a saving of one tenth of the expenses of a company, (a very reasonable estimate) by the addition of one tenth to the cost of their work, or otherwise to their capital.

First Case.

Capital,.....	\$1,000,000,
Gross Earnings,.....	150,000,
Expenses,.....	80,000,
Dividends,.....	7 per cent.

Second Case.

Capital,.....	\$1,100,000
Gross Earnings,.....	150,000
Expenses,.....	70,000
Dividends,.....	7½ per cent.

Showing, quite well, that to a reasonable extent,

a company does not lose, but *gains* by making its capital account sufficient to secure the *best* kind of work.

Tunnel of the Pennsylvania Railroad.

Since the opening of the long tunnel of the Pennsylvania Railroad under the Alleghany mountains, some notes of its dimensions, cost, etc., gathered from the report of the chief engineer, may be interesting.

The principal dimensions of the tunnel are as follows; length 3612 feet, width 24 feet, height 22 feet above grade, or 21½ feet above the rails; distance below the summit of the mountain 202 7-10 feet, depth of Eastern shaft 149 8-10 feet, of middle shaft 195 7-10 feet, of western shaft 184 4-10 feet; sections of first shafts 6 by 10 feet, of new shaft 8 by 13 feet; depth of new shaft 194 1-10 feet.

Much of the material excavated is fire clay, which, when exposed to the air and moisture, swells, cracks and falls in large masses. Nearly the whole work will require arching. Owing to the character of the material a larger quantity required removal than if it had been of a solid and permanent kind. In the middle shaft from 120 to 175 gallons of water per minute were pumped and discharged at the top of the shaft; and as the small size of the shafts first constructed did not afford facilities for the removal of material as fast as it was excavated, a new shaft was sunk, and a large and powerful engine substituted for the small one at the west shaft.

The excavation of the tunnel was finished on the 21st of January 1854, having been nearly two years in progress. During the year ending in March 1853, the average quantity of material removed per month was 2768 cubic yards; but since that time by increased exertion, the average monthly quantity has been 4555 cubic yards. There are about 18 cubic yards in each lineal foot of the tunnel, so that previous to March 1853, the daily progress was less than six feet on all faces, and since that time less than ten feet. The entire number of working faces afforded by all the shafts and at the end is ten.

The entire cost of the tunnel will be about \$450,000, or 125 per lineal foot, or nearly \$7 per yard.

The chief engineer of the work was Herman Haupt, Esq. Principal; Assistant, Thomas Seabrook, Esq.; Constructor, Thomas Rutter.

The proposed Hoosic Tunnel is 24,100 feet long. At the same rate of expenditure per foot, its cost will be \$3,012,500. Its time of construction if the same, in proportion to length, as the Pennsylvania tunnel with four shafts, will be 12 years 3 months.

If the geological illustrations of warped or undulating stratification are correct, the tunnelmen at Hoosic may expect to find some of the toughest kind of granite before half a mile of their excavation is completed. If the mountain is stratified and the strata has been undisturbed, the micaceous rock would of course show itself on both sides, while it might but barely cover a deep bed of granite below. Considering the abrupt elevation of the mountain, in proportion to its breadth, we are confident that a perforation of less than a quarter of a mile will disclose a different character of material from what appears on the surface. But it is not now necessary to throw doubts in the way of the enterprise. Its friends have se-

cured, *as they profess*, funds enough for its completion, while its opponents have prophesied that event at the end of the comfortable period of *thirty years*. Should the exertions of its friends prove insufficient it may perhaps be finished by an earthquake.

Pennsylvania Railroad.

Stationary and Locomotive power on grades.

The Alleghany Portage Railroad is the principal example in the whole world of the application of fixed power to Railroads. It was constructed in a primitive period of engineering, not with a view to the especial merits of railroads, but as a necessary link in the line of the Pennsylvania Canal, connecting its Eastern and Western divisions, by a portage across the Alleghany ridge. Towards the attainment of this purpose, the result of the operation of the railroad was reasonably successful. But when a new and improved channel had been opened, parallel to the general course of the canal, and embracing the portage within its route, a new standard of "successful operation" was established. The portage then became part of a new system, and its success had to be measured by a *relative* standard, instead of by its absolute results as before.

The Pennsylvania Railroad, forced into a temporary experience with the "inclined planes," sought from the first to avoid them, and has now attained that result by the completion of an independent line, operated by locomotive power.

The principal reasons which induced the construction of the independent line were these. First, the "Portage" was a state work, and a claimant for state tolls; second, it involved a serious delay to any heavy passenger business, such as was anticipated for the Pennsylvania Railroad; and third, the planes worked by a rope, were not considered as entirely safe. To these may be added a general belief that the system of operation by stationary power was more expensive than if performed by locomotives. On the latter point however, there is a wide difference of opinion among engineers of the highest reputation.

The Pennsylvania Railroad has avoided the planes by an extremely favorable system of gradients. In place of abrupt ascents of 1 in 10, the worst grades opposed to the heavy business are of but 1 in 100; while on the opposite side of the summit the maximum grades are 1 in 57, and the average 1 in 66. Yet, the preference of the engineering department of this road, is in favor of inclined planes and fixed power, in their assumed adaptation and economy in freight business.

The Baltimore and Ohio road, which has grades of 1 in 44, for long distances in both directions, is operated by locomotive power throughout, and with a decided preference for the practical convenience and economy attained under that system.

The preference of the latter company is a natural and a general one everywhere. Fixed power is an incongruous element in a railway system. But as, in an abstract view of its relative cost, its merits are less understood, we propose to examine some estimates of its economy, as found in the last report of the Chief Engineer of the Pennsylvania Railroad Company.

The expenses of working plane No. 8, the longest and most costly on the Portage road, have been found to be as follows, per day

1. Engineer.....	\$2, 00
1 Assistant Engineer.....	1, 25
2 Firemen.....	2, 25
2 Hitchers.....	2, 25
2 Hitchers.....	2, 00
9 Horses.....	6, 30
2 Drivers.....	1, 40
Oil and Tallow.....	3, 00
Coal, 100 bushels.....	3, 00
Wear of Rollers.....	2, 00
	\$25, 45

Wire rope costs 56 cents. per foot, Plane No. 8 is 3117 feet long—whole cost of rope \$3500. The average durability of the rope is one year. If the old rope be supposed to be worth nothing, the cost per day will be \$11.66. The machinery of one of these planes, besides rope and rollers, costs \$7500, the interest and repairs of which per. day would be \$3. The total cost of the plane per day would therefore be \$40.11.

This plane rises 307 feet in 3116 feet. Suppose now, the same elevation to be overcome by a grade of 80 feet per mile, the length of the plane would be about four miles. The comparative cost of working four miles of road; in one case with over 3 miles level and 3117 feet rising 307 feet, operated by stationary power; and in the other case an uniform rise, worked by locomotives, is then estimated as follows:

The gross load of an engine, having the adhesion of 20 tons upon the drivers; is 650 tons on a level, and 105 tons upon a grade of 80 feet per mile. The cost of such an engine per day may be estimated as follows:

Cost of an engine \$8500.	
Interest per day.....	\$1, 70
Running expenses per day, as per detailed report of the Reading Railroad Company:	
Engineer.....	3 00
Fireman.....	1 50
Fuel.....	18 58
Oil and Tallow.....	1 16
Repairs of Engine and Tender.....	4 89
	\$30, 83

This estimate is finally made as low as \$25.

Estimating the capacity of the plane at 5620 tons passed each way in 12 hours, it would require 5 4-10 engines, carrying 105 tons each, and running ten trips each way of four miles, to effect an equal movement.

The relative cost of fixed and Locomotive power is then estimated as follows:

For plane; daily expenses.....	\$40 15
For engine on $8\frac{1}{2}$ miles of level.....	25 00
	\$65 15
For 80 feet of grade; 5 4-10 engines at \$25, 135 00	

Difference in favor of plane..... **\$69 85**

This estimate, however fair it may appear from the consideration of the details upon which it is based, is altogether specious in a general application. We invite attention to the following facts.

The estimated capacity of the plane is equal to 3,205, 120 tons of cars, and freight per annum, more than four times what has ever passed it in that time. But the expenses of the plane are rated to be the same as they have been when passing a tonnage less than one fourth of its estimated capacity.

Neither does the estimate of the cost of the plane include any charge for extra brakemen, which have been generally employed at the Portage, nor does it include any depreciation of

horse power. The report of the Pennsylvania road, gives the cost of extra brakemen for last year, as \$20,000.

If all the charges of working the plane be considered, and a capacity of over three million tons annually be allowed for, the expenses of the plane would be nearer \$150 per day.

On the other hand, the comparative cost of Locomotive power is very high. To reckon anything like \$100 daily for fuel, for 5 4-10 engines, where an allowance is made of only \$3 for the same amount of stationary power, is simply absurd. If the Portage road is in a locality affording fuel as cheaply as is estimated, then the locomotives would be entitled to a corresponding advantage.

The other charges for locomotive power are not much too high.

But the great error in this estimate of the comparative expense of planes and locomotives is in underrating the power of the latter, and in not including the power of the regular engine attached to the train on the more level parts of the road. Instead of 105 tons, estimated as the proper capacity of an engine with 20 tons heavier adhesion, the Baltimore and Ohio engines, with 28 tons of adhesion, draw 252 tons as a regular, and 378 tons as a maximum load, up 83 feet grades. These 28 ton engines are now at much less expense than is estimated for the 20 ton engines. But upon an uniform grade of 80 feet, the regular engine attached to the train would pull at least 170 tons more, making 420 tons instead of 105 drawn in a single train, up the grade. The assistance of the regular engine costs nothing as its expenses are equally as great, or very nearly so, whether it goes with the train or not, over the grade. If the cars have a "continuous draw rod" they will not be overstrained in being drawn, in so long a train, over the grade.

There are very few practical instances where an ascent of 80 feet per mile is approached by an uniform level, for any long distance. Therefore the engines, approaching the grade will not often have more than 420 tons behind them, so that their trains will not require division, beyond that for a single assistant engine.

The relative assistance derived from the regular engines running with the trains, depends upon the physical features of the line approaching the grade; and where there are grades of from 35 to 55 feet, which are almost always inevitable in approaching higher grades, this assistance is very important. With fixed power, however, this assistance is thrown away.

Reviewing all the considerations affecting the relative expenses of the two systems, it is probable that a daily difference of \$50 would exist in favor of locomotive power upon the assumed grade, in a business of three million tons yearly. This would be independent of the greater dispatch and safety also afforded under this system.

Our review of the defence of inclined planes and fixed power, excludes of course, all consideration of passenger business; which upon any important line, would be very seriously interrupted by the "planes."

We are well convinced that inclined planes and fixed power are incompatible with economy, dispatch and safety, and especially so under any probable circumstances affecting the Pennsylvania Railroad.

Journal of Railroad Law.

CONTRACTS OF RAILROAD COMPANIES.

In the 73d volume of the English Common Law Reports, p. 775, is contained the decision of the Common Pleas in the case of the *East Anglian Railway Company, vs. the Eastern Counties' Railway Company*,

It was held that

A railway company, incorporated by act of Parliament, cannot, even with the consent of all its shareholders, legally enter into a contract involving the application of any portion of its funds for purposes foreign to those for which it is incorporated.

The defendants were incorporated by an act of Parliament, the 1st section of which enacted that certain persons should be united into a company, for making and maintaining a certain railway and other works by the act authorized, according to the provisions and regulations thereafter mentioned, and for that purpose should be one body corporate, by the name and style of the *Eastern Counties' Railway Company*, and should have perpetual succession and a common seal. The 3rd section of the act empowered the company to raise a sum of money "for making and maintaining the said railway and other works authorized by the act." The 5th section directed that the money so raised should be expended in and towards making and maintaining the said railway and other works, and in otherwise carrying the act into execution. And by subsequent sections it was provided that the profits, after defraying the expenses of making, maintaining and working the railway, were to be accounted for and divided amongst the proprietors of the undertaking.

It was held that it was not competent to the Directors of the *Eastern Counties' Railway Company* to enter into a contract with another railway company, to take a lease of their line, and to pay the costs incurred by them in the soliciting and promoting of bills in Parliament for the extension and improvement of such other line of railway, even though such extension and improvement would benefit their own company; and that such contract, if entered into, was illegal and void, and could not be enforced in a court of law.

Chief Justice Jervis, in giving his decision, observed in substance, that if the defendants could not embark in new trades, because they had only a limited authority, for the same reason they can do nothing not authorized by their act and not within the scope of their authority. Every shareholder has a right to expect that the charter will be adhered to, and that money will not be spent on undertakings which, at some remote period may be beneficial. The public also has an interest in the strict exercise of powers. By deviating from the charter, the comfort and safety of the line may be endangered. In *Colman vs. the Eastern Counties' Railway Company*, 10 Beavan, 15, the Master of the Rolls, Lord Langdale, says, "It has been very properly admitted, that railway companies have no right to enter into new trades or businesses not pointed out by the act; but it has been contended that they have a right to pledge, without limits, the funds of the company in the encouragement of other transactions, however various and extensive, provided the object of that liability is to increase the traffic upon the railway, and thereby to increase the profit to the

shareholders. There is, however, no authority for any thing of the kind. The like doctrine is laid down in 12 Beavan's 352. *Solomons vs. Laing*. So in 15 Jurist, 914. *Beman vs. Rafford*. Also in *Bagshaw vs. the Eastern Union Railroad Company*. 2 McNaght & G., 389.

If the Eastern Counties' Railway Company is a corporation for only a limited purpose, and the contract is not within their authority, the assent of all the shareholders to such a contract, though it may make them all personally liable to perform such contract, would not bind them in their corporate capacity, or render liable their corporate funds.

ACTIONS FOR NEGLIGENCE.

In the case of *Marshall vs. The York N. & B. Railway Company*, 73 English Common Law, p. 655, the Common Pleas held in an action for baggage lost by the company's negligence, that the action being founded on breach of duty, and not on contract, it was not necessary to allege in the declaration, or to prove on the trial, that the compensation for carrying the baggage had been paid by the plaintiff. The plaintiff was entitled to recover although the fare was paid by his master, with whom he was traveling at the time.

The Superior Court of our city has lately been occupied with the suit of *Bulfinch Administratrix vs. Hudson River Railroad Company*. The plaintiff's deceased husband was killed upon the road, and the action was brought in accordance with the statute for such case provided.

The jury found on one of the issues that there was negligence on the part of the defendants in not furnishing their cars with proper lights to enable the drivers to see ahead and keep a proper look-out. They could not say whether there was negligence on the part of deceased or not. Verdict for plaintiff, \$3,600.

For the American Railroad Journal.

HOLLOW AXLES.

The London *Mc. Mag.* vol. 59, page 262, which contains an account of McConnell's hollow axles, has been copied by the whole tribe of Scientifics on both sides of the water, as if something new or useful, had been elicited thereby.

It must surely have been an entire waste of time, among such scientific men as were then and there assembled, to undertake to prove that a hollow cylinder, or a tube, is stronger than a solid cylinder of the same diameter, or, even to define in what proportion; as that question has been settled many hundred years ago.

According to Mr. Norris' observation, (page 264) it would appear that the "crystalline state" must be a new complaint of iron. He doubted, if it ever was produced by working upon Railways, and Mr. Stephenson had long before expressed the same opinion.

An old axle which had been in use three years was not crystallized while a new one broke in the same manner, was very badly so.

Moreover, a hollow axle could not be made crystalline, and Mr. Morris had tried many solid ones, which had been in use for twenty years upon the Liverpool and Manchester railway, and none of them were crystalline. Surely this just about settles the crystalline question, as being produced by bad manufacture, and cannot be produced in iron of superior quality, whether hollow or solid.

If twenty years will not produce this interesting state, I think there is little hope for the young humbug, and he had better "go to grass" again, as it is some years since he was up before. I think it is about ten years since his last appearance, when John Oliver York made a great fuss about him, and brought him out under the influence of a patent, and general Paisley.

I have often met him, these last twenty years, but he was always so hollow, that no dependence could be placed upon him.

Fuchs (Repertory No. 513) concluded very rationally, that, the alteration proceeds from "a breaking up of the continuousness of the mass," or, in other words, the entire destruction of its elasticity; in which case it is of no practical importance whether it is crystalline or not. If it is "busted up," broken down and good for nothing from hand usage, having stood all that ever iron should be expected to stand, it appears to prove nothing at all. If it breaks with but little hand usage, instead of proving that the quality of the iron is inferior and probably crystalline in consequence thereof, it is assumed that the crystalline state has been produced since the iron was manufactured, while in fact the crystalline state never has been produced in anything, in which it was reasonably well known not to have existed before.

So long as it is desirable to make Railway Axles as small as possible; consistent with the strength thereof, it is quite evident that no advantage can be obtained by making them hollow, unless, the quality of the materials can thereby be improved. The foregoing remarks are pretty near conclusive on this point, and go far to show that axles are not made with as much care as formerly. Mr. McConnell could not, (would not,) tell the cost of these axles, although five hundred of them had been made, but, he could astonish us by figuring out the immense amount saved in fifteen thousand waggons, and ten thousand miles, and eleven millions, (I don't know how many) tons "dead weight" as he called it, amounting to some eleven thousand seven hundred pounds sterling per annum; enough to work a moderate sized Railway, saved in the freight of "dead weight" alone!

A most singular circumstance in connection with axles is the fact that, the best which are manufactured in Prussia of a very extraordinary quality of cast steel, and not introduced into England until very recently, although they have been used for years in Germany, not one of which was ever known to fail for any cause that I am aware of, much less are they likely to fail from the "crystalline" disease, to which iron is said to be subject.

Cast steel tire, from the same manufactory, has more recently been introduced with promise of equally favorable results. One of them was exhibited at the Crystal Palace, made without welding, from a solid bar, and is a beautiful specimen of work.

Rails as well as axles ties, have long been patented to be made of steel, but hitherto, the latter have not been generally on sale; the axles and tire of cast steel are in the market, and there is no doubt will eventually supercede all others, and even the company which "does not profess to introduce anything new," must have them, or be ruined by "damages" at law.

Yours, respectfully,

T. A. R.

Savannah Valley Railroad.

We have been shown the report of Mr. Arms, Chief Engineer, to the President, Mr. Hutchinson, of the results of the experimental surveys of the above road, from which we cull the following interesting facts:—

The length of the experimental line from Anderson to Hamburg..... 93½ miles. This can be brought down to..... 92 " an increase of length over an air line of only 8 miles or 9½ per cent.

This compares favorably with the following:
Length over a straight line of the road from Charleston to Columbia..... 25 per cent.
Columbia to Greenville..... 47 " "
" to Anderson..... 28 " "
Augusta to Atlanta..... 25 " "
Savannah to Macon..... 27 " "

A comparison of distances shows not less favorably.

Connecting with the Rabun Gap road at Anderson, it will afford a route from Knoxville, Tenn., to Charleston, S. C., 28 miles shorter than via Greenville and Columbia roads.

From Knoxville, via Dalton and Atlanta, to Augusta, is..... 377 miles,
Via Anderson..... 286 "

Difference..... 91 "
Knoxville to Savannah and Augusta..... 498 "
Via Anderson and Augusta..... 416 "

Difference in favor of Valley Route.... 82 "

The estimated cost of the Road, grading, bridging, masonry, &c..... \$799,070 00
Superstructure..... 757,000 00
Equipment..... 185,200 00
Engineering, &c..... 70,000 00

\$1,811,270 00

No estimate is hazarded of the business and profits to be expected from this desirable connecting link of the Southern Atlantic, with the Western States of the great valley. But they must be immense. The road will make Anderson an important depot for a produce and distributing point, similar to Atlanta in Georgia. It must also greatly increase the trade and property of Hamburg and Augusta—Augusta Constitutionalist.

Franklin Canal, or Lake Shore Railroad.

The difficulties in reference to the above Company have been settled by the Legislature of Pennsylvania, by the passage of the following bill, which we give below, from the interest which these difficulties have excited, and from the importance of the measures of "Pacification" to the Company.

AN ACT relative to the Sunbury and Erie Railroad Company and the Cleveland, Painesville and Ashtabula Railroad Company.

SECTION I. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same, that the Cleveland, Painesville and Ashtabula Railroad Company, as incorporated under an act of the General Assembly of the State of Ohio, passed the 18th February, A. D. 1848, entitled "An Act to Incorporate the Cleveland, Painesville and Ashtabula Railroad Company," and an act supplementary thereto, passed December 10, 1850, be, and they are hereby authorized to construct and use a railroad, with one or more tracks, commencing at and in the city of Erie, thence extending south-westwardly by the most practicable route on or along the Franklin Canal Railroad to a point on the State line of Ohio, where it may connect with the Cleveland, Painesville and Ashtabula Railroad, subject to the provisions of an act regulating railroad companies, passed the 19th February, 1849, and that they be and are hereby authorized to connect their road with any railroad or railroads legally authorized to come to or to lay a road within the limits of the city of Erie. Provided, That all such connections shall wholly cease so soon as the Sunbury and Erie Railroad

Company shall leave a track or tracks open for use leading into said city, unless they shall also make a connection therein with said Sunbury and Erie Railroad at the depots of the said last-named company.

Sec. 2. That the said Cleveland, Painesville and Ashtabula Railroad Company be, and they are hereby authorized and required to purchase the railroad now constructed from the city of Erie to the Ohio State line, and all the right or interest of the Franklin Canal Company, or any other parties in and to the same, with its appurtenances and the right of way, and all other rights and property connected therewith, and shall also purchase any shares of the said original Franklin Canal Company's stock at par, and pay the interest and principal on all bonds of said company according to their tenor, and thereafter the said Cleveland, Painesville and Ashtabula Railroad Company may use and enjoy the said railroad and its appurtenances, with a full release of any and all rights and claims of the Commonwealth thereto or therein, and the said Franklin Canal Company is authorized to make such sale and transfer to said Cleveland, Painesville and Ashtabula Railroad Company.

Sec. 3. That the said Cleveland, Painesville and Ashtabula Railroad Company shall extend the tracks of their road, equal in all respects except the grades, to the main track from a point west of Liberty street, being the western boundary of the city of Erie northeastwardly by the most practicable route to the harbor of Erie at or near the depot grounds of the Sunbury and Erie Railroad Company, and have the same opened and ready for use within two years, or sooner, if the said Sunbury and Erie, or any other railroad coming from an eastwardly direction, shall have one or more tracks completed to the said harbor. *Provided*, That the Sunbury and Erie Railroad Company shall grant such use of their depot grounds as may be agreed upon by the parties, and that the city of Erie shall grant free the right of way over and along such public streets or public grounds as may be required for the track or tracks of said road to the harbor.

Sec. 4. That all the privileges and immunities granted to the said Cleveland, Painesville and Ashtabula Railroad Company in and by this act, are granted upon the following terms and conditions, namely:

First. The said Cleveland, Painesville and Ashtabula Railroad Company shall make such connection between their railroad and that of the Sunbury and Erie Railroad Company, at or near the city of Erie as may be best adapted to the safe, cheap and ready transferring of cars; passengers, baggage and freight from one road to the other, so soon as the western division of the said Sunbury and Erie Railroad shall be finished, and that so soon as the said Sunbury and Erie Railroad Company shall have laid down a track of road from Sunbury to Erie, then and thereafter the said Cleveland, Painesville and Ashtabula Railroad Company shall run their freight and passenger trains to the depots of the Sunbury and Erie Railroad Company, and from then and thereafter shall not grant, furnish or allow to any company whose railroad shall terminate at or pass through or near the city of Erie, nor to any company or companies whose road or roads shall connect with or be contiguous to such road terminating at or passing through or near the city of Erie any facilities, privileges or advantages which are not equally granted and furnished to the Sunbury and Erie Railroad Company, nor give or furnish, or permit to be given or furnished, by any agent, or by any person or persons, company or companies, using their road directly or indirectly, any inducement of any kind whatever to any party to travel or to send or forward property or mail matter in any direction on or over any railroad so terminating at or passing through or near the city of Erie, or connecting or contiguous therewith, in preference to traveling or sending or forwarding such property or mail matter on or over the said Sunbury and Erie Railroad, and all passengers, prop-

erty and mail matter passing over the said Sunbury and Erie Railroad, or destined to pass over the same, shall be received and dispatched by the said Cleveland, Painesville and Ashtabula Railroad Company with all proper and reasonable speed and dispatch. *Provided*, That the Commonwealth hereby reserves the right, at any time that may be deemed necessary, to protect her interests, to impose such taxes on the Cleveland, Painesville and Ashtabula Railroad Company as may be imposed by any general law upon all the railroads of the Commonwealth.

Second. The said Cleveland, Painesville and Ashtabula Railroad Company shall, before exercising any of the rights or franchises hereby granted, subscribe for five thousand shares of the capital stock of the Sunbury and Erie Railroad Company, to be paid for in the bonds of the said Cleveland, Painesville and Ashtabula Railroad Company, as hereinafter authorized, to be issued, bearing seven per cent. per annum interest, payable half yearly, the principal payable in twenty years, to be secured by a mortgage of all their property, rights and franchises, and which shall be a first lien or mortgage on that part of their property in Pennsylvania, and on the rights and franchises granted or to be granted by this act. Said mortgage to be executed to such trustee as shall be satisfactory to the said Sunbury and Erie Railroad Company. The payments in bonds on account of such subscription to be made, and stock issued therefor in the same proportions, and at the same times, that the city of Philadelphia shall make their payments on their second subscription of ten thousand shares to the capital stock of the said Sunbury and Erie Railroad Company, which said five thousand shares of the stock, unless otherwise agreed to by both parties, shall be inalienable until the maturity of the bonds given in payment therefor, and so declared on the face of the certificate for the same, and in all the elections or stock votes of the Sunbury and Erie Railroad Company, one thousand six hundred and sixty-seven shares, and no more, may be voted upon by the said Cleveland, Painesville and Ashtabula Railroad Company.

Third. That at least three of the Directors of the said Cleveland, Painesville and Ashtabula Railroad Company shall be citizens of the Commonwealth of Pennsylvania.

Sec. 5. That said Cleveland, Painesville and Ashtabula Railroad Company be, and they are hereby authorized to issue their bonds in sums of not less than \$100 each, bearing interest at the rate of seven per centum per annum, payable half-yearly, to be secured by a mortgage or deed of trust of all their property, rights and franchises, to the amount of five hundred thousand dollars; and the said Sunbury and Erie Railroad Company are hereby authorized to receive said bonds at par in payment, as before provided, for the subscription to their stock hereinbefore authorized and directed to be made.

Sec. 6. That if the said Cleveland, Painesville and Ashtabula Railroad Company shall in any respect knowingly and intentionally refuse or neglect to conform and comply with all and singular the terms and conditions herein before recited and imposed, the fact of such refusal or neglect having been adjudged by a court of competent jurisdiction, then, and in such case, all the rights and privileges, powers and immunities granted to said company by this act, or intended so to be, shall forthwith cease and determine. *Provided*, That nothing herein contained shall be construed to release the Cleveland, Painesville and Ashtabula Railroad Company from liability to the Sunbury and Erie Railroad Company by reason of such refusal or neglect; but the said Sunbury and Erie Railroad Company may from time to time recover from the Cleveland, Painesville and Ashtabula Railroad Company such damages as they may sustain therefrom.

Sec. 7. That immediately upon the passage of this act the Susquehanna and Erie Railroad Company may assign and transfer to the Sunbury and Erie Railroad Company all their estate and effects,

rights, liberties and franchises; and from and after such transfer and assignment, duly executed under their corporate seal, and said Sunbury and Erie Railroad Company shall become vested with all the estate and effects of the said Susquehanna and Erie Railroad Company, and shall, and may exercise and enjoy, all the rights, privileges and franchises of the said Company, in their own name, and in addition to those now enjoyed or possessed by themselves, as fully as though the same had been directly granted to the said Sunbury and Erie Railroad Company. *Provided*, That if the said Sunbury and Erie Railroad Company shall, under the rights and franchises transferred to them by the said Susquehanna and Erie Railroad Company, or under any other legislative authority, construct a railroad leading from the city of Erie to the Ohio State line, parallel with the said Cleveland, Painesville and Ashtabula Railroad, or shall connect with any other such railroad, then and in such case the Sunbury and Erie Railroad Company shall pay to the said Cleveland, Painesville and Ashtabula Railroad Company so much as may have been paid on account of the said subscription of 5,000 shares of stock, either in cash or in the bonds aforesaid, at the option of said Sunbury and Erie Railroad Company; and thereupon the said Cleveland, Painesville and Ashtabula Railroad Company shall deliver up the certificates of stock issued to them to be canceled, and thenceforth the said Cleveland, Painesville and Ashtabula Railroad Company shall be, and they are hereby authorized to exercise all the rights and privileges hereinbefore granted, or intended so to be freed and discharged from all and singular the terms and conditions hereinbefore imposed and provided.

Sec. 8. That before exercising any of the rights and immunities hereby granted to the Cleveland, Painesville and Ashtabula Railroad Company, and to the Sunbury and Erie Railroad Company, respectively, either company shall give to the other notice in writing, under their respective corporate seals, that they accept this act and agree to become bound by all the provisions and conditions therein contained; and immediately upon either of said companies giving such notice to the other, then such company shall forthwith be and become entitled to all the benefits, rights, privileges and immunities granted by this act, subject, however, to the performances of the terms, provisions and conditions therein contained.

The above arrangement is stated to be "highly satisfactory to all parties." We are glad it is so. We presume the Lake Shore line, desirous of seeing the Sunbury and Erie Railroad built, are very willing to be allowed to aid a work important to its interests. Should the stock of the new concern prove valuable, the former will have the good fortune of securing another outlet and tributary, without submitting to a sacrifice. Should the contrary be the fact, the Lake Shore company can probably afford to throw away the \$500,000, provided it be the means of constructing the Sunbury and Erie road. This company is delighted with the arrangement, because it gives them an opportunity of compelling their more enterprising and wealthy neighbors to shell out half a million, which will enable this concern, which has been weather-bound "from time out of mind" for want of money to raise the wind, to set sail. The success of the road may turn upon this half a million, which has been seized as a sort of a waif from the capital of New York.

But as the parties interested are mutually satisfied—one that it has got so much, and the other that it has escaped by paying so little—all who have no interest certainly ought to be equally satisfied. New Yorkers are satisfied, because the arrangement will help to build the Sunbury and Erie road, a work which they regard as calculated

to be highly useful to them. The people of Philadelphia are pleased for a similar reason. Whether the satisfaction which the press of that city displays springs from a feeling that the settlement of the difficulty has relieved them from an unpleasant predicament, we will not give an opinion. But what has become of the offended majesty of the State? Has it been appeased by a sum of money? Has wounded dignity an equivalent in filthy lucre? But above all, what has become of the rights of the people of Erie in the arrangements that have been made? Completely sold out, sacrificed. Upon the break of gauge their hopes of salvation were built. The Governor, in his message in their vindication, states that the

"Effects of a break of gauge, and consequent trans-shipment east of Erie, upon the business of that harbor, must be paralyzing if not fatal."

By the arrangement now entered into, the Cleveland and Painesville road may connect their gauge with that of the road running to Buffalo, and break bulk there instead of at Erie. In fact, the two may be hereafter run as one road. So much for the principle involved in the Erie quarrel. It was a game of plunder from the beginning. The Erie people being the weaker party, have been rudely thrust aside, and get not a penny that was not offered time and again by the Lake Shore interest. If the positions they took were correct, they are ruined beyond remedy. The town was pretty thoroughly ruined in public estimation long ago.

Bellefontaine and Indiana Railroad Company.

The fourth annual report of the Board of Directors of the Bellefontaine and Indiana Railroad Company, under date of January 12, 1854, gives a full, and encouraging statement of the affairs of that company, since the completion of the road, in July 1853.

The completion of the road was delayed longer than contemplated for several reasons: the principal of which was a rise in the price of iron, and an increased price paid by the Company in the shape of duties; and the failure of the manufacturers in Europe to deliver the rails at the proper time, by which the Company was obliged to pay advanced prices for transportation.

The Indianapolis and Bellefontaine railroad was opened to the State line of Ohio a short time before this road was completed; so that a connection was at once made with the network of roads centering at Indianapolis. The two roads now run as one line under the superintendence of J. Nottingham Esq.

At Indianapolis, this line now connects with eight different railroads, branching to various points, and meeting on the Union track, which nearly encircles the city, to wit:

Madison and Indianapolis, length,	86 miles.
Terre-Haute and Indianapolis, "	72 "
Lafayette and Indianapolis, "	64 "
Peru & Indianapolis, supposed "	94 "
Indianapolis and Bellefontaine, "	84 "
Jeffersonville, "	108 "
Central supposed length,	72 "
Lawrenceburg,	90 "

The road is well stocked with first class engines and cars; but the accommodations are not half equal to the pressure of business offering. On the first of Nov. the company took entire possession of the road, relieving the contractors.

The entire expenditures of the road up to Jan. 1854, have been \$2,838,951.26.

But the company hold real estate, taken in payment for stock issued to the amount, (at cost,) of	249,431 75*
And materials, (surplus cross ties,) worth	3,750 00
Making	253,181 75
Which will be sold and reimburse the expenditure, prontato, leaving	\$2,585,769 51

The above is the actual cost, thus far, of the Road, its appurtenances and equipment, which makes the cost, per mile, (118 miles,) \$21,913.30.

The machinery, locomotives and cars of the company are all of the latest and most improved patterns, of the best materials, and well constructed. Our large and commodious new engine house, at Gallon, with accommodations for 20 engines, is nearly ready for use; one-fourth of which is to be paid for and occupied by the C. C. & C. R. R. Company. The same company is to occupy and pay for one-third of the repair shop, at the same point, which is also nearly ready for occupancy.

The engine house at Bellefontaine, with stalls for 5 engines, is nearly completed.

Warehouses have been erected, to accommodate the business of the Road, at Gallon, Caledonia, Marion, Larue, Ridgway, Bellefontaine, De Graff, Pemberton, Sidney, and Union, and others are being erected at other points. Small passenger houses will be required, at Marion and Sidney, during the present year.

But after everything is made complete, it is estimated the road will cost from \$22,000 to \$23,000 per mile. The increase over the estimate is attributed chiefly to expenditures not originally embraced in them, to the delay in obtaining iron, and to the advance in the price of labor, and materials.

Since the report was written the gauge of the Indianapolis road has been changed, so as to correspond with that of the Bellefontaine and Indiana road. A uniform track now exists between Buffalo and Indianapolis, through Cleveland; also from Pittsburgh to the same point over the Ohio and Pennsylvania road, which connects with the Bellefontaine and Indiana at Crestline. It is believed that this uniformity of track will add largely to the efficiency and value of the above road.

The report states that the troubles at Erie during the past winter, operated disastrously to the interests of this road, not less than \$25,000 having been diverted from this line to other points, at the date of the report.

The road was opened for business July 12th, 1853, and from that time up to Jan. 1st, 1854, the gross earnings of the road have been—

And the running expenses, after deducting fuel, oil, and other materials for use,	\$135,623 49
Net profits,	33,255 30
From which deduct 6 months interest on bonds,	\$102,368 19
Leaves applicable to dividend,	34,440 00
Four per cent. dividend, (payable mainly in stock,) declared on \$1,696,544 25-100 stock on dividend list,	67,928 19
Which leaves a surplus of,	67,861 77
	\$66,42

*Note.—This real estate was taken at an early day in the progress of the road, before the construction of the road had raised the price of real estate. It is now worth much more than its cost.

After direct connection is made with St. Louis, the Directors confidently anticipate a very large increase of business and receipts.

The following is a statement of the receipts and expenditures of this road, up to Jan. 1st, 1854.

Capital Stock paid in,	\$1,722,231 11
Mortgage Bonds,	792,000 00
Real Estate Bonds,	192,000 00
Bills payable,	64,791 96
Earnings used in Construction,	67,928 19
	\$2,838,951 26.

Graduation, Masonry, and Bridging,	\$510,437 36
Superstructure,	1,010,961 94
Right of Way,	27,120 85
Engineering, Officers' Salaries, Rent, Stationery, &c.	79,853 66
Depots and Stations,	55,750 27
Gravel Ballast,	90,826 06
Equipment,	348,068 92
Incidental Expenses,	14,966 25
Telegraph Line,	7,606 00
Interest, Discounts, Commissions, and Taxes,	363,820 83
Bills Receivable,	63,820 22
Real Estate taken for Stock, remaining unsold,	249,431 75
Material remaining on hand,	3,750 00
Cash in the hands of Treasurer and Agents of the Company,	17,628 15

\$2,838,951 26

There are in the line 16 locomotives, 208 eight-wheeled curves, 100 four-wheeled gravel cars, and 27 hand cars. All the cars above mentioned are now on the road. The final estimate of the whole cost of the road, exceeds the original estimate by the sum of \$138,596.93; the difference of which is attributed to the same causes as those mentioned in the report of the President. The following are some of the leading characteristics of the road.

Length of Road,	118.23 miles.
Length straight,	108.00 "
Length curved,	10.23 "
Length of curved line with radii varying in length from 2,865 to 11,460 feet,	8.77 "
Length of curved line with radii between 1,910 and 2,865 feet,	0.77 "
Length of curved line on minimum radius, 1,146 feet,	0.67 "

Only about 600 feet in length of the minimum radius of curvature occurs between stopping stations. The residue is at Sidney, and in the temporary track at Gallon, soon to be replaced by a new track, on an easy curve. These are tangents of 17, 13, 12, 8, 7, and 5 miles in length, respectively.

GRADES.

Level line,	20.69 miles.
" and under 5 feet per mile,	30.82 "
" and " 10 " " "	37.85 "
" and " 15 " " "	51.32 "
" and " 20 " " "	61.64 "
" and " 25 " " "	68.80 "
" and " 30 " " "	80.79 "
" and " 35 " " "	87.25 "
" and not over 39.60 "	118.23 "
Total length of maximum grades,	23.56 "
Longest continuous maximum grade, 3.00 "	

The report complained of a failure on the part of the Cleveland, Columbus, and Cincinnati Company; to comply with a contract entered into with the Bellefontaine and Indiana Company, requiring the former to furnish a certain proportion of Engines

and Cars to unite in doing the business from the line of the Bellefontaine and Indiana Company.

The consequence has been that the cars of this road have to run not only over their own road, but over that of the Indiana 30 miles, and 79 miles of the C. C. and C. road; and besides being often detained at Cleveland as warehouses, and at a time when western business is pressing.

The report also urges an independent connecting road of four miles between Galion and Crestline, in relation to which we copy the following:

The Ohio and Pennsylvania road, since its completion to Crestline, 188 miles from Pittsburgh, placing it in connection with the C. C. & C. road; and, by using 4 miles of the latter, with your line at Galion, has been crowded with business. The superintendent recently informed me that they had not been able to accommodate the local freight accumulating on their own line; much less, to extend proper facilities for the transmission of the still greater amount awaiting shipment along your line and its tributaries in Indiana. That company has commenced active measures for bringing about a connection with the Pennsylvania railroad across the Alleghany river, between the cities of Alleghany and Pittsburg. The Pennsylvania road, which has for some time been in operation with the State Inclined Plane road, will, during the present month, be finished throughout, with a new track, avoiding all the inclined planes. Trains will then run from Philadelphia to Pittsburgh in 16 hours, saving 6 or 7 hours on their present time-table. This change, so long desired by the traveling public, will unquestionably add largely to the business passing between the west and the eastern cities, by the Pittsburgh route. Many, even now, travel by this line, in preference to the Wheeling route, to Baltimore and Washington; and with the avoidance of the inclined planes, and saving of time, it must become a favorite with the traveling community. Thus will, in a few days, be presented a strong additional inducement for the construction of the 4 miles of Union track long since proposed between Crestline and Galion. This accomplished, with a second track on the C. C. & C. road, from Galion to Cleveland, the Bellefontaine and Indiana road will take its proper stand among the railroads of Ohio.

In addition to roads already constructed, there are several proposed works, which, when completed will have a tendency to pour an increased business into the Bellefontaine and Indiana road. One of these is the Owl Creek Valley connection from Marion to Mt. Vernon 37 miles; thence to Coshocton 37 miles, thence to Steubenville 78 miles; and thence to Pittsburgh, via the Pittsburgh and Steubenville road, 42 miles.

Another connection is from Cincinnati to Sydney, called the Dayton and Michigan road. From Dayton to Troy 20 miles; this road was opened last spring, leaving but 17 miles between Sydney and Cincinnati to be completed. This road, passing as it does through the exhaustless Miami Valley, is regarded as a valuable tributary to the Bellefontaine and Indiana road.

The great strength of the Bellefontaine and Indiana Railroad, is in the fact, that it connects by the shortest line, the capital of Indiana, and the web of railroads about that point, with the great Lakes, and the eastern markets. It must become apart of the shortest route from Cleveland, not only to St. Louis, but to all the towns in the Lower Ohio. It traverses an excellent section of country, which must supply it with a lucrative local traffic. We regard it a first class Western Railroad, not only as a connecting line between other systems, but as a local work.

Extent of the Domain of the United States.

The following report of the Commissioner of the land office, made to the Secretary of the Interior, and submitted to the House of Representatives on the 21st of March, 1854, by the President, in obedience to a resolution of that body, explains a material error as to the prevalent estimate of the extent of the public domain. The letter of the Commissioner is as follows:

GENERAL LAND OFFICE, March 15, 1854.

SIR: In compliance with the resolution of the House of Representatives, received in your letter of the 24th ult., which resolution is as follows, viz:

Resolved, That the President of the United States be requested to cause to be prepared, for the use of this House, tabular statements exhibiting—

First. The area of each State and Territory, expressed in square miles and in acres;

Second. The extent of public domain now remaining in each State and Territory, expressed in acres;

Third. The extent of public domain alienated by the government of the United States in each State and Territory, distinguishing between that sold for a valuable consideration and that given, granted, ceded, or conveyed for the purposes of education, public buildings, internal improvements, and miscellaneous objects;—

I have the honor to transmit herewith a statement containing the information called for;

By the former statement of this office, the whole surface of the public domain is made to cover.	Acres. 1,612,184,919
By the statement now furnished...	1,391,480,320

Making difference.....	220,704,599
------------------------	-------------

This discrepancy is explained by the fact that Oregon, the proposed Nebraska, and the Indian Territories, are set down in the former statement as containing....

	764,197,760
--	-------------

Which was in accordance with an estimate of the public domain west of the Mississippi river, made many years since on the most correct maps then in existence, reduced from time by deducting the estimated surfaces of the organized Territories; but by reestimating the surface according to the improved maps of the day, and the new divisions thereof by the recent legislation of Congress and the bills now pending before that body, it is found, as now stated, to cover only.....

	543,493,120
--	-------------

Leaving difference.....	220,704,640
-------------------------	-------------

From which deduct a slight error in the old statement, made in reducing the miles to acres for the States of Illinois and Alabama...

Leaves difference, as above.....	220,704,599
----------------------------------	-------------

With great respect, your obedient servant,
JOHN WILSON, Commissioner.
Hon. R. McCLELLAND, Sec'y of the Interior.

Consolidation of Railroads.

The consolidation of the railroad lines between Baltimore and Sunbury, Pa., is likely to take place. The lower branch of the Pennsylvania Legislature, on Tuesday, passed the bill to consolidate the York and Maryland line, York and Cumberland, Susquehanna and York, and the Susquehanna Railroads into one road, to be known as the Northern, Central Railroad. The bill had previously passed the Senate, and no doubt is entertained of its receiving the approval of the Governor. The consent of Maryland to the proposed consolidation was granted by the Legislature at its recent session, and the only legislation now necessary to consummate the enterprise is to come from the Baltimore City Council. An ordinance

relating to the subject was passed by both branches, but was returned by the Mayor without his approval, and another, amended so as to meet his objections, has since been introduced.

Earnings of the Maine Railroads for 1853.

We give below a statement showing the gross income of the Railways of Maine in 1853.

RECEIPTS IN 1853.

	Passengers.	Freight.	Other sources,	Total receipts.
Androscoggin,	\$9,168	9,555	428	19,152
A. & St. L.	130,435	167,733	17,869	316,038
And. & Ken.	79,305	68,176	6,594	154,106
Bangor & Pisc.	23,269	18,911	1,957	43,188
Calais & Baring,	1,361	25,675	1,001	28,038
Ken. & Port.	134,432	34,628	7,941	177,003
Machiasport,		9,715	100	9,815
P. S. & P.	187,808	58,197	16,061	262,077
York & Cumb,	35,170	18,905	284	54,361

\$600,951 411,439 52,238 1,064,628

Estimating the cost of the Railroads of Maine in operation in round numbers at \$12,000,000, the gross earnings are about 9½ per cent on the cost. Our Railroad returns are too incomplete to allow of any thing like an accurate statement of their working expenses, or of the net earnings of the roads.

Wabash and Erie Canal.

The Trustees of the Wabash and Erie Canal, of the State of Indiana, report the
Tolls and water rents of 1853.....\$181,204
Land sales for year.....417,379
Interest on New-York deposits.....1,481

Total increase of year.....	\$600,064
Balance from 1852.....	265,376

Total.....	\$865,440
Expenses of year.....	\$98,373
Construction.....	473,083
Interest on debt.....	64,416
Miscellaneous.....	9,395—
	642,272

Balance on hand December, 1853...\$223,168

Cincinnati Peru and Chicago Railroad.

There are now engaged in the construction of the above road, about one hundred and fifty workmen within the limits of this county, and as many more at different points on the line. We are assured, that in the course of one week or ten days, the hands put upon the track will be nearly double in number, making a force of five or six hundred men, and that the road, between this place and Plymouth will be completed and placed in running order by the first day of October next. Connecting at that point with the eastern portion of the Fort Wayne and Chicago road, which will soon thereafter be in an available condition, a portion of our own will thereby be brought into early operation and be made to pay into the treasury of the company a remunerating profit. Those interested, therefore, in the value of the stock, as well as the citizens of Laporte generally, solicitous for our sectional prosperity, will have cause to congratulate their fortune, that the Peru and Chicago railroad has for its contractors, men who sustain so well their reputation for untiring energy and promptness as Messrs French & Tyner.—*Laporte Times*.

Henderson and Nashville Railroad.

The Hopkinsville *Whig* says there are now about six hundred hands at work on this road, principally in Henderson and Hopkins counties, where they are at work on the tunnel and the deep cut. The tunnel will be 600 feet in length. The deep cut is 300 feet in length and about 60 feet deep from the apex. The road has been grubbed and cut out nearly throughout its whole length from Henderson to Trenton; about thirty miles have been graded, mostly in Henderson and Hopkins counties, and the work of grading is rapidly progressing. The managers of the road hope to

commence laying down the iron rail during the summer, and before fall it is hoped the cars will be on a portion of the road, and may be running from Henderson to Madisonville.

American Railroad Journal.

Saturday, May 13, 1854.

Stock and Money Market.

We have but to repeat the substance of what we have said for several weeks past. The ebb of the tide still continues. Securities of all kinds have touched, within the past week, a lower point than at any previous period. There appears to be no effort to sustain the *fancy* market, nor is there any demand for securities of an unquestioned character. A complete paralysis seems to have struck the entire market.

Under this state of things, it is worse than useless for railroad companies that do not possess a well-known reputation, to attempt to borrow money by a sale of their bonds. They will not only not succeed, but failure will, to a certain extent, discredit the character of the security offered.

At the present time no railroad company can safely borrow money beyond the means for payment within their reach, nor incur heavy expenditures in the construction of new works, relying on the ordinary mode of raising money by sales of bonds. The market is loaded down with securities much more attractive than any new project can offer, and some time must elapse before the supply on hand can be cleared off. Our own views will undoubtedly be abundantly confirmed by the experience of any person who, for a few months past, has attempted to effect negotiations. The state of things under which railroad companies are suffering will, in time work its own cure; but to allow it to do so in the end, it should not be aggravated by adding to the causes that produced it.

The drain of specie continues. The shipments for the last week were \$1,571,012; and for the year, \$9,987,073. The almost entire cessation of foreign orders for our securities is one of the reasons for the large export.

Below is the comparative statement of the City Banks for the weeks ending April 29 and May 6:

	May 6.	April 29.
Loans.....	\$90,688,774	\$90,245,049
Specie.....	11,437,034	10,951,135
Circulation.....	9,851,038	9,377,678
Deposits.....	63,857,487	59,719,381

The returns of Railroad Companies for April to date were as follows:

Bal. & Ohio (main stem)...	\$351,379	\$200,219
Michigan Northern.....	165,301	111,894
Michigan Central.....	145,156	104,128
Macon & Western.....	29,624	20,903
Cleveland & Pittsburgh...	42,000	39,380
Chicago & Rock Island...	86,944	new
New York and New Haven.	69,313	66,462

The city of Cleveland has loaned \$100,000 to the Akron Branch Railroad, payable in the stock of the Cleveland, Columbus, and Cincinnati Railroad.

Rome and Watertown Railroad.

The stockholders of the Watertown and Rome Railroad have voted to authorize its board of directors to indorse the bonds of the Potsdam and Watertown Railroad Co., under the recent act of the Legislature.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,588,100	2,973,700	5,973,700	254,743	113,520	none	83
Androscoggin and Kennebec...	55	824,363	1,043,540	2,036,140	177,003	80,053	none	80
Kennebec and Portland.....	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth..	51	1,355,500	123,884	1,459,384	208,669	.....	6	98
York and Cumberland.....	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,849,278	622,200	2,540,217	150,538	79,659	none	30
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	37
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence....	24	717,543	.....	.....	.....	.....	6	83
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	105
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan.....	26	.....	.....	673,500	.....	.....	none	12
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	22
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central.....	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	8
Vermont and Canada.....	47	1,500,000	.....	1,500,000	Leased to	the Vt. C	Cent.	97
Western Vermont.....	51	392,000	700,000	.....	Recently	opened.	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	89
Boston and Maine.....	83	4,076,974	150,000	4,111,315	803,024	418,358	8	103
Boston and Providence.....	55	3,160,000	402,326	3,579,041	509,326	226,639	6	81
Boston and Worcester.....	69	4,500,000	590,541	4,850,754	887,219	413,289	7	98
Cape Cod branch.....	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River.....	52	1,591,110	286,363	1,802,244	258,220	102,098	4	55
Eastern	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	84
Fall River.....	42	1,050,000	6,208	1,050,000	294,183	126,589	8	95
Fitchburg.....	67	3,540,000	191,500	3,716,870	626,659	214,633	6	88
New Bedford and Taunton...	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	57
Old Colony.....	45	1,964,070	295,038	2,293,534	374,897	122,866	none	96
Taunton Branch.....	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts..	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	15
Worcester and Nashua.....	46	1,140,000	194,445	1,342,593	182,898	81,807	5	60
Western	155	5,150,000	5,819,520	9,953,258	1,525,224	746,736	7	96
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	64
Providence and Worcester...	40	1,457,500	800,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	639,629	294,269	10	120
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill..	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven....	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	90
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.	55	750,500	650,000	1,380,610	Recently	opened.	none	40
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	54
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently	opened.	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line.....	69	879,636	872,000	1,921,270	Recently	opened.	.....	130
Canandaigua and Niagara F..	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira.....	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.....	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)...	464	10,000,000	24,008,865	33,070,863	4,318,962	1,800,181	7	68
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	64
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	49
Long Island.....	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	102
Ogdensburg (Northern).....	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	19
Oswego and Syracuse.....	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal.....	23	174,042	131,000	349,775	Recently	opened.	none	.....
Rensselaer and Saratoga....	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.....	60	850,000	400,000	1,250,000	Recently	opened.	.....	.....
Saratoga and Washington....	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	Recently	opened.	.....	33
Troy and Boston.....	39	430,936	700,000	1,043,357	Recently	opened.	none	.....
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	93
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,400	1,388,385	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey.....	31	2,197,840	476,000	8,245,720	603,942	316,259	10	131
New Jersey Central.....	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	20	600,000	.....	750,000	Recently	opened.	.....	125
Harrisburgh and Lancaster...	36	830,100	713,227	1,702,523	265,827	106,320	8	55
Philadelphia and Reading....	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	74
Philad., Wilmington and Balt.	98	5,000,000	2,399,166	8,047,285	868,038	541,789	5	74

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	62
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	466,468	7½	....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga. "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	81½
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	91
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton. "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine. "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru. "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Terre Haute and Indianapolis. "	72	632,887	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	126
Michigan Southern and Ind. N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	112½
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	103½
Pacific..... Mo.	38	.....	non	In progress	Recently opened.	.....	.....	.....

Railroad Consolidation.

The stockholders of the Old Colony and Fall River Railroads met on the 4th inst., and voted to unite the two roads, thus forming a continuous line with New York by the steamers via Fall River. In the Old Colony meeting the vote was unanimous, but in the Fall River there was a little opposition.

Sale of Harlem Bonds.

The great sale of the Bonds of this Company took place on the 10th inst. The bids ranged from 92, 33, to 95, 27. The bonds are secured by a first mortgage on the whole road, and are a first-rate security.

Maysville and Lexington Railroad.

The following gentlemen have been elected Directors of the Maysville and Lexington Railroad Company for the ensuing year, viz:

Henry Waller, President. A. M. January, C. Shultz, Maysville; F. T. Hord, J. M. Forman, Mason County; William Nun—Bourbon county; George Robertson—Fayette county. Gen. Forman and Judge Robertson are new members.

Debt of Milwaukee.

The debt of Milwaukee is \$1,216,050, nearly all of which has been caused by loans to various Railroad Companies connecting that city with the interior.

Lewiston and Topsham Railroad.

At a meeting of the stockholders of this road at Topsham on the 1st inst., the following board of directors was elected, to wit:

Francis T. Purington, Topsham; Oliver Moses, Geo. W. Kendall, S. A. Houghton, and Wm. M. Rogers, Bath; Henry J. Holland, Webster; Chas. Farnsworth, Lisbon.

The board was subsequently organized by the choice of F. T. Purington, president, and H. W. Owen, of this city, clerk and treasurer.

Cincinnati Hamilton and Dayton Railroad.

The following named gentlemen have been re-elected Directors of this company for the ensuing year:

S. S. L'Honniden, John C. Wright, A. M. Taylor, George Carlisle, Sam'l. Fosdick, Edwin B. Reeder, Cincinnati; John Woods, Hamilton; Simon Gebhart, Dayton; Jos. B. Varnum, New York.

Locomotives for Sale.

We advertise, in our paper of to-day, two locomotive engines for sale. They are not considered sufficiently heavy for the work for which they were ordered for sale, without having been moved from the manufactory. They are of first class workmanship, and will be sold at a bargain.

Public Debt of the U. S.

According to the Report of the Secretary of the Treasury, the purchase and redemption of the National Debt since March 4, 1853, has been as follows:

The principal of the debt paid..... \$18,873,714
Premiums paid on same..... 2,657,902
Principal of Debt now standing.... 50,315,872

Virginia and Tennessee Railroad.

This road, it is believed, will be completed to New River, one hundred miles from Lynchburgh, by the first of June. In this distance the two great mountain ranges of the State, the Alleghany and Blue Ridge, are crossed, New River being a tributary of the Kanawha.

South Side Railroad.

It is expected that the South Side Railroad will be completed to Lynchburgh in September next.

Iron Bridges.

The result of a failure of an iron bridge, some years since, upon the Erie Railroad, coupled with the accidental circumstance, it is believe, that a patent owned by an officer of the company, embraced a wooden super structure, has prevented the adoption of iron bridges upon that line. The Baltimore and Ohio and Pennsylvania Railroads, however, have used iron spans for a long time with undoubted safety. Both of these roads have been fortunate in their possession of home talent, competent to produce the best examples of this kind of engineering, Herman Haupt, Esq. of the Pennsylvania, and Albert Pink and Wendall Bollman, Esqrs., of the monuments of their skill in this line. Mr. Haupt, Baltimore and Ohio road, has erected substantial especially, has become widely known for his scientific researches in the science of bridge construction. His opinion of iron bridges, as expressed in his late report, is worthy of attention.

"The bridges on the mountain division (of the Pennsylvania Railroad) have been constructed of iron, upon plans which are perfectly reliable.—With a proper distribution of material, the cost of an iron bridge does not greatly exceed that of a wooden structure, and if properly proportioned, is more safe and preferable in every respect. The failures that have occurred upon other roads were the result of defective proportions, and of weakness that a calculation should have exposed. Iron, where properly used, is more safe than timber, and I am decidedly of the opinion that none of the bridges on the Pennsylvania Railroad should be rebuilt with wood—iron should be substituted in every case when renewals are required."

Six spans of double track, wrought and cast iron truss bridges for the mountain division, and a three-span boiler-plate bridge for the same division, have been built during the past year at the company's workshops at Altoona.

Railroad "Runners."

We are pleased to see in the report of the Pennsylvania Railroad Company, a decided disavowal of the system of employing "runners" in the Western towns, to influence passengers over their route. This system, which has been long practiced to the discredit of several competing companies, is one which no respectable tradesman would adopt to procure customers. It is annoying to travelers and expensive to the companies. It is also irregular in principle, and leads to a loose system of collections and of accountability on the part of the agents. It is a system which parades all the defects of every road before the traveling public, and in a manner which often shakes their confidence, unnecessarily too, in all the routes in the field.

Much of the through passenger business, of several of our leading roads is obtained under the operations of this system. We have been enabled to show the profits (?) of this class of patronage to the Erie road, and no doubt could establish a similar result in the case of other roads if their reports but supplied the materials for a comparison.

Under this view we are more pleased to learn that the Pennsylvania road has secured a large and profitable through business, without any considerable resort to this system. The report says.

"The through business of our Road has increased with astonishing rapidity, and at this time exceeds that of the New York and Erie Railroad—

While it has not cost us as much to obtain it as we have received from it—as appears from the statements of that company to have been the result of their past experience. The expediency and utility of maintaining an army of noisy drummers throughout the West, has always been doubted by this Company, and practiced only to a limited extent. It is therefore gratifying to find that the experience of our neighbors has justified our own conclusions upon this subject. Information in relation to the facilities of the route can be disseminated less expensively and more efficiently through other means. The fact that our line has commanded a remunerative business with impediments at its centre equivalent—as regards time—to an increase of its length of nearly 200 miles, shows that it has not been unknown to the traveler."

Mississippi and Atlantic Railroad.

This company having at last obtained a charter from the State of Illinois, Mr. Brough, the President, has issued a circular to the stockholders, giving a brief history of the legislative proceedings in reference to the above company, with statements of the opposition encountered from interests adverse to his own, and of the present condition of the company's affairs.

The principal opposition is represented to have come from the *Terre-Haute and Alton* interest. In the year 1852, a charter to the Mississippi and Atlantic Company was refused, and again in 1853, both which results were openly and avowedly (as affirmed by the circular) effected by the friends of the *Terre-Haute* and *Alton*, and the *Ohio* and *Mississippi* companies. In the spring of 1853, however, negotiations having been made for the completion of the *Ohio* and *Mississippi* road, opposition from that source was, in consequence, withdrawn. The former opposition however continued, on the ground, as is asserted, that the faith of the State was pledged, by former refusals of a charter to the *Mississippi* and *Atlantic* Company, as interfering with the interests of the *Terre-Haute* and *Alton* road.

The bill granting the charter was, however, passed by the decisive vote of 53 to 18 in the House, and 15 to 8 in the Senate.

The opposition to the road still continued. As soon as the charter was obtained, a legal opinion, by certain "jurists" of Illinois, was procured, to the effect that the charter was invalid, because the company was not so formed as to come within the provisions of the Governor's proclamation convening the Legislature; and a writ of *quo warranto* was served upon the Company. The case was heard on the 19th April, before the highest legal tribunal of the State, judgment entered of dismissing the writ, and re-affirming the rights and powers of the company.

The roads from *Cleveland* to *Terre-Haute* are now completed, and running regular trains; and as soon as this remaining link is added, the connection will be complete to and from *St. Louis*. The distance from *Terre-Haute* to *St. Louis* by this road is set down as 162 miles—the route exceeding by less than one mile an air line.

A table of comparative distances between different points with other roads, is given in the circular, which it may be interesting to refer to. The distance on the line of the *Wabash Valley* road from *Toledo* to *Lafayette*, and on the contemplated line from thence to *Paris*, Illinois, have been taken

according to the line of the canal, and the traveled roads, confirming them by minimum measurements on maps.

1. Cleveland to St. Louis, by Central Route, embracing our Road.

Cleveland to Galion,.....	79 miles.
Galion to Union,.....	118 "
Union to Indianapolis,.....	84 "
Indianapolis to Terre-Haute,.....	72 "
Terre-Haute to St. Louis,.....	162 "

Total,..... 515 miles.

1. Cleveland to St. Louis, via Toledo.

Cleveland to Toledo,.....	112 miles.
Toledo to Lafayette,.....	214 "
Lafayette to Paris,.....	80 "
Paris to Alton,.....	155 "
Alton to St. Louis,.....	25 "

Total,..... 586 miles.

Deduct Central Route,..... 515 "

Difference,..... 71 miles.

2. Cleveland to St. Louis, via Chicago.

Cleveland to Toledo,.....	112 miles.
Toledo to Chicago,.....	242 "
Chicago to Joliet,.....	40 "
Joliet to Alton,.....	220 "
Alton to St. Louis,.....	25 "

Total,..... 629 miles.

Deduct Central Route,..... 515 "

Difference,..... 124 miles.

4. Air-Line from Cleveland to St. Louis, (as contemplated though not commenced.)

Cleveland to Paris,.....	342 miles.
Paris to Alton,.....	155 "
Alton to St. Louis,.....	25 "

Total,..... 522 miles.

Deduct Central Route,..... 515 "

Difference,..... 7 miles.

5. Cleveland to St. Louis, via Cincinnati.

Cleveland to Columbus,.....	134 miles.
Columbus to Cincinnati,.....	118 "
Cincinnati to St. Louis,.....	344 "

Total,..... 596 miles.

Deduct Central Route,..... 515 "

Difference,..... 81 miles.

6. St. Louis to Cincinnati.

By Ohio and Mississippi road,.....	344 miles.
By our route to Indianapolis,.....	234 miles.
Indianapolis to Cincinnati,.....	109 "

Total,..... 343 miles.

Difference,..... 1 mile.

7. St. Louis to Philadelphia.

Our route to Galion,.....	436 miles.
Galion to Philadelphia,.....	546 "

Total,..... 982 miles.

The contracts for the whole line of the road, have been let; although all the plats of location had not been filed at the time of the issue of the Circular, for the reason that some changes in the location were deemed advisable, and were being made at the time.

Annexed to the Circular, is a letter from W. Milnor Roberts Esq., Chief Engineer of the Bellefontaine and Indiana, and Alleghany Valley Railroad, who in company with Mr. Eaton, Chief Engineer of the Mississippi and Atlantic Road, has minutely examined the line of the latter, and has given his views of its business capabilities, &c., &c. He states the alignment of the road to be exceedingly favorable.

The smallest curves have generally radii exceeding one mile in length. The maximum grade, used chiefly in passing the valleys of the streams, is 39.60 feet per mile. The longest grade of this elevation is not quite two miles; and there are but six others exceeding a mile. The bridges usually require about from one to two hundred feet of water way: the largest, the crossing of the Wabash at Terre-Haute, requires about seven hundred feet, with a grade of thirty-one feet above low water.

Good building stone is found within short distances, at several points along the route. Seven important towns and villages line the route, thus affording conveniences for such concentrating a force of laborers as may be needed.

We copy the following from Mr. Roberts letter.

The east branch of the Illinois Central Railroad crosses your line sixty-five miles west of Terre-Haute, and ninety-seven from St. Louis, where the two roads are to be connected, forming a very favorable line between St. Louis and Chicago, which can probably be run quicker and cheaper than any other route between the same two important points.

The main line of the Illinois Central Railroad crosses, and will connect with your line, at Vandalia, ninety-six miles from Terre-Haute, and sixty-six miles from St. Louis, affording an advantageous railroad connection with the whole of central Illinois.

The mineral wealth (chiefly coal,) along the route, may be regarded as entirely undeveloped; yet there is sufficient evidence to prove that coal, of a superior quality, will hereafter form a heavy item of transportation. From careful geological examinations, it is established that good coking coal exists; so that coal will not only form an article of transportation to St. Louis and other markets, but will be used in the locomotives of this and connecting lines, and thus atone for the scarcity of timber along much of the route, and in this way reduce the cost of running the road.

The distance by this route from St. Louis to New York, by way of Cleveland, will be 1,116 miles; which, at thirty miles per hour, would require only thirty-seven hours; from St. Louis to Philadelphia, 982 miles, which, at thirty miles per hour, would require but thirty-three hours.

At Indianapolis and Union your road will meet several distinct lines running to Philadelphia and Baltimore, through Pittsburgh and Wheeling, all of which will find their nearest and best route over your road; whilst, at the same time, by means of lines now in progress between Indianapolis and Cincinnati you will present a short and highly favorable route between Cincinnati, and St. Louis.

In conclusion Mr. Brough adds:—

The contracts for the whole line of the road have been let, on reasonable terms, to responsible and energetic contractors. Under the provisions of the law, we are required to locate our line, and deposit plats of such location with the clerks of the county courts, before commencing the work. On the west end of the line some changes in the location were deemed advisable, and the Chief Engineer, with his corps, has been engaged on these since the middle of March. They will be completed in the course of ten days, and the plats made and filed. It will remain for us only to give the orders to the contractors to proceed vigorously with the work of construction.

It is important to us, in every particular, that this work should not be delayed a day beyond the sternest possible necessity. It is now the middle of April, and the very best season for doing work. During July and August, it will be difficult to command a force, unless it is collected early in the season. On some adjoining roads the work is closing up, and the hands can now be secured, which, under the present heavy demand for labor, is exceedingly desirable. Add to this that our stock is bearing interest, and our incidental expen-

ses accumulating—and also that our eastern connections are all completed, ready and desirous to give us the full amount of business at the earliest moment we are prepared for it; and we have a pressure of facts and circumstances all indicating, in the most unmistakable manner, not only the importance, but the great interests of the stockholders in the most rapid and energetic prosecution of the work. Under these circumstances—seeing this importance—and feeling deeply the responsibility of the interest they represent, the Board of Directors advise the most prompt and active measures. It is for the stockholders, who have so long and faithfully cherished this enterprise, to sustain the Board, by promptly meeting the instalments of the stock; and, this done, we feel warranted in saying that, within two years, this important line to the community, and productive interest to the stockholders, may be brought into successful operation.

Erie Canal.

Probable cost of the enlargement.

In reply to a resolve of the State Senate, John P. Clark, Esq., State Engineer and Surveyor, has submitted estimates, supplying some omissions in the report of his predecessors, as follows:

For completing the enlargement of the Oswego Canal.....	\$831,108 47
For deficiency in the estimate for completing the Black River Canal and the improvements of Black River.....	125,000 00
For enlarging Locks on the Champlain Canal.....	150,000 00
" " the Cayuga and Seneca ".....	525,000 00
For engineering, land damages, removal of buildings and miscellaneous expenses, say.....	1,500,000 00
	\$3,131,108 47
Estimates, per report of Mr. McAlpine.....	9,862,592 98

Total, with omissions supplied \$12,993,701 46

Mr. McAlpine, (owing to the uncertain nature of the work, and the impossibility of judging from the surface the character of the soil beneath, is not confident that the estimates made by him, were sufficiently large to complete the work, and the present engineer knowing no good reason why the estimate presented by him, should not correspond to those made under similar circumstances, in other cases, and "that few, if any public undertakings, have been fully completed for the sum provided in the original estimates," is of opinion that the "estimate presented by him, amounting to \$12,993,701 46, will prove insufficient to complete the works provided for in the amendments of the Constitution.

Lake Shore Railroad.

The Legislature of Pennsylvania have passed a bill, conveying the Franklin Canal Railroad to the Cleveland and Painesville Company, on condition that the latter take \$500,000 in the capital stock of the Sunbury and Erie Railroad. This condition, though an onerous burden, is as favorable a result, probably, as could have been expected under the circumstances. We presume that the road will be allowed to connect with the eastern line of the same gauge. It is certainly a matter for congratulation that this vexed question is disposed of. Still we question very much whether Pennsylvania will make money in the long run by selling the right of way over her borders; or whether the Sunbury and Erie Company would not be better off without than with the aid they have thus secured.

The New Orleans, Jackson and Great Northern Railroad.

The extract from the proceedings of the Board of Directors of this Company, to be found in another place, will arrest the attention of our readers to an inconsiderable extent.

The resignation by Mr. James Robb of the Presidency of the Company will come unexpectedly upon the community, and will be universally regretted. From the beginning, Mr. R. has been the steadfast friend of the Great Northern Road. He was the life and soul of the movement that led to the organization of the Company. In the Senate, on the streets, before public meetings, and among men of wealth, he earnestly advocated this great work of internal improvement so essential to the future prosperity of this city. As a legislator, he was sagacious and far-seeing; as a citizen, liberal and enterprising; and, as President, eminently efficient, capable and industrious. The city owes him a debt it will be difficult to repay.

The reasons that compelled Mr. Robb to resign the Presidency, again tendered him by acclamation, will be found entirely satisfactory.

We congratulate the friends of the road on the selection of his successor. Col. William S. Campbell will make a most admirable and efficient President. His great experience in railroad affairs, his thorough, practical knowledge in all things pertaining thereto; and his well-known energy and zeal in promoting enterprises calculated to advance the interests of New Orleans, are sure guaranties that his administration of the concerns of the Company will be eminently judicious, useful and energetic.

Mr. Robb resigns on account of the pressure of private business. The following complimentary resolutions toward him were unanimously adopted by the directors:

Resolved, That this Board accept, with sincere regret, the resignation of James Robb, Esq., as President of the Company.

Resolved, That the zeal and ability displayed by Mr. Robb, in the discharge of the important and arduous duties of that office, from the organization of the Company to the present time, are duly recognized and appreciated; and that the thanks of the Board be and are hereby tendered to him as a mark of their deep sense of the obligations under which he has placed the Company, by the extraordinary services he has rendered, and the great sacrifices he has made in its behalf.

Number of Persons Employed on Railways in Great Britain.

A return extending to 39 folio pages has just been printed showing the number and description of persons employed on the railways in the United Kingdom. It appears that the total number of persons on all railways employed (open and not open) at the end of June, 1852, was 103,536, and at the end of the same month last year 118,173. The length of line opened at the end of June, 1852, was 7,075 miles and 52½ chains, and at the end of June last 7,511 miles and 75½ chains. The total length of line authorized at the end of June last was 11,884 miles and 46 chains. At the end of June last there were 260 secretaries and managers, 47 treasurers, 324 engineers, 525 superintendents, 247 storekeepers, 241 accountants and cashiers, 1,003 inspectors and time keepers, 1,897 station masters, 231 draughtsmen, 6,431 clerks, 1706 firemen, 2,821 engine drivers, 2,869 assistant engine drivers and firemen, 2,641 guards and breaksmen, 2,223 switchmen, 2,278 gate keepers, 1,755 policemen and watchmen, 12,297 porters and messengers, 6,033 plate layers, 20,171 artificers, 49,869 laborers, and 2,309 miscellaneous employments. In England and Wales the number of persons employed at the end of June last was 91,150; in Scotland 12,093, and Ireland 14,930. In England and Wales 6,747 miles and 15½ chains were open, and there was authorised 8,716 miles and 28½ chains. In Scotland 977 miles and 69 chains were open in June, and 1,640 miles authorised; and in Ireland 786 miles and 71 chains were opened, 1,523 miles and 16½ chains were authorised.

Dayton and Michigan Railroad.

The second Annual Report of the above Company presents the following exhibit of the condition of the company's affairs.

At the time of the first Report, means for the construction of the road, and the iron, had yet to be raised; and no accurate survey nor effort to raise stock had been made, north of Sidney. The road was then in its infancy. Since that period, says the Report—

Though disappointed in the receipt of our iron, part of which arrived at Toledo too late for shipment before the close of navigation in 1852, and therefore had to await the completion of the T., N. and C. R. R. before it could be forwarded; and though further delayed several weeks by reason of damage done by the December flood to the pier of our bridge over the Miami River, we completed the twenty miles under contract by the first of May, 1853, within a period shorter than that usually occupied in the construction of an equal amount of railroad.

The receipts of this twenty miles have averaged about \$2,500 per month; nearly all from travel alone, as the regular freight business has not yet commenced.

The mortgage bonds of the Company have been sold at rates to compare favorably with other roads, through their agents, Messrs. Winslow, Lanier & Co., of New York, and from these proceeds the iron has been paid for.

Upon the opening of the road, it was operated by the Cincinnati, Hamilton, and the Dayton Railroad, by which arrangement the purchase of equipments was at first dispensed with. At the present time the Company is operating with its own machinery.

The capital stock subscribed, is \$1,500,450—a sum sufficient to construct the road, and furnish a large amount of rolling machinery.

Of these subscriptions there are in convertible seven per cent, County, City, Town and Township Bonds, \$323,000 00. In cash and real estate which has already been made available as cash, \$880,000. In Real Estate, \$297,450 00.

The County, City, Town and Township Bonds have all been negotiated—those of Miami County at par, and the residue at a little less.

Since the first exhibit, a contract has been entered into with Messrs. Doolittle and Shoemaker to build and equip the Road entirely, and to deliver it ready for immediate use, from Troy to Toledo, on or before the 1st of June, 1855.

This contract embraced the *Turtle Creek* route, leaving Sidney to the east some four miles. Sidney being named for a point in the line in the charter, an injunction was granted against this departure. During the pending of the injunction, the citizens of Sidney increased their subscriptions to the stock of the Company to \$189,000, and J. W. Carey, of Sidney, proposed to build 14 miles from Piqua north, through Sidney, for the above amount, and take the subscriptions in payment. This proposition was accepted, and the road to Sidney is to be completed by the 10th of July next, and the balance by the time the contract of Messrs. Doolittle and Shoemaker is performed. The south end of the Road to Piqua is completed, ironed and ballasted. Fifty miles from Toledo south are nearly ready for the iron, and the work is going on. The right of way is secured over nine-tenths of the distance; and although there is some difficulty with the balance, it is hoped it will be soon overcome.

To purchase iron for superstructure, &c., the

Company first issued bonds secured by a mortgage on said road to the amount of \$1,000,000, payable in New York in fifteen years; but subsequently found this sum inadequate, in consequence of the advanced price in iron, &c., to meet the wants of the Company, they have therefore cancelled \$700,000, and made a new mortgage upon the extra line of the road, depot grounds, franchises, and personal property of the Company for \$1,500,000, and have issued their bonds of \$1000 each, payable in twenty years, with seven per cent interest, payable semi-annually, principal and interest payable in New-York, and convertible into the stock of the Company at any time in ten years, at par.

An arrangement has been entered into between the D. & M. and the C. H. & D. R. R. roads, by which an entire line of uniform gauge is effected between Cincinnati and Toledo, a distance of 198 miles; and the latter Company guarantees to the former, for twenty years, the exclusive business of their Road between Cincinnati and Toledo, and to discriminate in their favor against competing roads. The Road is the shortest railroad line between the Lakes, with lower gradients by nearly one-half, and less curvatures by more than one-half, than any other road between Cincinnati and the Lakes.

A company has also been organized under an old charter in Michigan, to continue the D. & M. Road with the same gauge, from Toledo, or the State line, to Detroit; making a distance of 256 miles from Cincinnati to Detroit.

The Fort Wayne and Chicago Railroad, now well advanced towards completion, will, with the G. and I. R. R., now nearly finished, with the same gauge as the D. and M. road, form a chain of uniform gauge from Cincinnati to Chicago, by way of Lima and Fort Wayne. The Fremont and Indiana Company have also under contract, to be completed within eighteen months, their road from Lima to Fremont, and eventually to be extended to Sandusky City.

So there is formed over the Dayton and Michigan road, from Dayton to Sidney—a direct and continuous line of railroads, of uniform gauge, from Cincinnati, by the way of Sidney and Gallion, to Cleveland, not longer, but with less curvatures and lower grades than that of the C. C. & C. R. R.

The distance from Cincinnati to Cleveland by this line is 259 miles, as against 255 miles between the same points via the Columbus route. The difference in length is more than made up by the low grades on this line.

By means of the same road with the O. & P. R. R., there is formed over the same portion of our road another continuous line from Cincinnati, by the way of Sidney and Pittsburgh, to Philadelphia, without crossing the Ohio River, capable of being run in as short a time as any other line between those points.

Over the northern portion of this road, from Sidney to Toledo, there is formed another line, by means of the B. & I. R. R., from Indianapolis, through Canada, to New York and Boston.

The Dayton and Michigan road from Dayton to Toledo, connects with, or is intersected by no less than twenty railroads; the combined aid of which it would seem, cannot fail to make this a heavy business road.

In the report of Mr. T. S. Huntington, Engineer,

the grades with their distances, between Dayton and Toledo are as follows:

The maximum grade on the above line is generally twenty-one feet per mile, but it has been found necessary at a few points to increase it to twenty-six feet per mile.

TABLE OF GRADES.

Between level and 5 feet per mile,....	84 miles.
" 5 feet and 15 feet per mile,....	23 "
" 15 feet and 31 feet per mile,....	25 "
" 21 feet and 26 feet per mile,....	8 "

Whole distance,..... 140 miles.

Sum of ascents going north,..... 675 feet.

Sum of ascents going south,..... 725 "

The entire length of curved line from Dayton to Toledo is nine miles. The total amount of curvature is 650 degrees. About one-half of the curved line has a radius of 5,730 feet, and the remainder not less than 2,865 feet, which is the minimum radius employed. The curves occur mostly in the immediate vicinity of towns.

It will be seen by reference to the following table, showing the respective proportions of curved and straight lines on most of the prominent Ohio roads, how this line will compare with others in this important feature.

NAME OF ROADS. PROPORTION OF CURVED LINE TO WHOLE DISTANCE.

Cleveland & Columbus,.....	1 to 10
Cleveland & Pittsburgh,.....	1 to 4
Mad River & Lake Erie,.....	1 to 8
Little Miami,.....	1 to 3
Cincinnati, Hamilton & Dayton,....	1 to 4
Dayton & Western,.....	1 to 10
Cincinnati, Hillsborough and Parkersburgh,.....	1 to 5
Bellefontaine & Indiana,.....	1 to 12½
Dayton & Cincinnati, (short line)...	1 to 3½
Dayton & Michigan,.....	1 to 16

This road, then, as it appears from the above comparison, is superior to all others in the list, in point of alignment.

The road stands equally favorable as to grades, the maximum grade upon nearly all the long roads in the State being about double that adopted on this. The D. and M. road, in connection with the Cincinnati, Hamilton and Dayton railroad, will occupy some of the finest country in the State of Ohio. The northern portion, perhaps, is yet much of it thinly settled and undeveloped; but the effect of this road will be to open a channel through its forests and prairies, and draw out its vast resources. The line is located through all the county seats of the counties traversed by the road, with one exception, Putnam county.

The probable cost of the road, and the means provided for the same, are stated to be as follows:

Grading, masonry and bridging for 120 miles, and ballasting 60 miles at contract price, \$850,265	
Ballasting the remaining 60 miles,.....	90,000
Superstructure, including iron and side track,.....	1,105,000
Equipments,.....	309,000
Right of way and land damages,.....	60,000
	<hr/> 2,405,265

To which we add the cost of the road now built from Dayton to Troy,....	396,635
Locomotives and cars now on the road,.....	60,000
Right of way from Dayton to Troy,....	8,500
Depot and depot grounds, water stations and engine houses for the whole line,.....	75,000
Contingencies, including engineering, officers' salaries and incidental expenses,.....	75,000
	<hr/> \$3,020,400

WAYS AND MEANS.

Capital stock paid in,....	\$922,703 50
Capital stock not paid but considered good,.....	577,746 50

Proceeds, \$304,000 Bonds sold, and \$1,200,000 contracted for iron and machinery, 1,288,000 00
Bonds not sold, 296,000 00
\$3,084,450

The line of the above road is identical with that of the Miami Canal, which is now the chief medium of communication between Cincinnati and the Lakes, and the Eastern States. It occupies, therefore, one of the great business routes in Ohio. For one-third of the year, it will be the only channel of communication for this business, and for the remainder it will take the passenger traffic and the more profitable freight, which of themselves will supply a lucrative business. Experience has fully shown that a canal and railroad over the same route mutually aid each other, instead of leading to an injurious rivalry.

The above road traverses one of the best portions of Ohio. The connections it will make are exceedingly important, and the project deserves to rank among the first-class roads of Ohio.

Nashville and North-western Railroad Tenn.

The following is a list of the Board of Directors of this company:

John A. Gardner, President; H. L. Claiborne, Secretary and Treasurer. Directors: Jos. H. McEwin, Michael Burns, John B. Johnston, R. C. McNairy, W. F. Cooper, Davison county, Jas. L. Bell, Dickson county; Thos. Wyly, Humphreys county; Wm. Fitzgerald, John W. Blanton, Henry county; Jephtha Terrel, W. W. Gleason, Weakley county; Geo. H. Carey, Wm. Wyatt, Wm. B. Isler, Obion county.

The line of this road commences at Madrid Bend, on the Ohio, in Obion county, passing eastwardly, and crossing the Mobile and Ohio road, in the same county, thence, via Dresden and Reynoldsburg to Nashville. The company has the advantage of "state-aid" in conjunction with other roads. The line will shortly be under contract, a portion of it in July.

Maysville and Lexington Railroad.

The work upon this important road has been suspended in consequence of the inability of the company to secure means for its prosecution. The president and directors have been requested to visit the cities of Louisville and Lexington, and confer with the councils of those cities, and the boards of directors of the Louisville and Lexington, and Lexington and Frankfort Railroad Companies, and urge upon them the importance of an endorsement of the bonds of the company to an amount not exceeding four hundred and fifty thousand dollars.

Ohio Central Railroad.

The portion of this road between Jamesville and Cambridge has been opened for business.

According to the late report of the company, the whole expenditure for the entire completion of the road, provision of machinery, rolling stock, and contingencies is estimated at \$4,661,567; and its resources consist of capital stock \$1,808,347; mortgage and income bonds, and surplus real estate \$2,600,000,—add balance to represent floating debt, \$353,210, and we have the total of \$4,661,567. This apparent balance may be increased by the accrual of interest and the discount upon unsold bonds to nearly \$600,000.

Cleveland and St. Louis Railroad.

The Cleveland Leader says that this road has been put under contract (in Ohio) to Messrs. A. De Graff, E. C. Frost & Co., of Dayton, at \$24,000 per mile, including a large equipment. \$10,000 worth of station buildings, and all the masonry to be constructed for a double track. They are to take 65 per cent. in the stock and bonds of the company.

Alexandria, Loudoun and Hampshire Railroad.

The stockholders of this company, at the meeting held at Alexandria on the 12th ult. decided to adopt the Keyes' Gap route and to locate the road immediately as far as the Shenandoah river. The line adopted will pass by Sunbury, through Clarke's Gap in the Catoctin Mountain, Hillsborough Gap in Short Hill and thence up the eastern slope of the Blue Ridge to its summit at Keyes' Gap; it descends the western slope in an oblique direction to the south, and reaches the Shenandoah river at the mouth of Long Marsh Run; crossing it ascends the valley of the Highlands immediately North-west of the town of Berryville, descends the valley of Dry Marsh Run to Obeupon Creek, crosses the latter and descends the valley of Red Bed Run to the neighborhood of Winchester, leaves Winchester one mile to the south, thence &c., to Piedmont, on the Baltimore and Ohio Railroad. The distance from Alexandria to Piedmont by this route is 175 miles—maximum grade from Piedmont 62 8-10 feet per mile; to Piedmont 79 2-10 feet per mile; maximum radius of curvature 1,000 feet; cost of construction estimated at \$8,182,100 or an average cost per mile of \$46,800. The estimate is for a road with grading, tunnelling, culvert masonry and bridge masonry for a double track, and railway for a single track, with water houses and depot buildings for a trade of 1,000,000 tons. The estimated cost of the Snicker's Gap route is \$8,360,300. Difference in favor of the route adopted \$178,200 on first cost and two years in time necessary to construct.

Sandusky Mansfield and New York Railroad.

Mr. D. N. Barney, trustee, gives notice that the railroad corporations heretofore known by the names of the Mansfield and Sandusky City Railroad Company and the Columbus and Lake Erie Railroad Company having, in pursuance of the laws of the State of Ohio, become one consolidated corporation, under the name of the Sandusky, Mansfield and Newark Railroad Company, the bonds of either companies may be exchanged for a corresponding amount of the bonds of the consolidated Company, secured by a mortgage of the property and franchises of the whole consolidated road, at No. 82 Broadway.

South Side Railroad.

The Farmville Journal understands the laying of the track on the S. S. Railroad will be completed to Davis', about ten miles this side of Farmville, next week, when the cars will run to that point. The remaining unfinished portion of the road, 41 or 42 miles, will be in readiness for the cars, it is supposed, by the last of September.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N.Y. 19tr

MR. WILLIAM NAISH, of Newport, Mammouthshire Inspector of rails, begs most respectfully to acquaint importers of rails, engineers and others connected with the railroads of America, that he still continues to execute orders of inspection, throughout the various districts of South Wales and adjacent Iron works, and confidently refers to the satisfaction which his supervision has given during the last ten years to exporters of rails, and others below named; as a proof of the fidelity, carefulness and promptitude of his inspections.

BARING BRO. & CO., London.
PALMER, McKILLOP, DENT & CO., London.
LEWIS HOPE, Esq.,
COLLMAN & STOLLTERFOHT, "
Hon. JAS. WADSWORTH, Buffalo New York.
JAMES SPENCE, Esq., Liverpool.
NAYLOR, VICKERS & CO. " 19 tr

For Sale.

By the Baltimore and Ohio Railroad Company, 24 grate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to SAMUEL J. HAYES, M. of M., Baltimore and Ohio R. R. Co., Or BRIDGES & BROS., 48 Fulton st., New York, 19 tr

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors' Compasses Manufactured on the most improved principle and of the Best Quality by THOMAS HUNT, No. 53 Fulton Street, New York. 1y10*

Railroad Iron.

3000 TONS Railroad Iron, weighing about 59 lbs. per yard, "Erie" pattern of G. L. and Crawshaw's manufacture, now on the way from the shipping ports in Great Britain to this port, for sale by P. CROUTEAU, Jr., SANFORD & CO., December 4, 1852. No. 51 New street.

To Railroad Companies and Contractors.

SECOND hand engines for sale in good running order and condition.

2 engines, 10 in. X 20 in. cylinder, 4 drivers 54 inch diameter, about 16 tons weight.

2 engines, 10 in. X 18 in. cylinder, 2 drivers 54 inch diameter, weight about 14 tons.

For terms, &c. apply to

CLARK & JESUP,
General Railroad Agents,
38 Exchange Place.

4t16

Brass Tubes for Locomotive and Marine Boilers.

THE undersigned having been appointed Agent for the highest respectable manufacturers Messrs. Allen, Everitt & Son of Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to

March 1854.

JOHN H. HICKS,
90 Beaver str.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions,
ILLINOIS CENTRAL RAILROAD,
Vandalia, Ill.

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities; will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio,) issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburg, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of

Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN C. Engineer.

Huntingdon May 6 1854,

4t

RAIL ROAD CAR FINDINGS,**BRIDGES & BROTHER,**

64 Courtlandt Street, N. Y.

WHEELS AND AXLES,**JAWS, BOXES, AND CASTINGS FITTED.****WROUGHT NUTS, BOLTS AND WASHERS,****ENGINE AND CAR SCREW BOLTS, all SIZES,****COACH LAG AND TELEGRAPH SCREWS,****LOCOMOTIVE ENGINE LANTERNS,**From the **BEST** Manufacturers and at their Prices.**CAR, HAND AND SIGNAL LANTERNS.****COTTON DUCK, FOR CAR COVERING,**

of any required width to 124 inches.

ENAMELED HEAD LININGS,

The best article made in this country.

PLUSH, and CURLED HAIR.**HAND CARS AND BAGGAGE BARROWS.****PASSENGER, FREIGHT-CAR, AND SWITCH****LOCKS, DOOR KNOBS AND BUTTS.****BRASS AND IRON WOOD SCREWS.****BRASS AND SILVER PLATED TRIMMINGS**

For Windows and Seats.

VARNISH, COACH JAPAN, AND GLUE,

Paints, Varnish and Glue Brushes.

SILVER PLATED AND WHITE METAL LETTERS.**ENGINE and SIGNAL BELLS.****ANTI-FRICTION, OR BABBITT METAL.****PORTABLE FORGES & JACK SCREWS.****HEMP PACKING, AMERICAN, RUSSIA AND ITALIAN.****CONDUCTOR'S BADGES AND BAGGAGE CHECKS.****Iron Bronzed and Brass Hat Hooks.****VENTILATORS AND WHITE METAL RINGS,**

And all other Articles pertaining to Cars.

ALBERT BRIDGES, } Late Davenport & Bridges, Car Manufacturers,
} Cambridgeport, Mass.**ALFRED BRIDGES,** } Late Davenport, Bridges & Co., Fitchburg,
} Mass.**To Contractors.**

The Virginia Central Railroad Co. proposes to contract for taking up about 36 rails of superstructure now laid with the strap rail, and relaying with a heavy rail, the contractor furnishing every thing except the ties which will be distributed by the company.

Sealed proposals will be received at the office of the company in Richmond, until the 24th day of May next, at 9 o'clock.

The Rail to be used must weigh from 55 to 60 lbs. to the yard. Payments to be 50 per cent. cash, and 50 per cent. in the Bonds of the company running 30 years, and secured by a mortgage on the whole property of the company.

Specifications may be obtained at the Engineer's office at Richmond, after the 10th day of May.

CHARLES ELLET, Jr.

Chief Engineer.

April 26th 1854.

3t.18

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment. Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,

287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.

\$1,700,000**LOAN OF THE MORTGAGE BONDS OF THE NEW YORK AND HARLEM RAILROAD COMPANY.**

This Company will receive proposals for one million seven hundred thousand dollars of their First Mortgage Bonds, issued in sums of one thousand dollars each, payable at the office of the Company, in the City of New York, on the first day of May, 1873, with coupons attached for the payment of interest at the same place semi-annually, on the 1st of May and 1st of November, at the rate of seven per cent. per annum.

These Bonds are secured by a First and only Mortgage, to Thomas W. Ludlow and R. M. Blatchford, Trustees, on the road and its appurtenances, made under special authority of an Act of the Legislature and vote of the Stockholders.

The whole amount of Bonds which can be issued under the Mortgage is \$3,000,000, and will be the first and only lien upon the road, and will constitute the sole debt of the Company. The Company reserve \$1,300,000 of this Mortgage for the exchange of all the outstanding plain Bonds of the Company now in existence, and propose to dispose of the residue, One Million Seven Hundred Thousand Dollars, for the purpose of discharging all their floating debt, and of payment of the expenditure necessary for the full completion of the improvements now in progress upon the road.

The capital of the company paid in is \$1,500,000 of Preferred Stock and \$3,600,000 of Common Stock, upon which regular dividends have been earned and paid for the last five years of Eight (8) per cent. per annum on the former and Four (4) per cent. on the latter.

The receipts of 1853 amounted to 964,467, being an increase of twenty-six (26) per cent over 1852, and there is no doubt a still larger business will be done the present year.

The public have therefore now offered them a home security of the most reliable character.

The Acceptances of the Company will be received in payment for the Bonds.

Twenty (20) per cent, is required to be paid on acceptance of bids, and Twenty (20) per cent. every thirty days thereafter, for which Bonds will be given; Ten (10) per cent. however of the first instalment being reserved by the Company until completion of the contract; interest to be adjusted from the 1st of May.

Parties have the privilege of making payment in full and receiving their Bonds.

Sealed Proposals will be received at the office of BLATCHFORD & RAINSFORD, No. 58 Wall street, on or before the 10th day of May next, at 3 o'clock P M.

LOCOMOTIVE ENGINES.**A. & W. Denmead & Son,**

BALTIMORE, MD.

HAVING THEIR IRON FOUNDRY & MACHINE SHOP in complete operation, are prepared to execute, faithfully and promptly, orders for

Locomotive or Stationary Steam Engines,
Woolen, Cotton, Flour, Rice, Sugar, Grist or Saw Mills,
Machinery for cutting all kinds of Gearing,
Hydraulic, Tobacco, and other Presses,
Car and Locomotive patent Ring-Wheels, warranted,
Bridge and Mill Castings, of every description,
Gas and Water Pipes, all sizes, warranted,
Railroad Wheels, with best forged axle, furnished and fit up for use, complete.

Estimates for Work, in any part of the United States, furnished at short notice.

ap.14-15

Krupp's Best Cast Steel.

SUITABLE FOR

MINT AND PLATERS' ROLLERS.

ALSO of large size (72 by 18 inches diameter) for rolling Iron, Copper or Brass.

Pistons of Steam Engines and Shafts for steamboats, not exceeding six tons weight in one piece.

Also the celebrated

CAST STEEL AXLES AND TIRE

made from a solid bar without welding. Agents

THOMAS PROSSER & SON,

23 Platt street, New York.

161r

Railroad Iron.

470 TONS 47 lbs. per yard of best quality now in store at New Orleans. For sale by

VOSE PERKINS & CO.

5 South-William street

1m16

Notice to Contractors.

Proposals will be received for all the heavy work on the Blue Ridge Rail Road, South Carolina; Blue Ridge Rail Road, Georgia; Tennessee River Rail Road, North Carolina; Knoxville and Charleston Rail Road Tennessee. The above lines of rail-way are consolidated and under the management of one Company, Extending from Anderson South Carolina, via Clayton, Georgia, Franklin North Carolina, to Knoxville Tennessee, a distance of 194 miles. That part of the road from Anderson South Carolina, to the Turniptop Mountain, a distance of 40 miles is principally earth excavation, of about equal quantities of cut and fill, with several bridges. From the Turniptop Mountain to the Rabun Gap, a distance of 24 miles, the work is very heavy, there being on the line one tunnel of 5800 feet, one of 1400 feet, and one of 400 feet in length; a suspension bridge across the Chatunga River 500 feet long, with some very heavy earth and rock cuts. The rock in the Tunnels is gneiss stratified. From the Rabun Gap to twenty miles below Franklin, a distance of 50 miles, the line follows down the Tennessee River; the class of work is principally side hill excavation, some of which is rock; their will also be several bridges. From the point 20 miles below Franklin to Hardens, a distance of 35 miles, the line follows the Tennessee River the entire distance, causing heavy side rock excavations. On this portion of the line will be several expensive bridges, and a tunnel of about 1000 feet. From Hardens to Knoxville, a distance of 45 miles, the line follows the river about eight miles, then leaves it, running across the Chilhona mountains almost a north line to Knoxville; this portion of the road is heavy work, with about equal quantities of cut and fill, an expensive bridge 1000 feet long and 45 feet high, crossing the Holston River at Knoxville. The character of the rock from Knoxville to Hardens is limestone, and from Hardens to Franklin gneiss rock stratified, and from Franklin to Anderson, stratified sand stone and gneiss rock. The character of the earth is sandy and clay loam. The line for the whole distance runs through high table lands, well settled, remarkable for its health, good water and ample resources for subsistence. The above line of rail-way offers great inducements to experienced contractors. The undersigned will be prepared to receive proposals and enter into contracts for the graduation, bridging, tunneling and masonry for the heavy portion of the line, from and after the 1st day of May next, at Knoxville Tennessee, Franklin North Carolina, and Pendleton South Carolina, and will continue at such places, until the same is under contract. Profiles and maps of approximate location can be seen at each of the above places after the 1st day of May. Proposals are asked with cash payments, also eighty per cent cash and twenty per cent in the Capital Stocks or Bonds of the Company. All communications prior to may 1st must be addressed at Pendleton South Carolina.

4.13

ANSON BANGS & Co.

To Contractors.

PHILADELPHIA, WILMINGTON AND BALTIMORE RAILROAD OFFICE.—PHILADELPHIA, April 21st, 1854.—PROPOSALS will be received at this office until May 25th, 1854, for driving the piles, protecting the foundations, and for the Masonry above and under water, of the proposed Bridge across the Susquehanna River at Havre-de-Grace, Maryland.

Also, for the Grading and Masonry of the new location of the Road adjoining the Bridge, and of the Port Deposit Branch Railroad.

Plans, profiles and specifications may be seen at the Engineer's Office, in Havre-de-Grace.

S. M. FELTON,

Pres. P. W. and B. R. R.

17,4t

Railroad Iron For Sale.

ABOUT 800 tons Rails of most approved Welsh patterns, for sale by
CLARK & JESUP,
38 Exchange Place, New York.

17 tr

M. W. BALDWIN & CO., Engineers,

Broad and Hamilton streets, Philadelphia.
WOULD call the attention of Railroad Managers, and those interested in Railroad Property, to their **SYSTEM OF LOCOMOTIVE ENGINES** in which they are adapted to the particular business for which they may be required; by the use of one, two, three or four pair of driving wheels; and the use of the whole, or so much of the weight as may be desirable for adhesion; and in accommodating them to the grades, curves, strength of superstructure and rail and work to be done.—By these means the maximum useful effect of the power is secured with the least expense for attendance, cost of fuel and repairs to Road and Engine. With these objects in view and as the result of twenty-three years practical experience in the business by our senior Partner we manufacture **Five different kinds of Engines** and several classes or sizes of each kind.

Particular attention paid to the **strength of the machine in the plan and workmanship of all the details.** Our long experience and opportunities of obtaining information, enables us to offer these engines with the assurance that in efficiency, economy and durability they will compare favorably with those of any other kind in use.

We also furnish to order, Wheels, Axles, Bowling Tire (to fit centres without boring), Composition Castings for Bearings; every description of Copper Sheet Iron and Boiler work; and every article appertaining to the repair or renewal of Locomotive Engines.

M. W. BALDWIN.

MATTHEW BAIRD.

New York and Erie R. R.**PASSENGER TRAINS**

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.
Dunkirk Express, at 7. s. m. for Dunkirk.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations.

WAY EXPRESS, at 12¼ p. m. for Dunkirk.

Rockland Passengers, at 3.30 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGERS, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

Emigrant at 6 p. m.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Supt.

Great Western Mail Route.

SIXTY MILES DISTANCE SAVED TO CHICAGO AND ST. LOUIS. THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD LINE, carrying the Great Western United States Through Mail, have the following staunch first-class Steamers running on Lake Erie in connection with the NEW YORK AND ERIE RAILROAD from Dunkirk, touching at Cleveland, and connecting with their Road at Toledo, and connecting directly with the CHICAGO AND ROCK ISLAND RAILROADS at Chicago, in the same Depot, thus forming a Daily Line for Passengers and Freight from New York to the Mississippi River. **NIAGARA**, Capt. Miller; **EMPIRE**, Capt. Mitchell; **KEYSTONE STATE**, Capt. Richards; **LOUISIANA**, Capt. Davenport. Also **A DAILY LINE FROM BUFFALO DIRECT TO MONROE**, by those well-known magnificent Floating Palaces, **EMPIRE STATE**, J. Wilson, Commander, leaves Buffalo Mondays and Thursdays; **SOUTHERN MICHIGAN**, A. D. Perkins, Commander, leaves Buffalo Tuesdays and Fridays; **NORTHERN INDIANA**, L. T. Pheatt, Commander, leaves Buffalo Wednesdays and Saturdays.

One of the above splendid Steamers will leave the Michigan Southern Railroad Line Dock, at 9 o'clock, P. M. every day, (except Sundays) and run direct through to Monroe without landing, in 14 hours, where the **LIGHTNING EXPRESS TRAIN** will be in waiting to take passengers direct to Chicago in 8 hours, arriving next evening after leaving Buffalo.

Running time from New York to Buffalo.....14 hours.

Running time from Buffalo to Monroe.....14 hours.

Running time from Monroe to Chicago.....8 hours.

Total.....36 hours.

Connecting at Chicago with a fine line of Low Pressure Steamboats to all places north of Chicago to Green Bay; also with Chicago and Rock Island Railroad to La Salle, and there connect with Illinois River Line of Steamboats, or Express Trains of ILLINOIS CENTRAL AND CHICAGO AND MISSISSIPPI RAILROADS, or connecting at Rock Island with regular line of steamers for all points above and below, making the cheapest and most direct Route to St. Louis, Rock Island, Minnesota, and the Great West.

The AMERICAN LAKE SHORE RAILROADS from Buffalo and Dunkirk connect with this line at Toledo, forming the only direct and continuous line of Railroads from the Atlantic seaboard to the Valley of the Mississippi.

Running time to Chicago, 36 hours; to St. Louis, 56 hours.

FOUR DAILY TRAINS by Railroad all the way.

TWO DAILY LINES by Steamers on Lake Erie.

Thus the Traveller and Shipper can see at a glance that no other Line can enter the lists as competitors.

Passengers Ticketed Through from New York with privilege of stopping over at any point on the route, and resuming seats at leisure, either by the New York and Erie Railroad, via Dunkirk, New York and Erie and Buffalo and New York City Railroad via Buffalo; People's Line of Steamboats, Hudson River or Harlem and New York Central Railroads, via Albany and Buffalo.

For any further information, Through Tickets, or Freight, apply at the Company's Office, No. 193 Broadway, corner of Dey st., N. Y., to

JOHN F. PORTER, General Agent, or

L. P. DUNTON, Ticket Agent.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Railroad Iron.

THE Subscribers are at all times prepared to enter into contracts for Railroad Iron, of Messrs. Guest & Co., or other leading manufacturers' make, delivered free on board vessels in England or in this country.

BOORMAN, JOHNSTON & CO.,

90 Broadway, New York.

MANUFACTURERS' AGENCY

FOR

RAILROAD FURNISHING,

Office 18 Dearborn St., Chicago, Ill.

E. R. T. ARMSTRONG, Agent,

KEEPS constantly on hand Railroad Spikes, Burden's make, Railroad Wrought Iron Chairs, superior quality, Ames' manufacture of Locomotive Tires, Cranks, &c. Washburn, Pond & Co.'s Car Wheels, of best Salisbury and Stirling Iron, mixed under direction of Mr. Washburn, and warranted.

Orders invited for Locomotives and Car Rolled or Hammered Axles—Locomotive Lamps—Superior Pumps, for Stations, Switch Stands, Levers, and Targets—Locomotive Drivers and Cylinders—Boxes and Pedestals—Screw Cutters and Drilling Machines—Frog's Head and Heel Blocks—Screw Presses, for forcing Wheels and Axles.

Cils of a superior quality, made expressly for railroads, and free from gum.
 Refer to—Illinois Central railroad, Ohio and Mississippi river railroad, Michigan Southern railroad, Galena and Chicago Union railroad, Milwaukee and Mississippi river railroad, Little Miami railroad, Cincinnati, Hamilton and Dayton railroad, Central Ohio railroad. 14.6m/s.

S. SEYMOUR & CO. GENERAL RAILROAD

AGENCY, Office, Metropolitan Bank Building, No. 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R.R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R.R. STOCK.

SCIOTO AND HOCKING VALLEY R.R. STOCK.

SCIOTO AND HOCKING VALLEY R.R. FIRST

MORTGAGE CONVERTIBLE BONDS, at 11 years.

LOUISVILLE AND NASHVILLE R.R. STOCK.

BUFFALO AND STATE LINE R.R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons; &c., &c.

Notice to Contractors.

PACIFIC RAILROAD OF MISSOURI.

SEALED proposals will be received by the undersigned, at their office in the city of St. Louis, until six o'clock, P. M., of the 15th day of May next, for the Grading, Masonry, etc., of the first division of the South-west Branch of the Pacific Railroad, extending from Franklin Depot, the present terminus of the road, some 40 miles West of St. Louis, to the crossing of the Gasconade River, a distance of about 78 miles. The line will be divided into sections of about one mile each, and proposals may be made for one or more sections. The line, plans, profiles, specifications, form of contract, etc., will be ready for inspection on and after the first day of May next. The work to be let is quite heavy, situated in a healthy country, and is easy of access.

The undersigned reserve to themselves to reject all proposals that are not satisfactory.

A. S. DIVEN & CO.

March 24th, 1854.

OGDEN & DELAFIELD'S,

Late OGDEN & MARTIN.

Rosendale Cement.

WE are prepared to enter into arrangements for supplying our cement for public works or other purposes. We warrant the cement equal in every respect to any manufactured in this country. It attains a great degree of hardness, sets immediately under water, and is a superior article for masonry coming in contact with water, or requiring great strength.

For sale in tight barrels, well papered, on application at their office, by **OGDEN & DELAFIELD**, 104 Wall st. The above cement is used in most of the fortifications building by government. 17

Pneumatic Pile Driving.

FOUNDATIONS FOR BRIDGES, PIERS & C.
BY THE PNEUMATIC process hollow cylindrical piles or tubes from eight inches to ten feet diameter can be driven through sand, mud, clay or other material to any required depth. The complete success which has attended the operations of this process shows it to be eminently practicable in, and much the best method known for, the construction of railroad bridges across deep and rapid rivers where permanent foundations of great strength are necessary, and have to be secured at great depth.

Applications for license for the use of the invention in any part of the United States may be made to **ILL. V. POOR**, Esq. Editor of the *American Railroad Journal*, 9 Spruce street; or for contracts for pile driving, or licenses as above to **CHARLES PONTEZ**, New York.

March 25th, 1854.

To Contractors.

PACIFIC RAILROAD OF MISSOURI

THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. S. O'SULLIVAN, Chief Eng.

THOS. ALLEN, Pres.

Pacific R.R. Office, St. Louis, Feb. 1854.

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—specular red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

G. PARISH, 13,3m*

Ogdensburg, N. Y., April, 1853.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in the construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of such weight or pattern as may be required.

VOSE, PERKINS & CO.,
9 South William St.

New York, June 1, 1851.

Knox & Shain,

MANUFACTURERS OF
LEVELS, TRANSITS AND SURVEYING
COMPASSES.

No 72 Dock st. first door south of Walnut, west side
PHILADELPHIA.

First Premium awarded by the Franklin Institute.

Stuart, Serrell & Co.,

CIVIL ENGINEERS,

Rooms 22, 24, 26 & 27,
157 Broadway, New York.

CHARLES B. STUART, EDWARD W. SERRELL,
DANIEL MARSH, SAMUEL McELROY.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West,
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
feb. 18. 1m.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

**Cast Iron Chilled Slip Tires
for Engine Driving Wheels.**

THE undersigned, principal Agent for the above improvement, offers it, with the right of use, to Railroad Companies and others. The cost of these Tires is less than one-third that of wrought iron, the cost of renewing one-quarter; and the adhesion, strength, and durability equally as great, as will be proved to the satisfaction of any party. Over two hundred locomotives of the heaviest class, (25 to 30 tons,) upon the Baltimore and Ohio Road, are shod with cast iron, with an acknowledged saving over wrought iron equal to \$30,000 per annum. Address
15, L.F.
ZERAH COLBURN, Paterson, N. J.

Railroad Car Works.

THE Undersigned are prepared to manufacture for Railroad Companies, Passenger, Baggage, Cattle, Freight, Gravel and Hand Cars, also Baggage Barrows and Freight Trucks.

F. HUNGERFORD & CO.

Mayeville, Ky., Sept. 29, 1853.

Railroad Iron.

1,300 TONS superior quality Yorkshire rails 56 pounds T pattern can be immediately delivered at New York, Savannah, or New Orleans.

For sale by

NAYLOR & CO.

New York, April 1st, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Railroad Spikes, Boiler Rivets, etc.

THE Subscribers, Agents for the sale of James S. Spencer's, Jr., Railroad and Boat Spikes, Boiler Rivets, and Wrought Iron Chairs for Railroads, made at his Works near this city, will execute all orders with promptness, despatch, and of the best quality.

ALSO IMPORTERS of English refined and Merchant bar Iron; Extra refined Car and Locomotive Axles (from 3½ to 6½ inches in diameter); B. O. Locomotive Tire (welded by Baldwin). Also, supply Boiler and Flue Iron cut to pattern or otherwise.—Spring, Shear, and Cast Steel, etc., etc., etc.

T. & E. GEORGE.

Philadelphia, November 14, 1850.

Railroad Iron.

THE UNDERSIGNED, HAVING made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchant Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWITT,
17 Burling Slip, New York.

February 15, 1850.

Notice to Contractors.

MEMPHIS & OHIO RAILROAD.

SEALED proposals will be received at the office of the Memphis and Ohio Railroad Company, at Memphis, Tenn., until the 15th day of April next, for the grubbing, clearing, gradation, and masonry of the first 65 miles, from Memphis to Cherryville.

Contractors must give the most undoubted security for the completion of the work at the time, and in the manner specified; and contracts will be let in sections, or for the entire work, as may be deemed best by the Directors.

The Directors reserve the right of rejecting all bids, should none prove satisfactory; and it is desirable that all propositions should be submitted, with the view of preparing the whole work for the iron as soon as possible. Bids of that character and otherwise equally favorable, will have preference.

Maps, plans and specifications may be seen at the office of the company, after the first of April.

E. PEABODY,
Engineer in charge.

Notice To Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND TEXAS RAIL ROAD COMPANY
Monroe, La., March 8th, 1854.

SEALED PROPOSALS will be received at this Office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty mile, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the entire sections, or any portion thereof, not less than one mile, and those proposing to take stock of the Company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the Company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract; or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,
President.

P. J. TOURNADRE,
Chief Engineer.

7t14

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

2d Feb'y.

JOHN H. HICKS,
90 Beaver street.

H. SAWYER

(of the late firm of SAWYER & HOBBY),
Manufacturer of Transits and Levels,

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by

June 9, 1853.

BOORMAN, JOHNSTON & CO.,
99 Broadway, New York.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail. Apply to

THOS. CHAMBERS, President,
September, 1850.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 20]

SATURDAY, MAY 20, 1854.

[WHOLE No. 944, VOL. XXVII.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Susquehanna Railroad.....	305
Knoxville and Kentucky Railroad.....	306
Memphis and Charleston Railroad.....	307
Erie Railroad.....	308
Prospects of Locomotive Building.....	308
Mobile and Ohio Railroad.....	308
Georgia Railroad.....	410
Journal of Railroad Law.....	310
Retrospective, Present and Future of the R.R. Journal.....	312
Stock and Money Market.....	312
The Commercial position of New York.....	314
Effects of the Railroads entering New York.....	314
Hollow Axles.....	314
Distribution of Railroad Capital.....	315
Southwestern Railroad.....	315
Pacific Railroad.....	316
Buffalo and New York City Railroad.....	317
Franklin and Warren Railroad.....	317
Mississippi and Tennessee Railroad.....	317
Denney's Divided Axles.....	317
Railway Consolidation.....	318

American Railroad Journal.

Saturday, May 20, 1854.

Susquehanna Railroad.

FIRST ANNUAL REPORT.

A report of the condition of the above road, the act of incorporation of which was passed the 14th of April, 1851, has been submitted by the President of the Board of Directors, W. F. Packer, Esq.

According to the ninth section of the supplement of the act to incorporate the Sunbury and Erie company, passed 27th March, 1852, it became necessary for the Susquehanna Railroad Co. to put their line under contract between Bridgeport and Sunbury, in one year from the passage of the last named act, and complete the same in two years; otherwise the Sunbury and Erie company was authorized to extend their road from Sunbury, by the valley of the Susquehanna, to connect with the Pennsylvania Railroad at the point deemed most expedient. The Susquehanna company was organized on the 10th day of June, 1852, and the grading and masonry of the entire line from Bridgeport to Sunbury, were put under contract on the 24th of November of the same year. The

distance from Bridgeport to Sunbury is 54¼ miles; upon 26½ miles of which the grading and masonry have been completed. A portion of each mile is under way, and 9½ miles of the most difficult work have been graded for a double track. As far as the work has progressed, it has been done in the most permanent manner.

The amount expended for grading and masonry, superstructure of bridges, right of way, engineering, &c., is \$509,502, of which sum \$130,307 were paid in the stock of the company at par, and the balance, \$379,195, in money. According to the estimate of the Engineer, there will yet be required, to complete the grading and masonry, and the superstructure of the bridges, \$822,542, which, under existing contracts, can be met with \$682,405 in cash, and \$140,137 in stock. The same officer estimates the cost of the railway superstructure, including iron, cross-ties and laying, (at the present advanced price of railroad iron,) at \$9,000 per mile.

To meet these various expenditures, the company have the following assets, viz:

Subscription by Northumberland county,	\$200,000
Do. by Union county,.....	200,000
Do. by borough of Lewisburg,..	75,000
Do. by borough of Sunbury, (conditional,).....	25,000
Individual subscriptions, (including contractors'),.....	305,000
Loan from York and Cumberland Railroad Company,.....	500,000

Making a total of.....\$1,305,000

The foregoing subscriptions being mostly in the bonds of the respective counties and boroughs, the company have been unable to dispose of them at par, and they still remained unsold at the date of the report. For some time the work of the road was retarded by a scarcity of laborers, and during that season there was unusual sickness among them. Now, however, affairs are in a more favorable shape, and the present force employed exceeds two thousand men. If funds are properly provided, the grading and masonry between Bridgeport and Sunbury can be completed before the 1st of August—the period stipulated in the contract with the company.

The merits and importance of the road are deduced from facts such as follow:

The whole extent of the road authorized by the charter, is about 54 miles, commencing at Bridgeport, the northern terminus of the York and Cumberland Railroad, and ending at Sunbury, with power to extend the road to Williamsport. At Bridgeport, the road also intersects the Cumberland Valley Railroad, and, passing upon the western margin of the river, at the distance of about 8 miles, it connects with the Central Railroad of Pennsylvania; thus opening a direct railroad communication between that great improvement and the city of Baltimore, without crossing the Susquehanna. As the railroads are now constructed, freight and passengers on the Pennsylvania Railroad, designed for Baltimore, have to cross the Susquehanna river, over bridges nearly a mile in length, twice in a distance of about 8 miles. When the short link of the Susquehanna Railroad, between the York and Cumberland and Pennsylvania Railroads, shall be completed, the same trade and travel will pass on directly between Baltimore and Pittsburg, without crossing the Susquehanna at all, thus actually diminishing the distance between those two points 2 miles, and saving the tolls and charges on 12 miles, as each bridge is estimated, in the rates of toll, as equal to 5 miles of road.

At Dauphin, 9¼ miles from Bridgeport, the Susquehanna road crosses to the eastern side of the Susquehanna, and connects with the Dauphin and Susquehanna road. The latter, having effected a connection with the Reading road, there is unbroken communication from the Schuylkill region, into the Susquehanna Valley, over the Dauphin road. The coal fields through which this road passes, being of a superior quality, and being nearer to the Baltimore market than any other mines, heavy tonnage may be expected from that source.

Passing up the Susquehanna, on its eastern margin, the Susquehanna Railroad connects with the Lykens Valley Railroad, at the village of Millersburg, 18¾ miles from Dauphin and 28 miles from Bridgeport. The Lykens' Valley Railroad is completed, and in use to the coal mines, a distance of 16 miles, and a large share of the coal which now supplies the Baltimore market is carried over this road, transshipped, and conveyed by boats, by way of the Wiconisco, Pennsylvania and Tide-Water Canals, to the city of Baltimore. The completion of this road is most anxiously awaited by the Lykens' Valley Railroad, and the coal operators in that and adjacent regions. They

are prepared to throw on the Susquehanna Railroad at once 250,000 tons of coal per annum, for the Baltimore market.

Fifteen and a half miles from Millersburg, the Susquehanna Railroad intersects and connects with the Trevorton Railroad; now on the verge of completion. This road is 15 miles in length, and connects the Susquehanna road with the Mahony Coal Region.

At Sunbury the Susquehanna road reaches the northern terminus of the Sunbury and Philadelphia Railroad, the outlet of the great Shamokin coal fields, second to none in the State, and possessing, in many respects, advantages superior to the best collieries of the Schuylkill region. This road, 20 miles in length, during the last summer, was relaid with a heavy T rail the entire distance from Sunbury to the town of Shamokin.

The various coal companies in and about Shamokin, are making unusual efforts to ship a large amount of coal during the coming season.

At Sunbury the Susquehanna road also connects with the southern terminus of the Sunbury and Erie Railroad, a portion of which is now under contract and the grading nearly completed from Sunbury to Williamsport. Between Williamsport and Milton, the point of connection with the Catawissa Railroad, it is expected that the grading will be finished, and a single track laid early the ensuing summer. The Susquehanna Railroad Company have authorized, and placed under contract an extension of their road from Sunbury to Lewisburg, from which point they can either connect with the Sunbury and Erie Railroad, or continue their road to Williamsport, as may hereafter be deemed expedient. In either case, or should the Sunbury and Erie railroad company prosecute their work from Milton to Sunbury, a complete railroad communication will be effected from Williamsport, by the valley of the Susquehanna, to Baltimore and Philadelphia, passing over the entire length of the Susquehanna Railroad.

At Williamsport, they connect with the Williamsport and Elmira Railroad, which extends from Williamsport, on the line of the Susquehanna, and Sunbury and Erie Railroads, in Pennsylvania, to Elmira, on the New York and Erie Railroad, in the State of New York, a distance of 74 miles. Twenty-five miles of the southern end of this road, extending from Williamsport to Ralston, have been completed, and trains of cars pass between those points every day. The balance of the road, from Ralston to Elmira, is nearly graded, and at the northern end, the track is laid for several miles. The road, it is confidently expected, will be graded, and a single track laid from Williamsport to Elmira, before the first of July next; thus completing the last link in the chain of railroads, connecting by a north and south line, through the centre of Pennsylvania, the great Northern Lakes with the Atlantic seaboard.

The whole extent of the road embraced by the charter of the Susquehanna Railroad Company, is about 94 miles, commencing at the terminus of the York and Cumberland Railroad, at Bridgeport, opposite Harrisburg, and ending at Williamsport. Thus:

From Bridgeport to Sunbury,..... 54 $\frac{1}{2}$ miles.
From Sunbury to Williamsport,..... 39 $\frac{1}{2}$ "

Total,..... 94 "

The average grade for the entire line is under

two and a-half feet per mile. On that portion of the road under contract, between Sunbury and the terminus of the York and Cumberland Railroad, over 36 miles of the road is a dead level. On 16 miles, the grade is under three feet per mile. On 6 miles, the grade is over three and under six feet per mile. On 4 miles, the grade is over six and under eight feet per mile. And on 2 miles, the grade is above eight and under 10 feet per mile. In every instance, the grade is in the direction of the trade, toward the seaboard. The grades above eight feet were rendered necessary to effect crossings at the points of intersection with the Cumberland Valley and Shamokin Railroads.

The coal trade alone of this road, would unquestionably make it profitable; but along the line are rich agricultural districts, inexhaustible quantities of iron, and timber sufficient to supply the Southern markets beyond all demand. Some conception may be formed of the value of the lumber trade along this line, from the fact that at the port of Williamsport alone, there were shipped by canal, during the boating season of the year 1853, thirty-one millions of feet of plank and boards, and the value of the lumber trade of the West Branch of the Susquehanna, during the past year, may safely be estimated at \$1,000,000.

Lateral roads have already been constructed in advance of the Susquehanna road to the extent of nearly 100 miles, all of which will connect with this road.

The Eastern slopes of the Southern and Middle coal fields have been a source of incalculable profit to the Reading Railroad and the City of Philadelphia. An estimate of the value of this trade to Philadelphia may be formed from the fact that, the tonnage employed in its distribution is greater than that engaged in the foreign trade of New York.

There is no reason to doubt that the western slopes of these coal fields, will contribute in a like proportion to the business of the Susquehanna Road, and to the trade of the Baltimore market.

A company has been incorporated, and a portion of the stock subscribed, to build a railroad from Sunbury up the North Branch of the Susquehanna to the Wyoming coal field. The natural outlet for that great region, is by the valley of the Susquehanna; and so soon as means shall be provided to accommodate its trade, a large amount of tonnage from that source may be relied on with confidence.

Very much of the business and travel of the Lakes and the West, destined to Baltimore and neighboring points, and thence back again, will naturally take the direction of this route. The distance by the Susquehanna railroad and the roads connecting with it from Elmira to Baltimore is 252 miles. From Elmira to Philadelphia by the same route, making Harrisburg a point, the distance is 275 miles. The nearest railroad distance from Buffalo to New York is 420 miles. From Baltimore to Buffalo it is 401 miles. Buffalo is consequently 19 miles nearer to Baltimore than to New York. So from Baltimore to Dunkirk the terminus of the New York and Erie Road it is 436 miles; from New York to Dunkirk 467 miles, making a difference for Baltimore of 31 miles. There being then such difference between Baltimore and Elmira; and New York and Elmira, there will be

a proportionate difference with every point west and northwest of Elmira; and yet all the trade and travel from that direction destined for Baltimore and adjacent points, at present are compelled to take the circuitous route of the City of New York; and passengers at Baltimore, desiring to reach Central or Western New York, are compelled as it were, to go first to New York a distance of 180 miles, and then they are some 20 miles further from their point of destination than they were at Baltimore.

Such unequal facilities ought to be more evenly balanced.

A railway thoroughfare therefore, from the Chesapeake and the Delaware to the exhaustless resources of western New York and the lakes, cannot fail, to be a matter of profitable investment to all engaged in it, and vastly enrich the southern cities of Baltimore and Philadelphia.

Recently a bill to consolidate the roads on this line from Baltimore to Sunbury, has passed both houses of the Pennsylvania Legislature, only awaiting the signature of the Governor, which evinces a determined spirit to push forward this great chain of railway enterprise.

The following is the estimate in the Engineer's report, of the amount of business that will probably be done on the Susquehanna road the first year.

550,000 tons coal, at \$1 per ton,.....	\$550,000
10,000,000 feet lumber,.....	24,300
12,000 tons agricultural products, at 3 cts. per ton per mile,....	19,440
15,000 tons merchandize, at 4 cts. per ton per mile,.....	32,400
5,000 " iron, at 3 cts. per ton per mile,.....	8,100
10,000 " limestone,.....	16,200
3,000 " lime, at 3 cts. per ton per mile,.....	4,860
300 passengers per day, at 2 $\frac{1}{2}$ cts. per mile,.....	147,825
Mails,.....	10,800
	<hr/>
	\$813,925

Deduct 50 per cent. for expenses,.... 406,963

Leaves a net profit of..... \$406,962

Being over 20 per cent. on two millions of dollars.

Knoxville and Kentucky Railroad.

ENGINEER'S REPORT.

Mr. M. B. Prichard, Chief Engineer of the East Tennessee and Georgia Railroad, having made an instrumental survey of the above route, in order to test its practicability, and ascertain its probable cost of construction, has published a report of the results of his observations, from which we gather the following facts.

The design was to connect with Cincinnati from Danville, the western terminus of the proposed route from East Tennessee to the Ohio river, by means of the Danville, and Lexington, and Lexington and Covington roads, then in process of construction; and with Louisville, by means of a road chartered and proposed thence to Danville as soon as it was found, that a passage could be within reasonable terms of cost, the object was considered attained at once; and although there were two routes indicated for the passage of the Cumberland mountains, yet only one was surveyed, that called Wheeler's, (or as designated upon Lee's map of Kentucky) Walker's Gap. The survey generally follows that of the Charleston and Cincinnati Com-

pany some years since, as far as Williamsburg, Ky., and there it deviates towards Danville. Its general direction is westerly of North, and therefore has to cross the principal streams and ridges, and one mountain range. The first six miles to Black Oak ridge, the line proceeds with easy grades and light work. This ridge is passed by an open cut 60 feet in depth, and probably all earth. Thence it crosses Hind's valley without difficulty.

It then passes Beaver ridge, at a water gap made by Knob Fork, a tributary of Beaver Creek. Crossing Beaver Creek, Copper ridge is reached, which, in consequence of the extraordinary depression of Bull run, on the west side of this ridge, can only be passed by a tunnel 1000 feet in length and a viaduct and embankment 80 feet above the stream, and 1200 feet long. Passing next Bull ridge, Raccoon Valley is crossed, and Chesnut ridge is reached. The ridge is high but narrow on the top, and a tunnel is thought preferable to the heavy cutting, and the estimate is made accordingly. From this ridge the line by Wolf Valley and Pine ridge is developed, in order to preserve the grade; and, passing the water gap made by Big dismal creek, Clinch river is reached. The distance from Knoxville to Eagle Bend, the point selected for crossing the Clinch is 16 miles, and is the hardest part of the road. The line proceeds with little difficulty now to the side of Walden's ridge, near the gap made by Coal Creek, a distance of about 36 miles from Knoxville. Here, and upon the opposite side of the mountain, coal is supposed to abound in great abundance. Crossing Coal Creek at a high elevation, its next serious obstruction is a cut of 60 feet in depth and great length, at the Indian Grave Gap of Cross mountain. The line passing Powell's Valley, high up on the top of Cross mountain, follows the valley of Cove Creek to Pine mountain, and then along its westerly slope for 10 miles, until it reaches the valley of Elk. This valley, embracing an area of about 12 miles in diameter, abounds in iron, ore and coal, while its mountain sides are densely covered with timber, making it a valuable region of country for a railroad to intersect.

From the upper Elk to Williamsburg, Ky., a distance of 25 miles, the line is very straight, of light grades, and of easy construction; and through a productive region, with an abundance of coal.

The Cumberland river is crossed at Williamsburg, over a bridge 300 feet long and 35 feet high; and from here to Danville there is little obstruction, except from the precipitous gorges of some of the tributaries intervening, which, however, it is thought, can be overcome without much difficulty.

Such is the principal outline of the country, through which this survey passes from Knoxville to Danville, as surveyed by way of Walker's Gap. Its length will be 145 miles; the maximum grade 50 feet per mile; the minimum radius of curvature 1433 feet. The entire cost of the road, built permanently and with stone arches for crossings, wherever such structures are practicable, is estimated at \$4,284,651 43. To this add for equipments and depots \$2,450 per mile, and it gives cost per mile \$32,000 for the road in full working order.

A careful reconnaissance was made of the passage of the Cumberland range of mountains, by

the Big Creek gap; and this line has points of preference. On this line the gorge through Pine mountain rises to the height of 1500 to 2000 feet above the stream, but there is ample room between the cliffs for the railroad as well as the river; and the basin beyond, through which the line from Elk gap passes, can be reached with little difficulty.

The distance from Powell's Valley to Williamsburg will be about 2 miles shorter than by Elk route, and the passage of the mountain summit can be accomplished with greater ease, and at a much lower level. The great difficulty upon this line will be in getting out from Powell's valley to Clinch river, and then to Knoxville. The range of ridges are higher, and there are more of them than upon the Eagle Bend line; the distance is also enough greater from the valley to Knoxville, to fully counterbalance the two mile level between the valley and Williamsburg. The merits of the two routes are so nearly counterbalanced, that in order to decide between them, a thorough location should be made on both of them.

The country between Williamsburg and Lexington and Paris, is said to be favorable, and was favorably reported on by the corps of the Charleston and Cincinnati company. The Knoxville and Kentucky road will probably deviate at Williamsburg from the Danville line, thus saving some 35 miles to Cincinnati, and losing nothing in the distance to Louisville. On this route the channel of Kentucky river is very low, but by following one of its tributaries to the river, it is thought it can be easily crossed, by constructing a heavy timber and iron bridge, supported by piers and abutments. The distance from Cincinnati to Knoxville, by either gap, will not exceed 252 miles, and the length of new road to build, even taking the Paris connection, will not be over 175 miles.

This road has long been talked of, and when the project is consummated, will throw open to Cincinnati and Louisville a large and valuable area of country.

Memphis and Charleston Railroad.

We have the recent annual Report of the Company, giving a history of the operations for the year ending May, 1854.

The Directors state that their road, with others, has felt the stringency of the money market, which has prevailed for nearly a year past. The effect has been to retard their operations somewhat, but the final completion of the road will not be materially postponed.

The line of the Memphis and Charleston Railroad consists of two divisions, the eastern and western. The western division extends from Memphis to Tusculumbia; the second, from Tusculumbia to the Nashville and Chattanooga Railroad. The estimated cost of the eastern division is \$2,509,774, upon which \$747,366 have been expended. There are still \$655,114 21 of subscriptions to the capital stock of this division unappropriated, a large proportion of which is available, leaving a deficiency of \$1,107,299 57. To supply this, bonds were issued last June, but owing to the depression of the market they were not offered for negotiation. The city of Charleston originally subscribed \$250,000, payable in the stock of the Nashville and Chattanooga company, *at par*; but the company declining to accept such a subscription, the city generously guaranteed its *par value*.

Under such arrangement, 8,500 tons of iron

were authorized to be purchased upon favorable terms. Much of this iron has been purchased and shipped, and the balance doubtless will be in a short time.

The road from Tusculumbia to Decatur was completed and prepared for business in September last, and from that time there has been realized a gross revenue of \$39,252 69. Deducting expenses, it has yielded a net profit of \$21,635 08, equal to 8 per cent. per annum upon the capital invested. Last season the road from Tusculumbia 22 miles west, was let to responsible contractors who are pushing it rapidly forward. The masonry for the bridge across the Tennessee river is completed, and the contractors were actively engaged in preparing the superstructure for erection. A large portion of the grading and masonry from Decatur to the junction with the Nashville and Chattanooga road is finished; and in the course of 18 months, the company hope to have the entire line, from 22 miles west of Tusculumbia to Coon Creek put in full operation. There will then be 150 miles in use in Alabama.

The estimated cost of the work upon the Western division is \$1,983,898 80, of which there has been expended \$808,866 18, leaving \$1,175,132 62 to be appropriated. To supply this there is in means, derived from Tennessee and other sources, \$1,207,399 65, which leaves an excess of \$32,307 03. On the 93½ miles of the main trunk, from Memphis to the Mississippi line, aid has been received and assured from Tennessee to the amount of \$935,000.

With the exception of about three miles in Alabama, west of Tusculumbia; and 29½ miles within the limits of the State of Mississippi, the entire line from the city of Memphis to the junction with the Nashville and Chattanooga road, is either in successful operation or under contract; the grading and masonry are already far advanced, and it is entirely practicable to complete it in two years, if not in a much shorter time.

The success of the Western division, so far as completed, may be seen by the following:

The income from that part of the main trunk of the road and the Somerville Branch, which was in operation on this division, for the year ending 1st of March, 1854, amounted to \$139,231 60; and the net profits to \$80,381 48. When we consider that the road was not completed to La Grange until the 1st of July, 1853—that for four months of the year it was in operation for only 39 miles; that from July 1st to September 1st it was in operation for only 50 miles; and that from the 5th of September to March the 1st on only 63 miles, including the Somerville branch—these results must appear altogether amazing. But this is not all: This income was derived from an investment of \$775,000. In six months after the completion of the road to La Grange and Somerville, it yielded gross \$104,995 98. After deducting 42 per cent. for expenses, here is a net revenue in six months of \$60,497 99, or within a fraction of 8 per cent. on the investment! In the four last months of the fiscal year, it yielded \$77,972 47. Deduct 42 per cent. for expenses, and it leaves a net revenue of \$45,225 28, or nearly six per cent. on the investment. Let those who are disposed to be skeptical as to the value of railway investments look at these results. But we are not yet done: The gross receipts on the 108 miles in operation on the two divisions, including branches, were in the same period \$176,483 98, and the net income \$102,016 56. The aggregate cost of the completed sections was \$1,180,086 62, therefore the income is equal to near 9 per cent. upon the investment. From this showing it cannot be

doubted, that the income from these sections for the ensuing year, will pay at least 7 per cent. upon the \$400,000 of bonds loaned by the State of Tennessee, and on the \$1,200,000 which are authorized to be issued by the Company.

A preliminary survey has been made of an extension route, from the point of intersection with the Nashville and Chattanooga road, east to a point opposite Chattanooga, and for a bridge to connect with the lines of railway centering at that place. The survey proves the route entirely practicable. The distance will not exceed 50 miles, and the cost \$1,200,000. Tennessee has granted a charter, and aid to the amount of \$500,000; and it is expected that the people along the line will furnish the balance.

There has been considerable difficulty with the State of Mississippi as to the route of this road. The people of this State desired to have the line run by way of *Holly Springs*, thus causing an additional expenditure of \$650,000, and an increase in distance of 10 miles. An arrangement; however, has finally been made of the matter, between this and the Mississippi Central Company; and an act has been passed by the Legislature of Mississippi: approved March 1st, 1854, which we also submit, granting the "right of way," upon condition, with others, that this company shall ratify and confirm the agreement made with the Mississippi Central Railroad Company. The charter has not been accepted, although it probably will be, so that the road may not be retarded.

The following is a condensed report of the Treasurers, applicable to the Eastern and Western Divisions:

To Iron, &c., including spikes and chairs, with duties, freight, &c.,	\$590,149 46
" Construction, &c.,	807,492 61
" Equipments,	157,317 80
" Right of Way,	2,400 00
" Real Estate and Depots,	82,962 08
" Personal Estate (5 negroes),	4,600 40
" Engineering Expenses and Preliminary Surveys,	67,392 36
" Interest and Exchange, &c.,	37,300 18
" General Expenses, including Salaries, Stationery, Office Rent and	
Incidental Expenses,	37,908 79
" Cash & Available Means on Hand	88,281 73
	\$1,875,805 00

By Capital Stock Paid,	\$1,264,665 92
" Tennessee Bonds received,	400,000 01
" Bills Payable,	99,719 60
" Receipts for Freight & Passengers,	\$201,704 16
" Less expenses of Transportation,	90,284 75
	111,419 47
	\$1,875,805 00

Erie Railroad.

This company, contrary to its custom, has not reported the earnings of the *previous* month at the commencement of the *succeeding* one. The reason assigned is the true one, to wit: that the earnings of a month *cannot* be ascertained until some time has elapsed after its close. Receipts are not net earnings, and the former greatly exceed the latter. The custom of the company has been to make no public distinction between the two. The stock had the benefit of the exaggerated statement, which, at the end of the year, was largely reduced from drawbacks paid to other companies.

We are glad to see this company correcting one

abuse after another. It may yet take the lead as a *model* road.

Prospects of Locomotive Building.

Herman Haupt, Esq., Chief Engineer of the Pennsylvania railroad, makes an estimate, in his last report, of the amount of motive power necessary to operate that road under a movement of 1,000,000 tons of freight annually. He makes the number of freight engines 300. The increasing business of this road will require this number, without doubt within five years. The passenger business of all kinds, will also require 100 engines by the end of the same period. Here are 400 engines, of which 79 were on the road on the first of January, and 32 contracted for; leaving 289 engines to be supplied in the period named. The whole amount of rolling stock to be ultimately employed in the business of the road will cost about \$10,000,000.

The Superintendent of the Bellefontaine and Indiana Railroad in his last report says there is not a road in the West that is provided with any thing like an adequate supply of motive power.

The present great market for locomotives is the West. The bulk of Western roads are commencing operations, but so soon as they are in a position to accomplish results, not singly, but such as are to be expected from the operations of a great system.—then, a vast business will be thrown upon the lines leading to the seaboard, and a large business will be offered our Eastern locomotive builders at home.

Our home lines, when they attain an employment equal to their capacity, and such as less than ten years will give, will be worked by a motive power something as follows.

New York and Erie	450 Locomotives.
New York Central	450 "
Hudson River	150 "
Sunbury and Erie	200 "
New Jersey Central and connecting roads, to Sunbury and Wilkesbarre.	200 "
Lateral roads from New York and Erie, except those named below	200 "
Delaware and Western	150 "
Albany and Susquehanna	100 "
Lake Champlain line to Montreal	75 "
Harlem Railroad	75 "
Ogdensburg and Rome	50 "
	2100 "

The roads named will require an average delivery of 200 engines a year for a long time to come, a number about equal to the present yearly production at Paterson.

The effect of the construction and employment of this machinery, upon roads directly engaged in the trade of New York can hardly be estimated. It will cover our state with a dense population and make every township productive. It will clear our forests, open our mines, cultivate our fields and increase our flocks faster than ever before. So will it extend our commerce, and develop our industry in a similar ratio.

For every year, these Locomotives will draw over fifty million tons of *wealth*, grain, lumber, iron, coal, salt and provisions to the seaboard, and an equivalent of manufactured exchanges and foreign products in return.

Locomotive builders are guaranteed a vast business. It is a business whose patrons are in all of the

States. And although in none will railroads be more employed than those immediately tributary to the great commercial center of the country, yet they will be generally required for the internal wants of nearly all other portions. If capital becomes abundant for the construction of roads, there will be 2000 locomotives required yearly for several years. The increase of equipment is not merely in proportion to the extent of new lines opened, but also upon the additional business thereby brought upon the old ones, which increase alone is very rapid. Within five years from now, depreciation of locomotives already built will require about 500 for yearly renewals.

The present production of locomotives in the United States is about 1200 per annum, but upon the general revival of railroad progress throughout the West this production will be inadequate.

Railroad companies would do well to recollect that actively employed rolling stock is the most productive part of their investments, and that incapacity in that single respect is the most serious obstacle in the way of developing a heavy business.

Mobile and Ohio Railroad.

The fifth annual report of this company presents the following exhibit of its affairs. The condition of the work on the line of the road will be best seen from the report of the Chief Engineer, John Childe, Esq., which we give entire:

To SIDNEY SMITH, Esq.,

President of the Mobile and Ohio Railroad Co.

For the information of Directors and Stockholders, I have the honor to submit the following report of the Construction Department of their road:

It will be recollected that in April, 1853, contracts for graduation had been made for the entire line from Citronelle to the State line of Kentucky, with the exception of a few miles of light work in North Mississippi and Tennessee; all of which have been subsequently disposed of, and the remainder of the line through Kentucky, terminating on the Ohio river at Paducah, placed under contract to be completed ready for iron, as follows: fifteen miles next the river by the 1st of April, 1854, and the remainder, to a junction with the main line from the mouth of the Ohio river, by the 1st of November, 1854, simultaneously with the completion of the contracts through Tennessee and Mississippi. Of the main line through Kentucky, that portion only has been contracted which lies in Hickman county, including the Columbus, Kentucky branch; leaving thirty-one and a half miles in Fulton and Ballard counties to be disposed of. This small portion of the line has been postponed, for the purpose of securing the right of way and the required amount of subscriptions from the people of those counties, who alone, of all the counties on the route of the road, have to the close of 1853 been unmindful of their own interests by not advancing the road.

Two hundred thousand dollars are required from both counties, fifty from Fulton, and one hundred and fifty from Ballard; and as the road cannot be placed in these counties respectively, until the required amounts are raised, it is believed active measures will be taken therefor. The Columbus, Mississippi, branch was placed under contract in June of 1853, to be completed in the spring of 1854. Recapitulating, we have in progress of construction, at this time, all of the main road, excepting the two counties above named, equal to

	462 miles;
All of the Paducah branch	59 "
All of the Columbus, Ky., branch	5 "
All of the Columbus, Miss.,	14 "
Total	540 miles.

PROGRESS OF THE WORK.

First Division.—From Citronelle to the line of Lauderdale county, Mississippi, 93½ miles—all the heavy and difficult work is completed, and the remainder so far advanced that no part of it for a day can detain the track, if laid with all practicable speed.

Upon the first 50½ miles of this distance the value work done to 1st March, is... \$282,137
Value of do. to complete the same ready for the tracks..... 18,360
Upon the remaining 43 miles, all light work, amount done to the 1st of March, is..... 111,760
Do. to be done to complete the same ready for the tracks..... 118,763

Thus for the 93½ mile, less than one-fourth of the work is yet to be executed, exclusive of the laying down of the tracks, and so arranged that the cars may be run 126½ miles from Mobile so soon as 84 miles of tracks can be laid, all the iron for which is on hand, and the timber is in an advanced stage of delivery.

Second Division.—Extending through Lauderdale to Kemper counties, Mississippi, and 59 miles in length, embracing the heaviest grading of the whole road. During the past year white labor was here relied upon, but not half enough of it could be obtained to fully man the work; yet, the value of work done to the 1st of March upon the 59 miles is \$134,797, leaving to be done exclusive of timber and tracks, the value of \$193,189. This division is now provided with a force of white men and negroes, sufficient to complete it in all of this year, and before the tracks can approach it from the South and North as contemplated.

Third Division.—Extends through Noxubee, Lowndes, Monroe and Chickasaw counties, Mississippi—length 82¾ miles. This division is generally light work, and nearly all in the hands of planters, who being allowed two years by their contracts, for the execution of the work, which might be done in one, they have, in many instances, postponed a beginning till this spring. The returns, therefore, do not show as much done in proportion as upon the 1st and 2d divisions; yet two-fifths of all the earth-work is now done, with bricks and cement furnished for an equal or greater proportion of the masonry.

The determination of all the contractors on this division is to finish their work in all of this year, and as they control three times more men than are required for that purpose, there can be no doubt of their success.

From a central point of this division, the branch road puts out to Columbus upon the Bigby river, the graduation of which, including timber for the tracks, is now two-thirds done, and all necessary arrangements made for its completion by the first of July next.

Iron rails for this branch and for seven miles of the main road have been ordered to Columbus, and preparations made for laying track thence, as early as the 1st of June, consequently this branch will be in running order by the 1st of September, and track-laying begun in Lowndes county upon the main line, in both directions from the branch junction.

By shipping iron up the Bigby river during all of the next winter, the tracks will be continued South to meet the completed road in Lauderdale county and North to the Pontotoc line. To the latter point, under this arrangement, the road can be completed and cars running by the 1st of September, 1855.

Fourth Division.—Extends from Chickasaw county to the Tennessee State line, 66½ miles in length, and was the last work placed under contract in April, 1853.

Two fifths of the earth-work is now done, and preparations made for masonry and bridging. The force designed to be placed on this division, so soon as the spring rains are over, will complete nine-tenths of it in twelve months, and the heavy points (of which there are three) in eighteen to twenty-four months.

Fifth Division.—Extending through the State of

Tennessee, is 118½ miles long, one-third of the earth-work is nearly done, and two-sevenths of the whole value of all work graduation completed. The work is generally light upon this Division; is all, excepting three Divisions, in the hands of planters, who can and will complete it ready for the iron, within the present year, and furnish timber for the tracks during the first three or four months of 1855.

Sixth Division.—Consists of the Main line in Kentucky, 40 miles in length, and the Paducah and Columbus branches, respectively 59 and 5 miles long; making the total length of the division, main road and branches; 104 miles; of which 72½ are in progress. The Paducah branch is all in the hands of one efficient Company, who have now 15 miles at the Paducah end nearly ready for the tracks, and can complete the whole by the 1st of December next. Thirteen and a half miles in Hickman county, Kentucky, including the Columbus branch, has made some progress to the amount of \$5,000, but will be urged rapidly on, so soon as the remaining 31½ miles in Fulton and Ballard counties can be put under contract. Iron rails have been ordered to Paducah in moderate quantity, that the track-laying may be commenced as early as practicable. With a continued supply of rails at Paducah, the tracks may reach Jackson, Tennessee, by the 1st of October, 1855, and the heavy work in North Mississippi by the time the road reaches there from the south; which with proper diligence by the contractors in preparing the road-way, and by the Company in furnishing the rails, ought not to extend beyond the 1st of June, 1856.

The tracks are now laid about ten miles above Citronelle, and will be hereafter continued uninterruptedly until the whole road shall be completed.

The value of all work done on the Road is as follows;

Mobile to Citronelle, 33 miles.....	\$500,000
1st Division —To Lauderdale county, Miss.	
93½ miles.....	394,000
2d Division —To Noxubee county, Miss.	
59 miles.....	135,000
3d Division —To Pontotoc county, Miss., (including the Columbus branch) 96¾ miles.....	180,000
4th Division —To Tennessee State line, 66½ miles.....	53,000
5th Division —To Kentucky line, 118½ miles.....	144,000
6th Division —To the Ohio river at Paducah, and the Hickman county contract, 72½ miles.....	50,000
Total for Grading and 43 miles laid....	\$1,456,000
Value of rails, bolts, &c, on hand at Citronelle for 64 miles of Road.....	450,000
Right of Way, Engineering and Contingent expenses.....	150,000

Making a total of work done, machinery and rails, of..... \$2,056,000

Besides which, there are 8,100 tons of rails now arriving from Messrs. Thompson & Forman, which, with previous purchases will complete 147 miles of the main road, and 28 miles of the Columbus and Paducah branches.

Notwithstanding the hard times for money, the collections of instalments have invariably kept a head of the local work, and so long as the present good feeling exists throughout the line, based as it is upon confidence in the merits of the road as a stock investment, and upon the want of it as a commercial avenue, the Treasurers will not be troubled to meet the requisitions for the work. Stockholders, however, must at all times bear in mind, that to have the work done quickly, they must pay promptly.

The planters on the route have lost on an average \$8 per bale on their last year's crop of cotton, in consequence of not getting it to market as soon by three months, as they would have done by the road. At least two hundred thousand bales are grown in counties contiguous to the road, upon

which the loss sustained this year is \$1,600,000; and this is the second crop in three years, upon which this loss has fallen by late rivers and depressed prices.

The subscriptions for the Tennessee River branch are nearly to the amount required. It is now expected that the contracts can be made therefor in May next.

The State of Tennessee has given another proof of her wise and liberal policy, by amending her Internal Improvement law of 1852, and granting \$10,000 per mile to the Mobile and Ohio Railroad and several other roads, instead of \$8,000 as before.

The Tuscaloosa, Gainesville and Mississippi Railroad Company are now seeking a direct line of road from the Warrior coal fields to the Mobile road. When built it will be one of the most valuable tributaries to your road and City. Should this fail, the line chartered from Tuscaloosa via Eutaw and Livingston, will put you in connection with the same coal fields, but less favorably, on account of greater distance and consequent greater cost of coal transportation.

In addition to the connecting roads mentioned in the last annual report, two others are projected and justly merit the confidence and the support of the people to be accommodated by them. The first is from Coffeyville, running near Greensborough and Philadelphia, Miss., to the Mobile and Ohio Railroad at or near Enterprise in Clarke county. Eventually, this line will be extended via Panola and Fernando to Memphis, Tenn.

The second is from Columbus, Miss., to Decatur, Ala., to connect with your Columbus branch. It is represented, by the very competent Engineer, who has examined it, as a cheap and feasible route for construction of a railroad. But this is not the place, nor is it my province to discuss the merits of connecting roads. I wish merely to invite the attention of all parties interested for or against the Mobile and Ohio Railroad, to the true reason, why so many railway lines north of the 32d° parallel of latitude are converging to a junction with the Mobile road. It is because the Mobile Bay is the natural, nearest and best southern outlet by railway for all men living between the Alleghany Mountains and the Mississippi River north of latitude 32, including also, the States of Missouri and Iowa, and the Mobile road presents the shortest and cheapest trunk line of travel to that Bay.

This is proved by three prominent points through which most of the travel must pass. Jackson, Tenn., will be at least 95 miles farther from New Orleans by the Great Northern and Mississippi Central Roads, than from Mobile by the Mobile and Ohio Railroad. Nashville, Tenn., will be 94 miles nearer to Mobile via the bend of the Tennessee River and the Mobile and Ohio Railroad, than to New Orleans via the Chickasaw, Aberdeen and Great Northern Road; and the point of intersection of the two latter roads will be 110 miles nearer Mobile than New Orleans.

Take these facts in connection with the superior character of Mobile Bay for accessibility and depth of water, over the largest river entering the Gulf, and no man need lose faith in the success of the Mobile road, let him be ever so timid, or money affairs ever so tight. Allow me the liberty to repeat, what I know to be true, that the Mobile and Ohio Railroad possesses more fully all the leading elements of success, as a stock investment and commercial avenue, than any other line of Railroad in the United States, without exception. Resting upon this undeniable character of the road, the people of the country along its whole length are steadily progressing with the work, and will continue to progress until finished, generally within the period of their contracts.

The trains have been run with commendable regularity between Mobile and Citronelle during the past year, supplying the city with brick, wood, lumber and small crops—the contractors on the line above with tools and provisions—and for the road extension 7,000 tons of rails from Mobile.

The Treasurer will furnish you with an abstract

of gross earnings, expenses and net income for the year.

During the epidemic last summer, many persons escaped by the road to places of safety in the country, whilst others afflicted, received timely assistance with the speed which a locomotive alone can give. To the Resident Engineer of the 1st Division, John W. Goodwin, Esq., was entrusted the general supervision of the Running Department. Of him and his associates, it is but justice to say, they merit the thanks of the company for their persevering faithfulness, whilst death took more than half their number, but could not drive them from the post of duty.

With high regard, I am yours,

JOHN CHILDE,
Chief Engineer and General Agent.

WEDNESDAY, March 8, 1854.

At an election by the stockholders, held this day at the office of the Mobile and Ohio Railroad Company, the following named gentlemen were elected Directors for the ensuing year, viz:

James Whitfield, Mississippi, Milton Brown, Tennessee, Sidney Smith, Francis B. Clark, J. Emanuel, Duke W. Goodman, R. Lee Fearn, David Stodder, H. A. Schroeder, Newton St. John, Moses Waring, Charles Walsh, Hillary Foster.

At a meeting of the Board held March 16th, at their office, Sidney Smith, was unanimously re-elected President of the Company, and A. F. Irwin, Secretary and Treasurer. The following gentlemen were elected members of the Executive Committee for the ensuing year: Francis B. Clark, Chairman, J. Emanuel, Duke W. Goodman.

The Report of the Directors states the receipts of the Company up to February, 1854, to be \$1,518,028; amount paid out \$1,472,761; amount of work due, and value of materials on hand, \$2,056,000. The Company have not yet made sale of any of their securities, the local stock subscription being sufficient to prepare the road bed for the rails. To meet the payments due on these, of which 15,000 tons have been purchased, the company obtained, at the last session of the Legislature, a loan from the State of \$400,000.

The company proposed to create a funded debt of \$6,000,000, based upon the entire cost of the road, and upon the value of 1,156,658 acres of land, granted by the general government, and lying upon the line of the road. At the low estimate of five dollars per acre, the lands alone are worth nearly as much as the total proposed indebtedness of the company. In addition, the company have over \$5,000,000 of solvent stock subscriptions. The proposed funded debt, therefore, is abundantly secured under the present state of things. However, it is not thought best to force sales, but to wait a more favorable state of the market. In the mean time, the work will be carried forward with such despatch as the domestic means of the Company will allow. Upon a favorable change in monetary affairs, no doubt entertained that the lands of the company will find a ready market.

Since the previous report, the State of Tennessee has increased the amount which she is to loan to the company from \$8,000 to \$10,000 per mile; a sum sufficient to cover the superstructure in that State.

With the exception of the fact that the Co. have not sold their lands, as rapid progress has been made as was expected. The work of graduation is progressing rapidly upon every part of the line. The public sentiment of the country traversed is becoming more and more favorable toward the project. Its importance and value is being better understood. The project is daily becoming strong-

er in itself, a fact which will exert a favorable influence upon the price of the bonds when offered for sale.

Georgia Railroad.

The recent report of this company presents the following statement of the operations of the road for the year ending March 31, 1854:

Total receipts from the road.....\$931,767 00
Total expenses on account of the same 588,552 00

Nett profits.....\$343,214 00
The gross earnings of the
Bank have been.....\$93,093 62
Charged, with interest on
bonds, taxes, and ex-
penses.....74,547 61

Leaving nett profits from Bank.... 18,546 01

Nett profits of the Company from all
sources.....\$361,760 74
Add amount standing to credit of sur-
plus profits on 31st March..... 80,480 35

Makes a total of surplus profits on that
date of.....\$442,241 09
From this two dividends have been
declared of \$4 per share each,
amounting to..... 326,240 00

Leaving to credit of reserved fund.\$116,001 09

The report next proceeds to remark upon the expenditures for the road during the past year, together with other subjects connected with the affairs of the Company, which we copy:

"The extra outlays for the road for the past year have been large, but not larger than the Stockholders were led to expect from the last annual report. They have been for new work, and therefore add to the permanent value of the property of the Company. It is not, however, purposed to increase the capital stock, or make new loans, and they have therefore been charged upon the income, and diminish the surplus profits to that extent. It will be seen that those extra expenditures amount to \$163,589 62, which deducted from the amount of expenses and expenditures charged upon the income, leave a balance of \$424,963 18 for the ordinary current expenses of the year. This shows a decrease of ordinary current expenses compared with the previous year of \$7,796 78. Thus:

Ordinary current expenses for 1852-53 \$432,759 96
" " " " 1853-54 424,963 18
\$7,796 78

"The Directors had hoped that the outfit in cars and engines would be fully sufficient for the actual or prospective business, and that no further demand upon our income would be made on this account, except for repairs and renewals sufficient to keep up the existing stock. This hope, however, was partly based on the assumption that other connecting roads would, before this, have furnished their full quota of rolling stock, which, as yet, they have failed to do. It is, therefore, very desirable, that our outfit should be increased, for reasons stated by the Superintendent, and absolutely necessary that liberal outlays should be made for the renewal of the iron beyond Madison. For the latter purpose the Board believe that the estimate of the Superintendent is full low, and should be rather increased than diminished.

"The Nashville and Chattanooga, and Atlanta and Lagrange roads have also been completed since our last annual convention, and we have now continuous lines of Railroad communication from Maine to Montgomery, Alabama, and from the same point to Nashville, Tenn. From these important extensions, great advantages to our road have been anticipated, and an increase of about 33 per cent. in the business of the last month over that of April, 1853, may be mainly attributed to these important extensions. The unsurpassed fertility of Middle

Tennessee, must always furnish a heavy tonnage to the Nashville and Chattanooga Railroad and its eastern connections, and we may well congratulate the stockholders of that company, who after encountering many difficulties and delays in their mountain sections, have at length reached a consummation of their labors.

"It will be seen that the gross earnings of this road the last year have decreased, as compared with the previous year, the sum of \$2,356 49. This result is highly encouraging, when we consider that the decrease on the article of cotton alone was equal to \$54,000, as will be seen by the report of the Superintendent. This falling off in cotton was alone occasioned by a short crop in that section tributary to our road. That this large item should have been nearly made up by a healthy increase in other branches of traffic, was, perhaps, scarcely expected by the stockholders.

"Mr. Arms, who was long connected with our road as Superintendent of Transportation, and in that capacity conducted the business of that department with great ability, left the service of the company in January last, to take charge, as Chief Engineer, of the Savannah River Valley Railroad. Mr. George Yonge, late Superintendent of the State Road, has been selected to fill the vacancy, and the Directors are pleased to say that they believe Mr. Yonge eminently qualified for the duties expected of him."

The following gentlemen have been elected Directors of the Company for the following year: John P. King, President; Hays Bowdye, B. H. Warren, Joseph C. Fargo, Wm. D. Conyers, Jno. Cunningham, Jas. W. Davies, Samuel Barnett, John Bones, Thos. N. Hamilton, Elijah E. Jones, Antoine Poullain, A. J. Miller, Thos. Barrett, Thos. B. Phinzy, Wm. M. D'Antignac.

We learn that President King announced to the convention his purpose to resign his office, either before or after the expiration of the present term.

Journal of Railroad Law.

DUTIES OF CITY RAILROAD COMPANIES.

Below is the charge of Judge Duer, of the Superior Court, in the late case of *Button against the Hudson River Railroad Company*.

The doctrine of the Judge, purporting that railroad companies are bound to use the utmost degree of care, and are accountable for the slightest degree of negligence when damage results from it, is by no means novel. It is the general rule with regard to all public vehicles, whether running on railroads or on common roads, that slight faults, unskilfulness or negligence, either as to the competence of the carriage, or the act of driving it, may render the owner responsible in damages for injuries sustained by passengers. They are to be transported as safely as human care and foresight will permit. Sec. 2, Kent's Com. 601, and the authorities there cited.

This was an action brought by Margaret Button, as administratrix, to recover damages for the loss of her husband, who was run over by the cars of the company, on the corner of Christopher and West streets, on the evening of the 4th of November, 1853.

It was supposed that he was first knocked down and run over by the baggage car, and subsequently, by the first passenger car, it being in evidence that he was lying on the track at the time the passenger car ran over him. The defendants, however, gave in evidence some testimony tending to show that Mr. Button had been drinking, and was probably intoxicated at the time, and they alleged that the accident was the result of his own carelessness, and not of any fault on their part. It was proved that the horses usually carried bells, and that there were bells on the horses attached to the passenger car, but none of the witnesses could remember whether there

were bells on the horses of the baggage car or not. No lights were carried on the front of the car, and the driver testified that he was not able to see further than his leaders' heads; that although lights immediately in front be of no service in lighting the track, yet it was shown that light might be placed on the side of the cars in such a way that they would throw light on the track for some distance in advance. Damages were laid at \$5,000.

His Honor, Judge Duer, instructed the Jury as follows:

By the rules of the common law, no action could be maintained for the recovery of damages for injury to the person after the death of the injured party, but the statute upon which this action is founded has remedied that defect, and now, where death results from the injury, gives to the representatives of the deceased party an action for the recovery of damages. The action, however, can only be maintained where, if the injured party had survived the accident, he could have maintained an action in his own name; and consequently, every defence that could have been urged against the recovery, had the party not been killed, and had he brought the action in his own name for his personal injury, may still be set up by the defendant in this suit. Now it is a rule of the common law that where a party seeks to recover damages for injuries occasioned by the neglect or carelessness of the defendant, the plaintiff is not entitled to recover if there was any negligence on the part of the plaintiff which directly contributed to the accident—negligence without which in all probability the accident would not have occurred. And for the purposes of this suit, I shall instruct you that that defence is just as applicable in the present case as if the action had been brought by the deceased in his life time, upon the supposition that his death had not ensued.

The damages to be recovered where the action is brought after the death of the injured party by the personal representatives, are not governed by the same rule as if the action had been brought by the party in his life time. Where the action is brought by the party in his lifetime, the damages to be given are not necessarily limited to a mere indemnity for his actual pecuniary loss, but juries in such cases may give damages as a compensation to the party for his bodily and mental sufferings, and they may also give what are called exemplary or vindictive damages, or, to use a more familiar phrase, "smart money." They may, if they please, enhance the damages for the purpose of deterring others from being guilty of similar misconduct. In the present case, however, you are limited by the terms of the statute to those damages which the party has actually sustained, and you can give no other or greater damages than, in your opinion, will be sufficient to compensate the widow and children of the deceased for the pecuniary injury resulting to them from his death.

Having made these general observations, I shall now state to you, gentlemen, what are the questions you will be required to determine, and make a few observations in relation to the evidence applicable to each.

The first question is, Whether the death of the deceased, Thomas Button, was or was not occasioned by the negligence of the defendants, or by the negligence of their servants. That is a question, it seems to me, in regard to which there can be but little difficulty; although my opinion of the evidence is not to control your judgment, as you are responsible for the verdict to be given. All that is necessary is to apply the rule of law, which I shall now state, to the facts of the case. In my opinion, a railroad company that has obtained the privilege from the Legislature, or the Corporation, of running its cars through the streets of a crowded city, are bound to exercise the utmost diligence and care in order to avoid the occurrence of accidents; and if you are of opinion that this company, or their servants, by the use of any means which human prudence or human foresight could suggest, might have avoided the

accident in question, then the omission of the company to employ those means is, in my opinion, culpable negligence, and renders them liable in the present action. Taking that as the rule of law, the case seems free from doubt, leaving out of view the question whether these cars were running at an unusual rate of speed. The first car was running at the rate of six miles an hour. This I understood to be admitted by the driver; and whether that is or not a proper rate of speed for cars running in the streets of the city, on a dark night, I leave for you to judge.

The drivers on the cars tell you positively—both of them—that lights might have been fixed upon the side of these cars that would have thrown a light upon the track in front of the horses, and which would have enabled the driver to have seen any object on the track in front, and to have avoided a collision with that object. The driver tells you that where he was established he could not see beyond the heads of his horses any part of the track in front of him at all; and, indeed, I understood him as admitting—but whether he admits it or not, the fact is evident—that if, upon that occasion, there had been lights upon the car that would have enabled him to see the track in front, and the body of this man who was lying over the track, the car might have been stopped, and death would not have resulted. I charge you therefore, if you are satisfied that lights might have been so used as to have enabled the driver to have seen what was on the track in front of him, and that owing to his disability to do so, this accident occurred, the company are chargeable with negligence, which renders them liable in the present action, throwing out of view altogether other circumstances that have been relied on as proof of negligence. There is an ordinance of the Corporation which requires that lights shall be used on hackney coaches, and, in my opinion, the reasonable construction of that ordinance is, that it is just as applicable to cars running by night as to hackney coaches—in other words, that it is applicable to all vehicles that are usually employed for the transportation of passengers. But in order to avoid any difficulty upon that question, I shall charge you that that ordinance is not applicable to the present case, so that the question of law, whether it is or is not applicable, may be avoided, in case your verdict upon the other grounds shall be rendered in favor of the plaintiff; but if you are of opinion that the ordinance exacts only that degree of care which ought to be observed by the Company, then the omission of the Company to use lamps upon these cars is, in my opinion, I repeat, such negligence as justly subjects them to the recovery of damage.

Then the next question is, was there any negligence here on the part of the deceased that could operate as a bar to recovery of damages by his representatives? The allegation is that this man on the night in question was in a state of such intoxication, as not only to deprive him of control, but to have reduced him to a state of actual insensibility; that in that state of intoxication he fell over the track in question, and was lying there in a state of torpor and insensibility when run over by the cars. You are required to believe this upon the ground that he was a man of generally intemperate habits, that he had been drinking upon that evening, and that his being upon the track at all in the situation in which it was alleged he was found, can only be accounted for upon that supposition. Now, in the first place, with regard to his being a man of intemperate habits, there is no evidence to justify you in drawing that conclusion. Indeed I think you must consider that it is established by the evidence that he was not an habitual drinker at the time. I would here remark also, that the burden of proof lies upon the part of the defendants. They are bound to prove the affirmative, and not to leave you to conjecture or speculation. They are bound to prove that such were the habits in question, and that the accident happened from that cause, even admitting, for the present, that it would constitute a defence. Now, if this man was intoxicated, it seems to me

that he must have been intoxicated to such an extent that he had fallen over the track in question, and lay there in a stupid insensibility resulting from intoxication, when the accident happened. I leave it for you, gentlemen, to determine whether you will be justified by the evidence in the case, in saying that such was his actual condition.

I entertain myself some doubts whether a defence of mere negligence is applicable to a case of this kind at all. If the ordinances of the Corporation were violated, either by the omission of the company to use lights on their cars, or by the unusual rate of speed at which the cars were going, I do not know that the negligence of the deceased would exempt the defendants from the payment of damages. I do not know that it has ever yet been decided that where the act of negligence is an act of positive illegality, and a violation of the positive law, either of an act of the Legislature or of an ordinance of the Corporation, that negligence upon the part of the persons injured or killed constitutes any defence. But for the purpose of this suit I shall instruct you that if you believe that the accident resulted directly from this man's being in a state of intoxication at the time, and that this directly contributed to the accident in question, you may find that question, although not your verdict, in favor of the defendants. I would here observe, however, that the negligence which is to be set up by the defendant as a bar to recovery by a plaintiff in an action of this kind, is very different from that negligence which may be imputable to the company. The company is bound, as I have already said, to use the utmost degree of care and diligence, and the omission to use even that care and diligence—that is, even slight negligence on the part of the company—would render them accountable; but an individual is not bound to use the utmost care and diligence, that might have been employed and the omission to use such care and diligence would not be a bar to his recovery. Were it otherwise, I would ask in what case could men run over by cars recover at all? In all cases, by the exercise of the utmost care and prudence, a man might see the car coming, or hear the noise; and it is monstrous to say that, in all cases, because the accident might possibly have been avoided, the company is to be exonerated from all liability. In this case, if the deceased were guilty of negligence which directly contributed to the accident, this was a defence which the defendants themselves were bound to establish by positive evidence; but if that evidence has not been given, you will find a verdict for the plaintiff.

The next question is, What is the rule of damages in such cases? I know of no other rule than this: The probable loss resulting to the wife and children of the deceased, from the death of the husband and the parent. I say the *probable*, as distinguished from the *certain* loss; because, if you require evidence of certain loss, a necessary loss,—resulting from the death of the party, a jury could give nothing more than nominal damages. It might be said in every case of this kind, that although a man were killed by an accident, he might have died on the next day from some other cause, and the loss resulting to his family would have been as great as resulted from the accident. This is true. There is no certainty that if this man had not been killed, he might not have died from some other causes during the same night. Therefore, if you were required to give only such damages as necessarily and certainly resulted from the death of the party, I know not what damages could be given. The Legislature, in saying that damages may be given to the amount of \$5,000, have in effect, by necessary implication, sanctioned the rule that I now lay down,—that you are to give those damages which may probably compensate parties for the loss sustained;—meaning, by loss, the probable loss resulting to them from the death of the husband and parent. You have then to consider these three questions;

1. Was the death of Button caused by the negligence of the defendants or their servants? If you find there was no negligence whatever on the

part of the company or their servants, then you will render a verdict for the defendants.

2. Was there any negligence on the part of the deceased, which directly contributed to the accident? Even however, should you answer this question in favor of the defendants—that is, in the affirmative provided the previous question is answered affirmatively—I still instruct you to find a verdict for the plaintiff.

3. What is the pecuniary injury, to be compensated by damages, which has been sustained by the widow and children of the deceased?

Verdict was rendered for the plaintiff for \$3,600.

For the plaintiff, J. B. Phillips; for the defendants, Mr. Fullerton.

American Railroad Journal.

Saturday, May 20, 1854.

Retrospective, Present, and Future of the Journal.

Upwards of twenty two years has the AMERICAN RAILROAD JOURNAL been advocating, and regularly urging forward, on a sound and legitimate basis, the great system of internal improvements of the United States. More especially has it been devoted to the interests of the railway system, and such other projects as were incidentally connected with it. During the earlier and greater portion of this lengthy period the struggle has been a tedious one, the enterprise unremunerative, and its results discouraging; but, and abiding faith in the cause to which it was devoted, and implicit confidence in its ultimate triumph, as a means of developing the resources and working out the destiny of the country, were the incentives to perseverance, which, aided by the appreciative kindness of many friends, animated the proprietors and conductors of the *Journal* to struggle on till the crisis was fairly passed and success crowned their efforts; not only success in their enterprise as publishers, but also the triumphant success of the system which it advocated. The success of the one was almost necessarily coeval with that of the other.

When the publication of the *Journal* was commenced, there was scarcely a mile of railway in successful operation in the country, now, there are about seventeen thousand; and the *Journal* having advocated the construction of almost every line, and exerted its influence in favor of their prudent, careful and successful management, they, on the other hand have lent their countenance and patronage to the *Journal* and in almost every instance have continued it to this day. We may safely assert that there is not a railway corporation of any magnitude in the country which does not, either in its capacity of company or through some one or more of its officers, subscribe to the *Journal*, and usually both in their corporate capacity and by several officers, and stockholders, individually. Its circulation now embraces all the railway companies, officers, managers, contractors, manufacturers of equipment, machinery and rolling stock of all kinds, bankers, brokers, and capitalists both American and foreign who deal and invest in American securities, and those libraries of a public or private nature which abound in works of statistics and reference, besides a great number of private individuals who desire to keep themselves informed of the progress of the country, in all its material aspects. The average

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	824,363	1,043,540	2,036,140	177,003	80,053	none	80
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	98
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	30
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	37
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	83
Nashua and Lowell..... "	15	600,000	none.	651,214	182,545	51,513	8	105½
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	12½
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	22
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	84
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	ent.	97½
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	87½
Boston and Maine..... "	83	4,076,974	150,000	4,111,315	803,024	418,358	8	103½
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6½	81½
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	99½
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	55
Eastern..... "	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	82
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	95½
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	88
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central "	74	1,159,228	953,370	2,221,068	90,315	35,214	none	57
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,897	122,866	none	96½
Taunton Branch..... "	11	250,000	none.	307,186	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	15½
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western..... "	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	96
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	64
Providence and Worcester.. "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	120
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	423,173	7	93
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	.....	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	54
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	.....	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	.....	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna..... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	68½
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	64
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	50
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	103½
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	18½
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	.....	.....	.....	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington..... "	60	850,000	400,000	1,250,000	.....	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	.....	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	.....	.....	.....	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	93
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,409	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	.....	.....	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	74½
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	74½

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

Total.....	526,020
------------	---------

The commercial position of New York.

A State having great extent and productiveness, a temperate climate, an industrious and intelligent people, and having extensive and capacious channels of communication natural and artificial, both within itself, and leading to other states having similar natural resources, is destined to employ a vast commerce. No State better illustrates this truth than New York. No city in our own country could possess such a commerce as the city of New York.

While our State has an extent, fertility, productiveness, and climate only equalled by the leading states of the Union, it has an extent of population and of *natural and artificial communication* surpassed by no inhabited part of this continent and by but few noted countries in the world. The shortest line which could connect the coast of the Atlantic with that of the great inland lakes, lies in New York. More than two thirds of the boundary of the state is a water line, of a capacity equal to the demand of the heaviest trade. The Hudson, lying in a deep gorge, is necessarily deep, straight, free from shoals and of uniform volume, and bears a trade which no river of twice its length, on the whole continent, is capable of sustaining. Its navigation is extended, by the greatest artificial water channel on the globe to connect with the great chain of lakes.

The present actual tonnage coming to tide water over the Erie and Champlain canals would, if embraced in foreign commerce, load 4000 ships of 800 tons each, every year.

To the facilities for trade by the Hudson River, Long Island Sound, the canals and Lakes Erie, Ontario and Champlain, we add the internal lakes of our state, each of which accommodates a large trade to its borders. The lakes are a part of the natural distribution of water, such as is found in few other states, unless nearly inaccessible by surrounding swamps.

The topography of our State is also the best suited to a great seat of trade, and in fact controls the distribution of the water channels which have been so well employed. New York is the northern termination of the great Alleghany chain, which attains its full height in Virginia, and presents successively lower summits to the Baltimore and Ohio, Pennsylvania Central, New York and Erie and New York Central Railroad and water routes. These respective summits may be rated in the above order as 2600, 2100, 1750 and 560 feet. The New York Central route has the great advantage also that its whole *rise and fall* between the ocean and lake Erie does not exceed 600 feet while that of some of the other routes, in reaching the Ohio, is nearly 20,000 feet.

The New York water line, having an uniform descent, is in fact an *inclined plane* passing a trade nearly equal to that of the Mississippi River, while the other lines present a succession of summits in some cases *twenty* in number.

Since this State has organized its great additional system of railroads, most of which is completed it commands more of the materials of commerce, and better facilities for its despatch than any other country of equal extent on the face of the earth. And the entire trade drainage of its business channels, and its own vast aggregates of production, converge to the city of New York. What wonder that New York is the greatest city on the Western hemisphere? that it is *growing*

the fastest? that the *twenty miles* of its wharf lines are becoming covered with the materials of trade? and that its surface of over fifteen thousand acres is more than half shadowed by the temples of commerce and the houses of its busy votaries. And not only in material greatness, but in mental and moral grandeur will New York stand first among the cities of the earth. The wealth and genius of its people directed by noble aspirations, and intelligent faith in the great destiny of our country, has already attracted a vast aggregate of *mind*, whose workings disclose invention, instruction, sympathy and faith.

It is perhaps an injury, (temporary it must be,) to New York, that it grows *too fast* and that its people are *too much occupied* in their pursuits, to have organized all of the great municipal systems upon which its reputation for good government must depend. But a city like this will not long sacrifice any of the essentials to its ultimate position, but will secure the highest sanitary condition, and the full means of the highest comfort convenience, economy and safety of its inhabitants.

Effects of the Railroads entering New York.

The East river was originally deemed the best wharf line of New York, as it afforded a better depth and entrance of water, and as the *ridge* of the island was farthest back from the shore on that side. The east side became the business side of the city. The Custom House and Exchange were placed there. Wall street, received its character by its convenient position for the dealings of the merchants. The great hotels of New York were on that side, the United States and the Pearl street houses among them. The theatres were there. East Broadway was the principle locality for genteel residences.

But with the increase of the North river trade, and of the business of the Erie and Hudson River roads, and of the cotemporary inauguration of ocean steam navigation, the *West* side of the city is now taking to itself the commercial characteristics so long held by the East side.

Between Courtland and Duane streets the largest class of marble and brown stone fronts are rising, and already enclose the finest blocks of stores to be found in the country. The great hotels are all up town, but near the North River.

So are the theatres, the exhibition rooms, and the first among the temples of luxury and taste with which New York abounds. A friend told us lately that stores on the East side, which once rented for \$6000, now commanded but \$1500, although of course their age and inferior adaptation compared with modern structures had something to do with the decline of rent. But the *tendency* is irresistible. East Broadway has degenerated to a row of boarding houses. The Fifth avenue has become the home of the merchant princes. The Jersey shore is improving, both for trade and as a residence. All along the West side, property is changing hands at increasing prices, and revolution and renovation is the order of the day.

The foot of Canal street is destined to be the great depot of the railroads entering our city. A site can be readily found there which would be equal to any probable wants of the city, and which would accommodate more than any other situation, the great interests of the community. Canal street from the North River to Centre st., will become one of the most important avenues

of New York, and will be the focus of all the lines of city railroads.

Whenever this street becomes opened to the Bowery, it will acquire a new importance in the eyes of the business community.

For the American Railroad Journal.

Hollow Axles.

As a corollary to my communication of last week, I would state, that, a cast steel axle of the kind that I have referred to, three inches in diameter, and a hollow one of wrought iron five inches in diameter outside, and four inches diameter on the inside, would weigh about the same and be of about equal strength, while a solid one of wrought iron to be of the same strength, must be about four inches in diameter. I do not pretend to great accuracy in these calculations, but, they are sufficiently so for practical purposes, and are far within the discrepancies of one at least of the materials, as regards the strength of iron, according to the best experimenters.

Now as to the cost; I will venture the assertion that, the hollow ones cannot be furnished for less than four times the price per lb. of the solid iron ones.

The cast steel ones will probably cost eight times as much as the solid iron ones. But the latter and former being but half the weight of the solid iron axles (although equally as strong,) it follows, that, the hollow iron axle will cost twice that of the solid iron one, while one of cast steel will cost twice that of the hollow iron one.

The additional inch, in the diameter of the hollow iron axle over the solid one, is a great disadvantage, and the only advantage obtained therefore is a reduction of one half of the weight.

A cast steel axle has the same advantage as to weight, with the additional one of being one inch less in diameter than the solid one of iron, and two inches less than the hollow one. These advantages, far outweigh the imaginary one of the hollow axle, the quality of which arises from the greater amount of labor bestowed upon it, the half of which being bestowed upon the solid iron axle would effectually cure it of the "crystalline" complaint, under which it has labored so painfully of late.

The real advantages possessed by cast steel axles, however, is not yet half told, for they will last probably at least three times as long as wrought iron ones, and the steel is then worth one fourth of its original cost, so that there is no doubt in my mind, that, the cast steel axles, used on the continent of Europe, are really more economical than those used here or in England.

Mr. McConnell was confronting practical men, who doubted his diagnosis of the disease; knowing therefore, that, if he failed there, he had nothing but the "dead weight" to go upon, he brought out that wonderful array of figures, proving very clearly and by common arithmetic too, without any algebra among it, that, 15,000 waggons and carriages, each running 10,000 miles per annum, supposing each of its two axles to be relieved of $\frac{3}{4}$ of a cwt. in weight, would be equal to 11,250,000 tons taken over one mile of the "stock," which at the low figure of one farthing per mile is £11,700 (throwing in no less sum than £18 15 shillings which he was too generous to say anything about.)

In other words, the axles which if solid will weigh

3750 tons, will weigh but 2625 tons if hollow, to which should be added, that, if the former are worth \$375,000 the latter will certainly be worth \$787,500.

The difference will be some \$412,500 against the hollow rail, which at 7 per cent. per annum is \$28,875, which has to be deducted from the credit account.

Another deduction also has to be made for old iron, for the solid axles will be worth one fourth of their original value, while the hollow ones will be worth but one twelfth even at the same rate per lb., making a difference of \$28,125 per annum more against the hollow axle, which goes far to annihilate the last particle of profit on the "dead weight," at least, as applied to this country, if indeed it does not show an absolute loss when more closely investigated and the calculation of half a cent per ton per mile is corrected, for that is a heavy charge when it is remembered that nothing is concerned but fuel and rolling stock with the permanent way.

Truly friend McConnell deals in large figures to make out a case.

It suggests to me a point of great importance to railway companies and one that appears to have escaped observation, although the evil is far greater than heavy axles, as much indeed as moving and movable matter is more expensive in its transit than "dead stock." I allude now to fat Engineers beginning with the Chief who must necessarily be much upon the rail, fat Directors, tenders, brakemen and employees of all sorts. Now there may be some reason in the Directors being "heavy men" but there cannot be the slightest necessity for the rest being overweight.

If we stake this class at 90,000 persons only, each but $\frac{1}{4}$ of a cwt. over the general average of humanity, we have the same enormous amount of 11,250,000 tons not of "dead stock" it is true, but much worse of human flesh carried for nothing.

Now there can be no doubt, that it is five times as expensive as the same amount of "dead stock" and therefore a saving (without the possibility of a draw back) of at least £100,000 sterling may be effected by selecting "lean Cass iuses" $\frac{1}{4}$ of a cwt. under the average, instead of your fat 'uns, $\frac{1}{4}$ of a cwt. over that mark.

But, in sober seriousness, is this mode of calculation, such, an one, as an honest conscientious man should make for the purpose of bolstering up any invention? Does it not savor too much of charlatany and quackery, even for the most obdurate dealers in such trash to get down? Most assuredly it does; for the simple reason, that, there are not 15,000, "waggon and carriages" in all England for them to "get down," or I believe the aforesaid 'obdurates' would even swallow them all.

In conclusion, I would remark, that York's hollow axles which were patented in 1842, were tested the year afterwards at the Wolberton station of the London and Birmingham Railway; and it would indeed be difficult to tell what advantage they had over solid ones, commensurate with their additional cost.

The method of testing was certainly less satisfactory, but the saving in weight was not then pretended to exceed 25 lbs. per axle or about 12 per cent.

T. A. R.

Distribution of Railroad Capital.

We claim for our country a vast natural capital. It exists in the fertility of our fields and forests, the productiveness and wealth of our mines, the extent of our lakes and rivers, the temperature of our climate, and what is more necessary to make these gifts available, the brain and the muscle of our people. But railroads are artificial products. Our people have obtained a strong practical sense of the value of these works, and the ability of the pocket alone limits the extent to which this preference is to be gratified. Railroads create wealth, but not until they are finished, and it is in their primary stages that they require labor and materials such as money alone can obtain. Being in general request, we therefore find the extent of these works to be in some proportion to the ability of the community possessing them.

The Eastern states, among which Massachusetts stands principal, having abundant capital, have completed the most elaborate system of railroads to be found in any part of the country. The West needs the greatest system, by reason of its own vast productiveness, and by its distance from the great centers of commerce. But while the East has abundant capital for railroads, banking and insurance, for institutions of learning religion and charity, and for the gratification of individual taste and social display, the West stands in need of money to complete her works of improvement without which her natural capital is not available.

The effort of the people of the West is naturally to attract capital, and it is the extent of their wants which occasionally produces the pressure felt in our own money market. To diminish the expectation of capitalists, below a reasonable extent, would be to avert money, a commodity which needs but proper support to become naturalized at once. The monied capital of the West would be small security for the sums which must be advanced to supply the immediate wants of that portion of the country. It is the natural resources of the West that forms the real basis of her solvency, and which money must develop to become available. The west could not borrow money to be employed in banking operations because the business of banking would not sensibly increase her wealth, and would not therefore create a security.

The West is compelled to preserve a local interest in her railroads to originate such works and to establish a basis for ultimate loans. Hence money is necessarily subscribed towards the construction of new roads simply to secure their construction and to secure the benefits which they confer on real estate and on industrial energy. This money is oftenest subscribed when it is really needed to clear ground, build highways, churches, schools, mills, stores etc., but the railroad is considered to be of paramount importance. The railroad opened, the holder ceases to hold, by disposing of his stock for the means of purchase or improvement of property, and the ownership is transferred to another and a richer part of the country, one where capital rather seeks employment than employment capital.

The Journal has kept its readers cognizant of the sources and distribution of capital in our railroads, and has raised this subject simply to correct impressions which have been given that the West is in a measure independent of foreign aid,

and, that the possible extravagance of her railway enterprises could have but little bearing upon the operations of the New York money market. The only pretext for such a conclusion is in the circumstance that the relative debt of Western roads, compared with their whole cost, is less than on the average of several Eastern roads. Three words, however will explain why this is occasionally the case. It is simply because of the unfinished condition of most of the Western roads. Large sums of money will be required to lay double tracks, to perfect the road beds, to erect buildings, and to equip these roads with ample rolling stock; but how will this money be raised? The local want having been supplied in the construction of a road, it must, if in want of more money, raise it on mortgage. A man who has subscribed every dollar he could spare to build a road affecting the value of his property, is not solicitous to increase the cost of the road at his own expense, when his property has attained a position properly demanding his means for its improvement.

Let the proportion between stock and debt be what it may now, what will it be, ten years hence, when the work is finished by creating an additional debt;—the only means of finishing the bulk of Western roads. Many of our own roads, about New York are increasing their debt nearly every year, while their stock subscription remains stationary.

Furthermore, the East, while it holds nearly all of the stock of its own roads, owns a very heavy share of that of Western roads; so that the result proves nothing lessening the dependence of the West upon foreign capital.

The merits of Western railroad enterprises are best estimated upon the particular merits of their routes and their relation to commercial system of the country. Whatever circumstances may incite railroad construction, the result is sure to establish a level upon which these works will find themselves only equal in productiveness to the general employments of associated capital. It is not the best idea that railroads be sought especially as investment, but rather as creators of capital. The investment in a railroad is permanent, not capable of removal in case it proves unproductive. In this respect railroad property is different from most others. Buildings, steamers, ships, carriages, merchandize, etc., if not available for one market or for one service may be for another. It never can be so, however, with railroads; while the tendency of a too great investment is to tax the business of the community for its support, a result which may be worse than that of the most odious monopoly.

The Southwestern Railway.—Indianapolis and Vincennes.

We learn that Mr. Dennis, who has charge of the locating party of Engineers on the Southwestern Railway, and who has been so long and well known here as an Assistant Engineer to Col. T. A. Morris, has completed his line from Vincennes to Point Commerce, and has found a most admirable one, and that the party have gone back to Vincennes, and are now engaged in staking off the cast work for the contractors.

The Company hope, with the means already provided along the line, and without borrowing any money, or going from home for aid in any shape, to prepare their road-bed for the iron between those points during the present season.

Pacific Railroad,

Hon. I. I. Stevens, Governor of Washington Territory, arrived at this port in the California steamer of last week, bringing with him full reports of his reconnoissance for a railroad to the Pacific over the northern route.

It is believed that Governor Stevens' examination is the most complete and thorough yet made, of any of the routes proposed for a railroad across the Continent. It has certainly been made in an incredibly short time, when we compare what he has accomplished with what has been effected by other parties. In the short space of one year, he organized his forces, made a thorough exploration of the entire country between the Mississippi and Pacific, organized the new Territory of Washington—a labor which occupied his attention some months—and is again at the seat of Government with a full account of his operations.

The plan of Gov. Stevens embraced a thorough survey of the route to which he was assigned. Enjoying the full confidence of the department, he was allowed a *carte blanche*, as to the objects embraced and the mode of accomplishing them. He set out, therefore, fully prepared for the work before him. The result shows the importance of placing at the head of exploring parties competent men, and the value of a properly organized force. Gov. Stevens will be prepared to report fully upon the *topography, geography, flora, hydrography, meteorology, &c., &c.*, of the country upon this route; its capacities for settlement, with estimates of the cost of the railroad; the best plan for its construction; the means of supplying wood and water to it; the obstructions it is likely to encounter from snow; the extreme cold weather in the high northern latitude of the route. With these data a tolerably accurate estimate of the cost of the road may be arrived at. Upon the other routes proposed, nothing of the kind has been attempted. In reference to these, we have certain facts, from which a pretty accurate idea can be formed of the general characteristics of the country traversed by them. How far the apparent obstacles may be overcome by resources not yet developed or brought to light, remains to be shown. No adequate explorations have been made, showing the degree of practicability of these routes. No proper attempt has been yet made to collate and present in a connected shape, the evidence that has been brought out by the various explorations that have been made. In all that has been said upon the subject of a railroad upon what are termed the *southern* routes, we have not seen the first attempt to present the subject in the light warranted by the facts of the case. Until a proper conception is formed of the proposed work, little progress will be made toward the grand result.

Independent therefore, of the comparative merits of the routes proposed. The more Northern one will have the advantage of being first presented to the public, in a manner in which its merits and its practicability can be fully understood. The public will be able to master the subject at once. This fact will turn public attention still more to this route, and to call out such other facts bearing upon the subject, as the previous surveys have not already developed. A suitable commencement having been made, all the facts that subsequent investigation and inquiry shall bring to light, will

at once arrange themselves under their appropriate heads, and will exert their proper value in adding their strength to, or in weakening, the project.

Governor Stevens claims to have established certain leading facts in reference to his route; 1st, that sufficient timber is found upon its line, both for the construction and for its present maintenance; 2d, that it is abundantly supplied with water; 3d, that the country is capable of sustaining a population supported by agriculture, sufficient for the wants of the roads; 4th, that the route is favorable so far as its line and grades are concerned; 5th, that it will be unobstructed by snows, and that the cold which prevails in the winter season, will offer no impediment to the running of the trains, and constitute no objection to the use of the road. In a commercial point of view, he insists that it occupies a most important position, stretching as it does from the great Lakes which with the River and Gulf of St. Lawrence, from a line of navigable waters half way across the continent, through the valleys of the Missouri and Columbia. It apparently occupies the *natural* route for a great highway across the continent.

These great water courses will form most important auxiliaries in the construction of the northern route, should it be undertaken. The completion of the Sault St. Marie Canal will render *Fond-du-lac* on Lake Superior, upon which one fork of the road must rest, accessible by sea going vessels. This point will constitute the convenient base of operations for the *Eastern* portion of the road. From that point to the great Bend of the Missouri, the distance is not so great but that the work of construction can be carried on rapidly and profitably. From the last named point, the Missouri river, the navigability of which to the Grand Falls in latitude 110° west from Greenwich, and about 2800 miles from St. Louis, Gov. Stevens demonstrates, can be used as a convenient medium through which communication can be maintained uninterruptedly with a very extensive portion of the line, and men and provisions thrown upon it at a comparatively low cost. The Columbia river can be used in a similar manner, though less uninterruptedly and economically. The value of such auxiliaries to a work of such immense magnitude as must be a railroad to the Pacific, cannot till they are called into use, be appreciated. When in the construction of a Railroad 2000 miles long, the road as it progresses must serve as the medium through which is to be supplied, not only the force which is to build the road, but their food and the materials for construction, the progress must necessarily be exceedingly slow. The advantages which the Northern route possesses in the particulars named, would undoubtedly allow it to be built in a much shorter time than any other, although the latter might prove better adapted to the wants of the country.

We are glad to learn that Governor Stevens' report is to have immediate publication. We hope it will be followed up by similar explorations, and reports upon all the other routes. The one to be finally adopted is not to be selected upon any other ground than its *superior* adaptiveness to its object. Let us have the evidence by which alone such facts can be established, and to which local interests, sectional partialities, must in the end give way.

Governor Stevens gave an interesting Address

upon the subject of a Railroad to the Pacific before the American Geographical Society on the 9th inst. He also addressed the citizens of San Francisco upon the subject, previous to his leaving that city, a brief abstract of which we append, copied from the *San Francisco Herald*.

Of all the surveys ordered by the General Government at Washington with a view to the selection of a route for a railroad across the continent, that entrusted to Governor Stevens of Washington Territory, is far the most satisfactory. * * * He has accomplished the survey of a belt extending two thousand miles from East to West, and from one hundred and fifty to two hundred miles from North to South. In the Rocky Mountains his explorations have extended over four hundred miles from North to South, and in the Cascade Mountains over two hundred and fifty miles.

The route occupied by Governor Stevens and his party is the route of the two great rivers across the continent—the Missouri and Columbia. The tributaries interlock; the whole mountain range is broken down into spurs and valleys, and no obstruction exists from snow. The whole route is eminently practicable. The highest grade will be fifty feet to the mile; and it may be reduced to forty on subsequent examination. The summit level of the road will be about five thousand feet above the sea. There will be but one tunnel.—The snows will be less than in the New England States.

The Missouri River has been surveyed, and found to be navigable for steamers to the Falls, about 700 hundred miles from Puget Sound, and 500 miles to the point where the main Columbia is first reached by the railroad from the east. This 500 miles is in part along Clark's Fork, affording 100 miles navigable for steamers. It may be here observed that a party under Dr. Luckey went down Clark's Fork, from the base of the Rocky Mountains to the Columbia, and thence to the Lower Columbia, in a canoe in October and November, developing many facts in regard to the part it must play in the building of a railroad. They went the whole distance in canoes except one link of 60 miles. All the winter parties were heard from or had come in on the 25th of March. The developments are extraordinary. In the first place, as to snow:

Lieut. Grover crossed the Rocky Mountains in the middle of January, and found but one foot of snow in the pass; none in the valleys. Lieut. Mullen crossed the Rocky Mountains four times in December and January, and the greatest depth of snow found by him was fifteen inches, and that for a short distance.

He dwells on the luxuriant grass of the valleys in midsummer, and expresses the opinion that it must become a great emigrant route. The Flat-head Indians cross these mountains with horses during every month of the winter. At Fort Benton, just east of the mountains, there is not snow enough, nor has there been for twenty years, to use sleds. The fur companies, in midwinter, send their goods in wagons to their Northern trading posts. From the Mountains to Puget Sound, by Clark's Fork and the Columbia River, no obstructions snow exist. On this route Governor Stevens' expresses have been traveling with horses all winter. The greatest depth of snow found by Lieut. Grover was two and a half feet, and that on the mountain spurs overhanging Clark's Fork.—The railroad will be located on the side hill, where the snow will be much less in depth. A practical route to the South for the road will be over the Cascades by the Snoqual-me Pass. Mr. Tinkham crossed the pass in January. For six miles on the divide the snow was from six to seven feet. It then rapidly died out both eastward and westward, only about forty miles in all having snow from one and a half to six feet. The Columbia River line, affording a connection with both Oregon and Washington will be recommended as certainly practicable—the Snoqual-me Pass line saving one hundred and fifty miles as probably practicable, but requiring subsequent examination.—

The results of the survey may be assumed up as follows: Three lines run from the Mississippi River to the Rocky Mountains; nine passes explored in the Rocky Mountains to the end of January; three lines run from the Rocky Mountains to the Columbia River and Puget Sound; the Cascades explored from the Columbia River to the 49th parallel; Puget Sound examined with reference to a railroad depot; the fact that not the slightest obstruction will occur from snow established beyond controversy.

Buffalo and New York City Railroad.

This Company having failed to pay the interest and a portion of the first mortgage bonds, falling due on the 1st inst, a meeting of parties interested was held at the Astor House in this city on the 17th instant, for the purpose of determining the proper course to be pursued in the premises. The meeting was well attended and was organized by the choice of Hon. J. Phillips Phoenix as Chairman, and Mr. Wilson, of Cammann & Co., Secretary. After a free interchange of views, the following resolutions were framed and unanimously adopted, and the Investigating Commission consisting of Theodore Sedgwick, Edward Whitehouse, and Denning Duer was appointed to report at an adjourned meeting on Saturday, the 27th inst.

Resolved, That the general condition of the affairs of the Buffalo and New York City Railroad Company, taken together with the recent non-payment of the interest due 1st instant, on that part of the road from Buffalo to Attica, on the first mortgage Bonds of the Company, is such as to require a thorough investigation, so that all parties interested in the road may know the exact condition of their investment.

Resolved, That the interests of the bondholders, the stockholders, and creditors of the Company call for such investigation, and that the efforts of all parties interested in its permanent welfare should be invited to carry out such measures as the result of the inquiry shall show to be judicious and desirable.

Resolved, That a Committee of three be appointed; that the said Committee be composed of parties who are either bondholders, stockholders or creditors; that they be instructed to make a complete investigation of the affairs of the Company, showing what the road and its equipments of every kind have cost, the condition of its stock and debt, in full; the present condition and future prospects of the business of the road; and that they also report what measures are, in their judgement, desirable to place the affairs of the Company in a sound and prosperous condition.

Resolved, That the officers and agents of the Company be respectfully requested to give the said Committee all reasonable facilities to obtain the information above called for.

Resolved, That the said Committee report as aforesaid, on the 27th day of May, and that this meeting stand adjourned to the same day at one o'clock, to receive the said Report.

We are gratified to witness prompt action in reference to the above matter. We understand that the trustee under the mortgage, will adopt immediate measures to take possession of the road in behalf of the bondholders. So that neither their rights nor the value of their securities will be prejudiced by the action of the company. As the earnings of the road are sufficient to provide amply for all claims arising under the first and second mortgages, the bondholders, barring the inconvenience arising from the temporary postponement of one of their instalments of interest, will not suffer.

We must say that the President of the road, who is regarded as responsible for what has oc-

curred, is placed in a position in which his integrity is liable to be directly impugned.

The net earnings of the road properly applied, must have been sufficient to have met the interest due on the first instant. If not, it was his duty to have made a statement of facts. It is very probable that the current earnings of the Co. were used for expenses as received, but we happen to know that parties stood ready, in case such were the fact, to advance the necessary amount to pay the May interest, upon such security as the company could readily offer. But the President, it seems, chose to take some other course, the motives of which are not apparent. Whatever these may be, unless they be satisfactorily explained, he has affixed a stain upon his own character, and which must attach to the road till it passes into new hands. We trust and fully believe, that he will find no person occupying a similar position, with whom he can share his present responsibilities. Neither the public sentiment, nor the laws of the country will tolerate such acts on the part of railroad officials; and the indignant condemnation, and the promptness with which action has followed the offence, will in the end, perhaps, do quite as much good to our railroad companies as the above default has done them harm.

Franklin and Warren Railroad Company.

From the first report of the President and Directors of the above company to the stockholders, dated July 1853, we learn that the organization of the company was effected the 19th June 1851. Early in October of 1852, preliminary surveys were made under charge of Col. Geo. Robinson, which proved entirely satisfactory as to the feasibility of the route. The charter of the company is of the most liberal character, authorizing the construction of a double track railway from the northeastern to the western or southwestern extremity of the State.

A contract for the construction of the work was made with Mr. Henry Doolittle in June last, at rates entirely satisfactory to the company. The finances of the company consist, chiefly, of local individual subscriptions, amounting, in the aggregate, to one million three hundred thousand dollars, with the encouraging prospect of being increased to one and a half million of dollars. Of the first named amount, nearly one million of reliable subscriptions are now in the possession of the company; the balance will be ready for deliver at different points on the line so soon as the proper examinations are made for the permanent location of the road. This amount, added to the portion subscribed and payable to the contractor, will amount to about two and a half million of dollars, which, it is confidently believed, will constitute sufficient basis to insure the completion of the work; and establish ample confidence in the enterprise.

In the examinations and selections for this route, three essential considerations were kept in view.

1st. The shortest and most direct line from the city of Dayton, as a western terminus, to the northeastern connection with the Pennsylvania State line.

2d. The face of the country most conveniently and economically fitted for the construction of the road.

3d. The points of connection with other, more especially with Western and Southern, enterprises of the same character, either completed, in pro-

gress, or projected, serving or likely to serve as feeders for the main trunk of which the Franklin Warren Railroad forms so considerable a portion.

For the American Railroad Journal.

The Mississippi and Tennessee Railroad.

Mr. EDITOR:—The above road which has thus far excited but little attention abroad, is destined soon, in view of its important connection, to occupy a prominent position among the railroads of the South. Its southern terminus is Grenada, Mississippi, where it connects with the Central road, extending South to Canton, and thence to New Orleans and Mobile, by the Great Northern, and Mobile and Ohio roads. At Memphis, its northern terminus, it connects with the Memphis and Louisville, and Memphis and St. Louis roads on the North, the Memphis and Charleston road on the East, and the Memphis and Little Rock road on the West, (all of which roads except the latter, are in active process of construction,) thus making Memphis a grand focus from which radiate roads connecting every quarter of the Union; exchanging at this point, the rich mineral and agricultural products of the North for the great textile product of the South.

If a straight line be drawn from St. Louis to New Orleans, it will pass through Memphis and over the Mississippi and Tennessee road, and connect these two points by a practical railroad route, not exceeding 530 miles, whereas, by the Mississippi River, a great highway strewn with the wrecks of human life and property, the distance is 1240 miles. This road penetrates for its entire length of 97 miles, the richest cotton growing region of Mississippi, and at the lowest estimate will add to the trade of Memphis one hundred thousand cotton bales, which now find their way to New Orleans, through the small tributaries of the Mississippi River. The road is one of easy construction, passing over a comparatively level country with a light sandy earth, and no rock whatever. The attention of capitalists and contractors is invited to it, as affording an unusual opening for good investments and profitable work.

MINOR MERIWETHER,
Chief Engineer.

Denny's Divided Axle.

The especial attention of engineers and practical railroad men is for the advertisement and engraving of Denny's axle in this day's Journal. It promises to be of very great importance if it has any merit at all. Not having been able to view any of the practical tests to which it has been subjected were unable to speak from personal knowledge, but at this day it is not needed that we should enter into an argument to show the disastrous and destructive results, to both life and property arising from imperfect axles.

inventer claims that his improvement, without adding material to the present expense of axles, will entirely do away with the danger of breaking of them by the extraordinary strain put upon them in passing curves. This improvement was patented on the 31st January last and is now affected to the investigation of railway men, carbuilders etc;

The object sought to be attained by this axle is of unquestionable importance, and the invention is therefore entitled to the careful investigation of those persons who are competent to decide upon its merits.

Railway Consolidation.

The Sandusky, Mansfield and Newark Railroad Company, which is formed by the Consolidation of the Mansfield and Sandusky city, the Columbus and Lake Erie, and the Huron and Oxford Railroad Companies, has, we learn funded its floating debt, which will enable that company to pay dividends hereafter regularly from its earnings. The new company has issued a series of bonds, which it proposes through its agent D. N. BARNEY, 82 Broadway, to exchange for the bonds of the original companies. These Bonds are secured by a mortgage on the whole road, which is 127 miles long, and well furnished for business. We learn that the old bond-holders are rapidly exchanging their old bonds for the new, as the security is deemed better and more available. When the Scioto and Hocking Valley Railroad is complete, which traverses the great mineral region of Ohio, the stock of either will be a good investment, and the whole line of road will do more than any other to develop the natural resources of the State.

The latter road is rapidly approaching completion. Forty-five miles at the South end is in operation, and with only four engines, is earning some \$8000 per month. Some ten iron furnaces, producing near 30,000 tons pig metal annually, are accommodated by this road for carrying their products to market. The gap between Newark and Jackson, 90 miles, is nearly ready for the rails, and it is expected will be completed within a year.

D. Mitchell, Jr.,

Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley Railroads, Pittsburgh, Pa.

Samuel McElroy,

Assistant Engineer, New York Navy Yard.

Charles B. Stuart,

Civil Engineer, New York.

Edward W. Serrell,

Civil Engineer, 157 Broadway, New York.

MONTREAL & NEW YORK AND Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6 30 a.m. and 5 p.m., arrive at 8 a.m. and 7 30 p.m.

Leave Plattsburgh for Montreal 7 30 a.m. and 4 p.m., arrive at 10 a.m. and 6 50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate stations.

Trains connect at Moores Junction with Northern (Ogdensburg) Railroad for Ogdensburg and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequalled for comfort and dispatch, and attended with less fatigue and delay than any other. It possesses moreover the advantage of a short Ferriage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.

For particulars see Freight and Passenger Tariff.

BAGGAGE checked through.

H. W. NELSON, Superintendent.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to
September, 1850.

THOS. CHAMBERS,
President.

Notice to Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND
TEXAS RAILROAD COMPANY,
Monroe La., March 8th, 1854.

SEALED PROPOSALS will be received at this office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty miles, beginning at the Onachita river and running west, in the parish of Ouachita.

Bids may be made for the sections, or any portion thereof, not less than one mile, and those proposing to take stock of the company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN.

President.

P. J. TOURNADRE,

Chief Engineer.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,

287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.

N. York and N. Haven R. R.**NOTICE OF SUMMER ARRANGEMENTS,**

Commencing Monday, May 9, 1854.

**TRAINS FROM NEW YORK.**

7 A. M.—Accommodation to New Haven.

8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.

9 10 A. M.—Special for Port Chester.

11 30 A. M.—Accommodation for New Haven.

3 00 P. M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.

4 00 P. M.—Accommodation for New Haven.

5 00 P. M.—Express for Boston, stopping at N. Haven.

5 35 P. M.—Commutation for N. Haven.

6 30 P. M.—Special for Port Chester.

TRAINS TO NEW YORK.

5 30 A. M.—Special, from Port Chester.

6 00 A. M.—Commutation from New Haven.

6 15 A. M.—Accommodation for New Haven.

8 15 A. M.—Accommodation for New Haven.

9 35 A. M.—Express from New Haven, stopping at Bridgeport, Norwalk and Stamford.

1 07 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

4 00 P. M.—Special, from Port Chester.

4 00 P. M.—Accommodation for New Haven.

9 30 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Sup't.

New Haven, May, 1854.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.
December 18, 1852. WM. S. SAMPSON, Agent.

\$1,700,000

LOAN OF THE MORTGAGE BONDS OF THE NEW YORK AND HARLEM RAILROAD COMPANY.

This Company will receive proposals for one million seven hundred thousand dollars of their First Mortgage Bonds, issued in sums of one thousand dollars each, payable at the office of the Company, in the City of New York, on the first day of May, 1873, with coupons attached for the payment of interest at the same place semi-annually, on the 1st of May and 1st of November, at the rate of seven per cent. per annum.

These Bonds are secured by a First and only Mortgage, to Thomas W. Ludlow and R. M. Blatchford, Trustees, on the road and its appurtenances, made under special authority of an Act of the Legislature and vote of the Stockholders.

The whole amount of Bonds which can be issued under the Mortgage is \$3,000,000, and will be the first and only lien upon the road, and will constitute the sole debt of the Company. The Company reserve \$1,300,000 of this Mortgage for the exchange of all the outstanding plain Bonds of the Company now in existence, and propose to dispose of the residue, One Million Seven Hundred Thousand Dollars, for the purpose of discharging all their floating debt, and of payment of the expenditure necessary for the full completion of the improvements now in progress upon the road.

The capital of the company paid in is \$1,600,000 of Preferred Stock and \$3,600,000 of Common Stock, upon which regular dividends have been earned and paid for the last five years of Eight (8) per cent. per annum on the former and Four (4) per cent. on the latter.

The receipts of 1853 amounted to 964,467, being an increase of twenty-six (26) per cent over 1852, and there is no doubt a still larger business will be done the present year.

The public have therefore now offered them a home security of the most reliable character.

The Acceptances of the Company will be received in payment for the Bonds.

Twenty (20) per cent, is required to be paid on acceptance of bids, and Twenty (20) per cent. every thirty days thereafter, for which Bonds will be given; Ten (10) per cent. however of the first instalment being reserved by the Company until completion of the contract; interest to be adjusted from the 1st of May.

Parties have the privilege of making payment in full and receiving their Bonds.

Sealed Proposals will be received at the office of BLATCHFORD & RAINSFORD, No. 58 Wall street, on or before the 10th day of May next, at 3 o'clock P. M.

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN C. Engineer

Huntingdon May 6 1854, 4t

To Contractors.

PHILADELPHIA, WILMINGTON AND BALTIMORE RAILROAD OFFICE.—PHILADELPHIA, April 21st, 1854.—PROPOSALS will be received at this office until May 25th, 1854, for driving the piles, protecting the foundations, and for the Masonry above and under water, of the proposed Bridge across the Susquehanna River at Havre-de-Grace, Maryland.

Also, for the Grading and Masonry of the new location of the Road adjoining the Bridge, and of the Port Deposit Branch Railroad.

Plans, profiles and specifications may be seen at the Engineer's Office, in Havre-de-Grace.

S. M. FELTON,

Pres. P. W. and B. R. R.

17,4t

New York and Erie R. R.

PASSENGER TRAINS
leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without
change of baggage or cars.
Dunkirk Express, at 7 a. m. for Dunkirk.

MAIL, at 8¼ a. m. for Dunkirk and Buffalo, and intermediate
stations.

WAY EXPRESS, at 12¼ p. m. for Dunkirk.
Rockland Passengers, at 3.30 p. m., (from foot of Chambers
Street) via Plermonth, for Suffer and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate
stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

Emigrant at 6 p. m.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Buffalo with first-class
splendid Steamers on Lake Erie for all ports on the Lake; and
at Dunkirk with the Lake Shore Railroad for Cleveland, Cincin-
nati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

Great Western Mail Route.

**SIXTY MILES DISTANCE SAVED TO CHICAGO AND
ST. LOUIS. THE MICHIGAN SOUTHERN AND
NORTHERN INDIANA RAILROAD LINE**, carrying the
Great Western United States Through Mail, have the following
staunch first-class Steamers running on Lake Erie in connection
with the NEW YORK AND ERIE RAILROAD from Dunkirk,
touching at Cleveland, and connecting with their Road at To-
ledo, and connecting directly with the CHICAGO AND ROCK
ISLAND RAILROADS at Chicago, in the same Depot, thus
forming a Daily Line for Passengers and Freight from New
York to the Mississippi River. **NIAGARA**, Capt. Miller;
EMPIRE, Capt. Mitchell; **KEYSTONE STATE**, Capt. Rich-
ards; **LOUISIANA**, Capt. Davenport. Also
A DAILY LINE FROM BUFFALO DIRECT TO MONROE,
by those well-known magnificent Floating Palaces, **EMPIRE
STATE**, J. Wilson, Commander, leaves Buffalo Mondays and
Thursdays; **SOUTHERN MICHIGAN**, A. D. Perkins, Com-
mander, leaves Buffalo Tuesdays and Fridays; **NORTHERN
INDIANA**, I. T. Preatt, Commander, leaves Buffalo Wednes-
days and Saturdays.

One of the above splendid Steamers will leave the Michigan
Southern Railroad Line Dock, at 9 o'clock, P. M. every day,
(except Sundays) and run direct through to Monroe without landing,
in 14 hours, where the **LIGHTNING EXPRESS TRAIN** will
be in waiting to take passengers direct to Chicago in 8 hours, ar-
riving next evening after leaving Buffalo.

Running time from New York to Buffalo.....14 hours.
Running time from Buffalo to Monroe.....14 hours.
Running time from Monroe to Chicago.....8 hours.

Total.....36 hours.

Connecting at Chicago with a fine line of Low Pressure Steam-
boats to all places north of Chicago to Green Bay; also with
Chicago and Rock Island Railroad to La Salle, and there con-
nect with Illinois River Line of Steamboats, or Express Trains
of ILLINOIS CENTRAL AND CHICAGO AND MISSIS-
SIPPI RAILROADS, or connecting at Rock Island with regu-
lar line of steamers for all points above and below, making
the cheapest and most direct Route to St. Louis, Rock Island,
Minnesota, and the Great West.

The AMERICAN LAKE SHORE RAILROADS from Buf-
falo and Dunkirk connect with this line at Toledo, forming the
only direct and continuous line of Railroads from the Atlantic
Seaboard to the Valley of the Mississippi.

Running time to Chicago, 36 hours; to St. Louis, 56 hours.

FOUR DAILY TRAINS by Railroad all the way.

TWO DAILY LINES by Steamers on Lake Erie.

Thus the Traveller and Shipper can see at a glance that no
other Line can enter the lists as competitors.

Passengers Ticketed Through from New York with privilege
of stopping over at any point on the route, and resuming seats
at leisure, either by the New York and Erie Railroad, via Dun-
kirk, New York and Erie and Buffalo and New York City
Railroad via Buffalo; People's Line of Steamboats, Hudson River
or Harlem and New York Central Railroads, via Albany and
Buffalo.

For any further information, Through Tickets, or Freight, ap-
ply at the Company's Office, No. 193 Broadway, corner of Dey
st., N. Y., to
JOHN F. PORTER, General Agent, or
L. P. DUNTON, Ticket Agent.

Notice to Contractors.

**PROPOSALS FOR THE ENTIRE CON-
struction and equipment, or the graduation,
bridging and masonry, separately, either in whole
or in part, of the Mississippi and Tennessee Rail-
road, (extending from Memphis to Grenada, Mis-
sissippi, about 97 miles,) will be received at the
office of the Company, in Memphis, till the 20th
of July next. Proposals for the entire construc-
tion and equipment, and otherwise as favorable,
will have preference. Profiles and estimates of
the first 60 miles may be seen on application at
the Engineer's Office in Memphis. Bidders must
furnish satisfactory evidence of their ability to
complete the work.**

MINOR MERIWETHER,
Chief Engineer.

May 4th, 1854.

Notice to Contractors.



Proposals will be received for all the heavy work
on the Blue Ridge Rail Road, South Carolina;
Blue Ridge Rail Road, Georgia: Tennessee River
Rail Road, North Carolina; Knoxville and Char-
leston Rail Road Tennessee. The above lines of
rail-way are consolidated and under the manage-
ment of one Company, Extending from Anderson
South Carolina, via Clayton, Georgia, Franklin North
Carolina, to Knoxville Tennessee, a distance of 194
miles. That part of the road from Anderson South
Carolina, to the Turniproot Mountain, a distance of
40 miles is principally earth excavation, of about
equal quantities of cut and fill, with several bridge-
es. From the Turniproot Mountain to the Rabun
Gap, a distance of 24 miles, the work is very
heavy, there being on the line one tunnel of 5800
feet, one of 1400 feet, and one of 400 feet in length;
a suspension bridge across the Chatanga River 500
feet long, with some very heavy earth and rock
cuts. The rock in the Tunnels is gneiss stratified.
From the Rabun Gap to twenty miles below Frank-
lin, a distance of 50 miles, the line follows down
the Tennessee River; the class of work is princi-
pally side hill excavation, some of which is rock;
their will also be several bridges. From the
point 20 miles below Franklin to Hardens, a
distance of 35 miles, the line follows the Tennessee
River the entire distance, causing heavy side rock
excavations. On this portion of the line will be
several expensive bridges, and a tunnel of about
1000 feet. From Hardens to Knoxville, a distance
of 45 miles, the line follows the river about eight
miles, then leaves it, running across the Chilbona
mountains almost a north line to Knoxville; this
portion of the road is heavy work, with about
equal quantities of cut and fill, an expensive bridge
1000 feet long and 45 feet high, crossing the Hol-
ston River at Knoxville. The character of the
rock from Knoxville to Hardens is limestone, and
from Hardens to Franklin gneiss rock stratified,
and from Franklin to Anderson, stratified sand stone
and gneiss rock. The character of the earth is
sandy and clay loam. The line for the whole dis-
tance runs through high table lands, well settled,
remarkable for its health, good water and ample
resources for subsistence. The above line of rail-
way offers great inducements to experienced con-
tractors. The undersigned will be prepared to re-
ceive proposals and enter into contracts for the
graduation, bridging, tunneling and masonry for
the heavy portion of the line, from and after the
1st day of May next, at Knoxville Tennessee,
Franklin North Carolina, and Pendleton South
Carolina, and will continue at such places, until the
same is under contract. Profiles and maps of ap-
proximate location can be seen at each of the above
places after the 1st day of May. Proposals are
asked with cash payments, also eighty per cent cash
and twenty per cent in the Capital Stocks or
Bonds of the Company. All communications prior
to may 1st must be addressed at Pendleton South
Carolina.

4,13

ANSON BANGS & Co.

To Contractors.

The Virginia Central Railroad Co. proposes to
contract for taking up about 36 rails of super-
structure now laid with the strap rail, and relay-
ing with a heavy rail, the contractor furnishing ev-
ery thing except the ties which will be distribut-
ed by the company.

Sealed proposals will be received at the office
of the company in Richmond, until the 24th day
of May next, at 9 o'clock.

The Rail to be used must weigh from 55 to 60
lbs. to the yard. Payments to be 50 per cent.
cash, and 50 per cent. in the Bonds of the com-
pany running 30 years, and secured by a mort-
gage on the whole property of the company.

Specifications may be obtained at the Engineer's
office at Richmond, after the 10th day of May.

CHARLES ELLET, Jr.

Chief Engineer.

April 26th 1854.

St.18

To Contractors.



PACIFIC RAILROAD OF MISSOURI

THIRD AND FOURTH DIVISIONS.

It is intended to make contract for the third di-
visions of this road, (extending from the Mis-
souri river at Jefferson City, passing near George-
town and Warrensburg, to the Missouri river near
Independence, about 160 miles,) so soon after the
first of May next, as satisfactory proposals shall be
made.

Contract will be made for the whole now offer-
ed, or such parts as particular contractors may
select in form and quantity to suit the interests of
the company. Proposals are asked for by the cubic
yard, with cash payments; but contractors
may, if they desire, accompany their offer with
proposals for two thirds cash and one third in
county and railroad mortgage bonds or other se-
curities.

Profiles and maps of approximate location can
be seen after first of April next at Pacific Railroad
Office, in St. Louis, and any information will be
given on application to the Engineer.

The first division of this road is now in opera-
tion; the second division to Jefferson City under
present course of construction.

The third and fourth divisions now offered pass
over a high, rolling mixed prairie and timbered
country, and for healthfulness and supply of pro-
visions will compare favorably with any part of
the west.

THOS. ALLEN, Pres.

Tros. S. O'SULLIVAN, Chief Eng.

Pacific R.R. Office, St. Louis, Feb. 1854.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in
A construction of various Eastern and Western Railroads de-
sires a situation as Resident Engineer upon some railway in the
United States. The best of references as to Capability and Ef-
iciency can be furnished. Address B. care of John Palmer Esq.
East Cambridge, Mass. 17 tr

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Law-
rence County, N. Y.—This well known establishment, hav-
ing attached to it a large and complete Casting House and Ma-
chine Shop, with ample accommodations for workmen, and every
convenience necessary to the prosecution of an extensive
business, together with valuable Iron Mines and Mining Rights,
also Timber Lands, is offered for sale by the proprietor, who re-
tires from the business. The capacity of the Rossie Furnace
for making iron, is believed to be unsurpassed by any charcoal
Furnace in the country, having repeatedly run up to fourteen
tons per day, with 55 to 60 per cent. yield from ores—specu-
lar red oxides—coal per ton, 100 bushels. The same has been in
uninterrupted operation for over twenty years, and the reputa-
tion of its iron is established throughout the West. The location
of these works is in the village and town of Rossie, county of St.
Lawrence, N. Y., six miles from the River St. Lawrence, and
connected therewith by a plank road. Their cost, apart from
premises and water power, has involved an expenditure of over
\$100,000, and their present efficiency, in every respect, is con-
sidered unexceptionable. For further information apply to D.
W. Baldwin, Agent, at the works, or to the undersigned.

Ogdensburg, N. Y., April, 1853.

G. PARISH.
153m*

**SEYMOUR & CO. GENERAL RAILROAD
S.AGENCY**, Office, Metropolitan Bank Building,
No 110 Broadway, have to dispose of at private
sale, in amounts to suit persons desiring to invest,
the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R.R. STOCK, draw-
ing interest.

MAYSVILLE AND LEXINGTON MORTGAGE
BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R.R. STOCK.
SCIOTO AND HOCKING VALLEY R.R.
STOCK.

SCIOTO AND HOCKING VALLEY R.R. FIRST
MORTGAGE CONVERTIBLE BONDS, at 11
years.

LOUISVILLE AND NASHVILLE R.R. STOCK.
BUFFALO AND STATE LINE R.R. BONDS.

They are prepared to negotiate contracts for
the construction and equipment of Railroads in
any part of the country, including furnishing corps
of engineers and contractors locomotive engines
and cars, railroad bridges. McCallum's patent,
railroad iron, chairs, spikes, switch irons, &c., &c.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of weight or pattern as may be required.

New York, June 1, 1851.

VOSE, PERKINS & CO.,
9 South William Street.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West,
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
Feb. 18. 1m.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

MR. WILLIAM NAISH, of Newport, Monmouthshire Inspector of rails, begs most respectfully to acquaint Importers of rails, engineers and others connected with the railroads of America, that he still continues to execute orders of inspection, throughout the various districts of South Wales and adjacent Iron works, and confidently refers to the satisfaction which his supervision has given during the last ten years to exporters of rails, and others below named; as a proof of the fidelity, carefulness and promptitude of his inspections.

BARING BRO. & CO., London.

PALMER, McKILLOP, DENT & CO., London.

LEWIS HOPE, Esq., "

COLLMAN & STOHLTERFOHT, "

HON. JAS. WADSWORTH, Buffalo New York

JAMES SPENCE, Esq., Liverpool.

NAYLOR, VICKERS & CO. " 191y

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot gauge, 22 tons weight, 16 + 20 inch Cylinders, and 5½ and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.

Dec. 24

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road, a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,

No. 61 Camp Street,

New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N.Y. 191f

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of

Bolts and Bolt Ends

for Sale by

BRIDGES & BROTHER,

64 Courtland st., N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 grate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMNAN J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

Or BRIDGES & BRO.,

64 Courtland st., New York,

191f

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors' Compasses Manufactured on the most improved principle and of the Best Quality

by THOMAS HUNT,

No. 63 Fulton Street,

New York.

1y10*

Notice To Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND TEXAS RAIL ROAD COMPANY.

Monroe, La., March 8th, 1854.

SEALED PROPOSALS will be received at this Office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty mile, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the entire sections, or any portion thereof, not less than one mile, and those proposing to take stock of the Company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the Company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract; or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,

President.

P. J. TOURNADRE,

Chief Engineer.

7t14

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

2d Feb'y.

JOHN H. HICKS,

90 Beaver street.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by

BOORMAN, JOHNSTON & CO.,

90 Broadway, New York.

June 9, 1853.

Brass Tubes for Locomotive and Marine Boilers.

THE undersigned having been appointed Agent for the highest respectable manufacturers Messrs. Allen, Everitt & Son or Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to

JOHN H. HICKS,

90 Beaver str.

March 1854.

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburg, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 21]

SATURDAY, MAY 27, 1854.

[WHOLE No. 945, VOL. XXVII.]

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Duty on Railroad Iron.....	321
Effects of Railroads on Distribution of Wealth.....	322
Stationary Power and Inclined Planes vs. Locomotive Power and Steep Grades.....	323
Comparative view of the Banks of the different States for a series of years.....	324
Mississippi Ouachite and Red River Railroad.....	325
Railroad Convention at Baltimore.....	325
Journal of Railroad Law.....	326
Clinton Line Railroad.....	327
Adaptation of Locomotives.....	327
Indiana and Illinois Central Railroad.....	327
Long Island Railroad Company.....	328
Akron Branch Railroad.....	329
Fictitious capital in Railroad.....	330
Annual report of the State Engineer on the Railroad of the State of New York.....	331
Cincinnati, Logansport and Chicago Railroad.....	333

American Railroad Journal.

Saturday, May 27, 1854.

The Duty on Railroad Iron.

On the 25th day of February last, a meeting of gentlemen representing a large number of Railroad Companies was held at the Astor House, in this city, to adopt measures to effect the removal, or suspension, of the duty on railroad iron. The proposed meeting was notified through the columns of the Journal. It was designed to be public in its character, and the attendance of every person within reach, interested in the object of the meeting, was solicited. About 30 companies were represented, among them a considerable number, measured by the extent and cost of their works, the largest in the country.

The proceedings of the meeting, as copied from records made up on that occasion, were as follows:—

(COPY.)

"Pursuant to a notice which appeared in the American Railroad Journal on the 25th of February, 1854, a meeting was held at the Astor House, in the city of New York, at seven o'clock on the evening of the same day, to take into consideration the removal of the duty on railroad iron.

The meeting was organized by the choice of Hon. J. T. Elliott, President of the Cincinnati,

Logansport and Chicago Railroad Company, as President; Mortimer M. Benton, Esq., President of the Covington and Lexington Railroad Company, and the Hon. A. Boody, a Director in the New York Central, and other Railroads, Vice Presidents; and Henry V. Poor, Editor of the American Railroad Journal, Secretary.

M. M. Benton, Esq., President of the Covington and Lexington Railroad Company, offered the following resolutions, which, after discussion, were unanimously adopted, viz:—

Resolved, That in view of the embarrassments under which railroad enterprizes in all parts of the United States now labor, occasioned in a great degree by the onerous duty on railroad iron, and that too at a time when the wants of a redundant Treasury do not demand its exaction, it is expedient to aid those enterprizes with which the trade of the country, both foreign and domestic, is intimately identified, by a repeal of the duty on such iron.

Resolved further, That Hon. S. F. Vinton, President of the Toledo and Cleveland Railroad Company; Noah L. Wilson, Vice President of the Marietta and Cincinnati Railroad Company; John Striker, Director in the Michigan Southern Railroad Company; George Ashmun, of Springfield, Massachusetts; and Henry V. Poor, Editor of the American Railroad Journal, be, and they are hereby appointed a Committee on behalf of the Railroad Companies represented at this meeting, and such other companies as may co-operate with us in our endeavors to procure a repeal of the duty on imported railroad iron, who are requested and empowered to take such measures for the accomplishment of this end as they may deem expedient and proper; and especially that by memorial or otherwise, they cause this subject to be brought before the Congress of the United States at as early a day as practicable, and that said Committee be authorized to add to their number and to fill vacancies.

The following resolution was also offered, and unanimously adopted:—

Resolved, That for the purpose of supplying funds incident to the application to Congress for relief, the companies here represented respectively agree to pay one hundred dollars to the Committee on demand, and a further sum, equal to five

per cent., on the duties which may be remitted by Congress on the rails imported, or which may be imported or contracted for, within one year from the first of July next, which sum shall be paid to the Treasurer of said Committee on the passage of the law repealing such duties, provided however, that unless the Railroad Companies of the United States, generally interested in the repeal of the duties aforesaid, shall make like contributions, and agree to pay the five per cent., contingent upon the passage of the law for said repeal, then said advances shall be returned.

On motion, it was ordered that the proceedings of the meeting be signed by the officers, and that copies of the same be forwarded to such Railroad Companies as are supposed to be interested in the repeal of the duty on railroad iron.

On motion the meeting then adjourned.

(Signed) J. T. ELLIOTT, President.

M. M. BENTON, } V. Pres:
A. BOODY,

H. V. POOR, Secretary.

The only members of the Committee present at the above meeting were Messrs. Wilson and Poor. Neither Messrs. Vinton, Ashmun, nor Stryker had any notice of the meeting, nor knowledge that one was to be held; Mr. Ashmun being at the time in Massachusetts, Mr. Stryker either at Rome or Chicago, and Mr. Vinton at Cleveland or Washington. The movement was one set on foot entirely by the Railroad Companies, who also indicated the plan to be pursued to effect the desired result, and at the same time took the necessary measures to place a reasonable amount of funds in the hands of the Committee.

The first step which the Committee took after getting together, which was not till nearly one month after their appointment, was to secure the co-operation of all the companies not represented at the first meeting, upon the basis proposed. Accordingly, they issued the following circular to all the Railroad Companies supposed to be interested in the objects of the movement:

New York March, 21st 1854.

Sir: In entering upon the duties agreeably to appointment of the meeting of Railroad Companies held in this City, the proceedings of which were duly forwarded to your address; we find it necessary in the outset of our proceedings to cor-

respond with all the Railroad Companies of the United States supposed to be interested, for the purpose of obtaining accurate and reliable information, and of ascertaining whether they will co-operate with us, in order that we may know to what extent we may incur obligations and make expenditures in furtherance of our objects.—

To make provision for the expenses unavoidable incident to the prosecution of this measure, it was agreed at the meeting, that each company coming into the arrangement, should advance for this purpose the sum of one hundred dollars; and that in case of success, there should be paid by each company to the committee for the further expenses that may be incurred, and as a compensation for their time and services, (in addition to the above advance,) five per cent on the amount of duty remitted, or which may be saved to such Company, on Railroad iron heretofore imported by it, or which it may import or contract for, prior to July 1st 1855, by the passage of the law or laws repealing, remitting, or suspending for a limited time, the duty on such iron.—

If a sufficient number of Companies should not come into the measure, to make it expedient, in the opinion of the committee, for them to undertake to carry it into effect, then the hundred dollars advanced, to be returned by them to such companies as shall have paid the same.—

We enclose a copy of a Resolution which we sent to all the Railroad companies in this interest, with the request, that it be offered for consideration to your Board, or other proper authority, at your earliest convenience, and that we be advised of the result and if adopted, that we be furnished with a certified copy of the same.—

Will you also please furnish us with information on the following points?—The length of your Road.—The number of miles in operation.—The number of miles for which Iron is to be provided.—The weight of Rail to be used.—The number of tons upon which duties will be refunded, if a retro-active law be obtained, to take effect from July 1st 1853, also January 1st 1853, also from July 1st 1852. A list of the Directors, Superintendents, and Engineers of your Company, and the Post Office address of each, as the Committee may wish to correspond with each of them on the subject.—

As the Session of Congress is already far advanced, it is important that your Company should take immediate action, and advise us of the result, as the answer to this communication must necessarily be the basis of our action.—

Please enclose your communication to Henry V. Poor Esq. No. 9 Spruce Street, New York.

Very Respectfully,

Your obedient Servants,

S. F. VINTON,
NOAH L. WILSON
JOHN STRYKER,
GEO. ABNUN,
H. V. POOR, } Committee.

Accompanying the circular was a copy of the resolution referred to, (asking for the contribution of one hundred dollars, and an agreement to pay a sum not exceeding five per cent. of the amount saved,) with a request that it be presented to the board of directors of each company, for their approbation. This circular and resolution has been published by three or four newspapers,

with remarks that would lead the reader to suppose that a scheme had been exposed improper in its object, and in the means proposed for accomplishing it.

We have stated that the meeting of the Railroad Companies was a *public* one. The committee appointed by it determined to give a similar publicity to their acts. Everything emanating from them, addressed to all parties whatsoever, was printed, and for the purpose of securing as wide a circulation as possible, as Secretary both of the convention of the companies and the committee, we caused a large number of the proceedings of both bodies to be prepared in envelopes for the convenience of distribution. These were handed out both by ourselves and persons employed in our office, not only to persons representing railroad companies, but to all who were supposed to feel an interest in the subject. The proceedings were sent by ourselves to 200 railroad companies, many of whom we had good reason to suppose were entirely hostile or indifferent to the proposed measure; they having made all their purchases, and consequently were not in a condition to be benefited by it. It was foreseen that by adopting such a course, the circulars of the committee would fall into the hands of the more active opponents of the repeal of duties, and that the same use would be made of them that has been; that they would be published in a few papers with remarks similar to those which have followed. But as the committee have done nothing, nor proposed to do anything requiring secrecy or concealment, it was not thought advisable to attempt either. They are quite willing that any and all parties should help to make known the plan of operations proposed by the railroad companies, in such a manner and in such a style as best suit themselves, as it is deemed highly important that a very general interest should be excited in reference to the objects proposed.

As far as the committee are concerned, no money will be called for, or expended, except for proper and legitimate objects. Had not such been the case, a very different course would have been pursued; a *secret* instead of an *open* one. The committee were designed to, and will faithfully represent the interest of railroad companies. Three of the committee are directors, or largely interested in roads that within two or three years will require iron to the amount of more than 100,000 tons. These men are not going to waste their own money, nor that of the companies in which they are interested or which they represent.

In behalf of the committee, we would state that they are at work, and intend to execute faithfully and energetically the trust confided to them. They respectfully solicit the action of all companies who have not already signified their co-operation in the plan proposed by the meeting of railroad companies held in this city. In the meantime, a bill, or to speak more correctly, an amendment to a bill, in favor of the North Carolina Railroad, and which has been accepted in its stead, has been introduced into the Senate, and which meets the views of the committee, and it is believed of railroad companies. The committee now propose to bring an influence to bear on each member of Congress from their immediate constituents. There is not probably a congressional district in the United States where

a great majority of the voters have not a direct interest in the suspension of the present duty. It is the plan of this committee to allow this interest to speak, believing its co-operation to be the most effectual, and at the same time the proper method to accomplish their objects. The movement is one in which the *people* are the parties to be benefited, as owners of the stock in our new lines. They are to pay the duty if continued, or receive the benefit of, if repealed.

We must add, that unless Congress interfere in the matter, we do not well see how a large number of companies are to go through the present stringency in the money market without a crisis in their affairs. The relief asked is one that Congress can extend without injury to any quarter. The Government has a redundant treasury. The domestic manufacturer is certain of full employment for three years at least, the time limited for the suspension of the duty. The overflowing treasury, the activity of our domestic manufacturing establishments, and the general prosperity which prevails, are due to the efforts of our railroad companies. Shall not *they*, now that the favor can be granted without prejudice to any, be entitled to some consideration in return for what they have done? This is to be the question asked of Government. The plan indicated is the one that is to be resorted to, to *operate* upon Congress; the money expended will be what is wanted to bring the influence of the parties most interested, the *owners* of railroad stock throughout the country, to bear upon the National Legislature. The contest to be fought is one of popular right against an overflowing treasury, filled by railroad companies themselves; and against *capital*, which is annually doubling its investment in the manufacture of iron, the profits of which have been entirely due to the demand which railroads have created. It is not *favor*, but *justice*, that is demanded, and we assure all parties that no honorable measures will be left untried to obtain it.

Effects of Railways on the Distribution of Wealth.

Material wealth is chiefly that with which the earth is endowed by nature. It is the natural products of the earth which make it inhabitable, and it is their extent and variety which give rise to the operations of commerce. The earth was nobly planned to employ the fullest activity of its inhabitants. It is the desire to avail ourselves of what we have, and to possess what we have not, that prompts exertion, both of the mind and of the body. Were all the gifts of nature uniformly diffused throughout the earth, exertion would have no object. Were they widely separated, and each species almost inaccessible from the rest, none would be valuable.

The wheat of the Western States, the fruits of the tropics, the cotton and rice of the South, the coal of Pennsylvania, the iron of England, the lumber of Maine, and the copper of Lake Superior, would each be nearly without value, were there no means of their interchange. But, happily, means are not wanting. Nature has invited access by her noble streams, by oceans, and by valleys and plains favorable to the cheap construction of roads and canals. And Art, ever ambitious, has improved and occupied these channels, and created new ones almost rivaling in grandeur the works of Nature herself. These results are founded

in the geographical conditions of the earth, in the distribution of natural wealth and of population, and in the organization of the human being. They pervade the globe, and extend to its smallest divisions.

Commerce, or the interchange of wealth, requires great sources of production, and great centers of reception and distribution. In a country like our own, that trade which originates and terminates *within* our borders can never be eminently great, except dependent upon an *external* commerce. This circumstance proceeds from the variety of our local products. Corn and wheat are produced in large quantities in nearly every part of the country. The transportation of the rice of South Carolina, and of the cotton and sugar from the belt of country included between the thirtieth and thirty-third parallel of latitude, is seaward and coastwise. The great deposits of minerals and coals are found very widely diffused, except in the secondary formation of the great Mississippi valley. The great chain of the Alleghenies, extending from the Saint Lawrence to the alluvial approaches of the Mexican Gulf, is a continuous bed of limestone, anthracite and bituminous coals, and iron ores. These and other minerals are also found in vast deposits in the upper country of the Mississippi, and in the elevated and broken country beyond. At the northern termination of the Ozark mountains, and in the basin of Lake Superior, there are deposits of iron, copper and lead ample for the present supply of the globe.

It is partly from this variety of local products, but chiefly from the vast productive and inhabitable capacity of our country, that it is entitled to a vast external commerce, which, more than any extent of internal interchanges, tends to increase its wealth, advance its tone of civilization and refinement, and elevate it in rank in the great community of nations.

It is the demands of this commerce, reaping our prairies, upheaving our mines, and felling our forests, which must ultimately employ all the facilities which we are likely to possess of both internal and external communication. The influence of those channels, through which commerce seeks and collects its materials, is to impart and distribute wealth. The iron which, in its native state, was hardly more of an object of trade than air or water, attains a value on reaching the consumer, sufficient to command the products of his capital or industry, and thereby to pay the operations of the capital and industry exercised in bringing it to him. So with grain, with provisions and with fuel;—the effect of the channel of transport being to equalize demand and supply.

Railroads, especially, command a general interest, not only as investments, but on account of the additional opportunities which they create for other investments. A railroad, opening up an isolated district in the interior, benefits the seaboard by increasing the range from which it may draw its supplies, and possibly by opening the supply of a new object of trade. Hence the trade of the seaboard increases, and the residents enjoy the advantages in increased profits, and in an improvement of their commercial position, by which their fixed property, already acquired, becomes more valuable by being the seat of a better trade.

Natural and artificial channels of communication will be occupied then, in proportion to their capacity and to their direction towards the great centers of reception and distribution. It is indeed the capacity of these channels which determines *where* these centers shall be. The connection of a safe and capacious marine position, with extensive river navigation, would establish the site of a trading town, although the value of this position would depend upon considerations of climate and of the productive capacity of the tributary country.

The only great points on the Atlantic coast of our country, at which a good harbor is united with a great extent of inland navigation, are Quebec, New York, and New Orleans. A mountain chain with high summits, and extending nearly as far as our coast-line, is impassible by sailing vessels, except at the "Highlands" of New York. Beyond this point an artificial water-course extends into the great basin of the lakes, and already draws a large portion of the products of the valleys of the tributaries of the Mississippi.

It is the strength of this position which has made New York the great commercial center of the Atlantic coast. It is the capacity of the pass at the "Highlands," with the extent and variety of productions to which it leads, and the climate of New York, so well adapted to a great commercial city, that has established its glorious destiny, and which gives corresponding value to the improvements which its capital has created to bring home its trade.

For the American Railroad Journal.
**Stationary Power & Inclined Planes agst.
Locomotive Power & Steep Grades.**

MR. EDITOR:

Your correspondent on the above subject, pages 290 and 291 of the last number of the Journal, appears to take it for granted that the planes of the Allegheny and Portage Railroad in Pennsylvania are a perfection of their kind, and ought to be taken as fair samples when contrasting stationary and locomotive power. But unfortunately, these very planes are the worst samples he could have cited; they are, in fact, *used up*, both in *plan* and in *substance*.

To most engineers, the subject of inclined planes and stationary power is a *terra incognita*. They do not seem to know that this much-abused and very unpopular (undeservedly so) system has been much improved of late, and is susceptible of still more improvement. In making a comparison between locomotive and stationary power, it would be unfair to base our calculations upon the performance of those primitive engines which were first started on the Liverpool and Manchester road. Nor is it just to base that same comparison upon the working of the inclined planes of the Allegheny Portage—the very worst *jungle* of inclines and levels that could have been devised for crossing that mountain. Better models may be found in our anthracite regions, on the Lehigh roads, the Carbondale, and on the road of the Pennsylvania Coal Company. This last work forms two tracks, each 45 miles long, running in different directions, partly through the wildest and roughest country that is to be found, and overcoming a mountain of 800 feet elevation. The whole road is divided in descending grades of 52 feet per mile and 22 inclined planes, which

overcome the mountain, and at the same time supply the force of gravity to propel the cars, loaded as well as empty, in place of locomotive or animal power. The cars run at an average speed of 12 miles per hour, on a light and cheap superstructure, curving all the time. By this contrivance two very heavy sources of expense were avoided—locomotive power, and costly and expensive grading and superstructure. The transportation this year will be 500,000 tons, and wire rope expenses, *this great and fearful item*, will be 0.033 cents per ton per mile, counting both ways, or 0.066 cents per mile, counting one way. This is 3 cents per ton for the whole distance. This expense will be still further reduced, when the tonnage reaches one million, which is about the maximum the planes can accommodate. A freight road from New York to Lake Erie, on a direct route, worked with inclined planes of the most improved construction; two tracks, running on separate locations, with none but *descending* grades; the trains guided and controlled by very light locomotive engines, which only serve as conductors or pilots, and will run with ease on short curves and on a light rail; such a road will *successfully* compete with the New York and Erie Canal when enlarged. If ever the city of New York should go to work and make a direct road to the coal region, such road will have to be built on the system here chalked out; any other system will prove a failure. This can be proved with mathematical precision.

An inclined plane of improved construction, doing a promiscuous business, passenger as well as freight, works in the following manner:

The track is double, with a main rope working, reciprocating, but connected by a smaller rope, which completes the circle. To each end of the main rope a tender car, built entirely of cast and wrought iron, is attached, whose office is, either to push up a train or to let it down—that is a whole train at one time, locomotive and all. This tender is an assistant to the locomotive, to overcome the heavy grade of the plane, and so constructed, that by collapsing the wheels it runs under ground at the foot, permitting a going up train to pass over it. When a train approaches the foot, a watchman by turning the switch causes it to run up the plane upon *that* track, which has a tender in readiness. The locomotive (if any) keeps on a full head of steam; the momentum will enable the train to run up some distance, when by pulling the bell-wire, the stationary engine at the head is started, and brings up the tender car to the assistance of the train before its speed is much reduced. Arrived at the head, the train proceeds without losing one moment of time. The tender remains there until another train approaches from the opposite direction for going down, (provided the same plane is used for both tracks), or another up-train arrives at the foot and is helped up by the other tender, and *vice versa*. The same number of trains which a graded road can pass may be passed over such planes, in the night as well as in the day. The operation of such a plane, then, is a very different affair from the working of No. 8—the worst plane on the Allegheny Portage—with its host of hitches, broken down track, dilapidated machinery and shaking foundations. In place of wearing out ropes in 1½ year—the average duration on the

Portage—they will last twice as long, according to the business and speed. The whole attendance required is a guard at the foot, one engineer and fireman, with another set of night hands, if worked at night.

As regards safety and speed, the comparison will turn out entirely in favor of inclined planes, when contrasted with heavy grades and heavy locomotives. Whether the wire rope breaks, or any other part of the stationary power fails, the tender car is, from its construction, rendered essentially a *safety car*. It cannot be jerked off the track, being secured by a center rail, which is clamped by friction wheels, similar to the arrangement of Seller's locomotive; and the more the train pushes, the tighter it will hold, sliding down the track gradually and easy, the locomotive retarding this movement by reverse action of the steam.

As to speed, the inclined plane is always ready to assist full measure, independent of the state of the rail and the adhesive power of the locomotive. In place of zigzagging up and down a mountain, the planes enable us to go straight ahead, neither losing time nor distance. On the other hand, the delay, expense and dangers of grades exceeding 60 feet per mile, particularly in the winter, are too well known to require illustration. Locomotive power on steep grades will not suffer a comparison with stationary power, on any road which is doing a heavy business. An improved system of engineering will hereafter resort to inclined planes in preference to heavy grades, whenever a mountain is to be overcome. I might go on and write a volume on this subject, but will content myself for the present with the above remarks. My only object was to show, that the planes of the Allegheny Portage offer no basis for a just comparison. The new road which the State of Pennsylvania, or rather the politicians of that State, have undertaken to construct, for the purpose of *avoiding* the inclined planes, will prove a far greater source of expense and delay than the old one ever was.

In conclusion, I would call the attention of those who take an interest in such matters, to the inclined planes of the Morris Canal in New Jersey, with its new machinery, wire ropes, and new mode of working. This canal, with its new improvements, is now one of the most successful public works of the country.

JOAN A. ROEBLING,
Chief Engineer.

May 17th, 1854.

Mississippi and Rock River Junction Railroad.

A meeting of the stockholders of this road was held at Dixon on Tuesday, May 2d, at which the following officers were elected:

John Van Nortwick, Esq., President, John B. Turner, Walter L. Newberry, Wm. H. Brown, Hugh T. Dickey, B. W. Raymond, Thos. Dyer, Jas. H. Collins, E. Peck, Directors.

The Board subsequently elected E. Peck, Esq., Secretary and Treasurer. This road is the extension of the Galena Air Line, from Dixon to the Mississippi river. In our article on the railroads entering at Chicago, we included this in the Galena Air Line, and it is understood that it will ere long be merged into that company. The road is now in operation to Lane Station, and is rapidly progressing to the Mississippi. Passengers can now leave Chicago at half-past 8 A. M., and reach Dixon at 6 o'clock in the evening.

Comparative View of the Condition of the Banks in the Different States in 1850-51 and 1853-54.

State.	Date.	Bks.	Capital.	Loans and Discounts.	Specie.	Circulation.
Maine.....	1850 Oct.....	32	\$3,248,000	\$5,830,230	\$475,689	\$2,654,208
	1854 Jan.....	60	5,913,870	11,166,519	1,132,610	5,317,750
N. H.....	1850 Dec.....	22	2,375,900	3,821,120	129,399	1,897,111
	1853 Dec.....	35	3,376,000	6,518,183	180,239	3,021,579
Ver't.....	1850 Aug.....	27	2,197,240	4,423,719	127,325	2,856,027
	1853 Aug.....	33	2,914,040	6,840,982	188,173	4,764,439
Mass.....	1850 Sept.....	126	36,925,050	63,330,024	2,998,178	17,005,821
	1853 Sept.....	137	43,270,500	77,172,079	3,563,782	21,172,369
R. I.....	1850 Sept.....	63	11,645,492	16,492,547	297,661	2,553,865
	1853 Sept.....	77	15,917,429	22,844,911	359,699	4,895,529
Conn.....	1850 April.....	41	9,907,503	15,607,315	640,622	5,253,884
	1853 April.....	53	13,164,594	24,601,165	1,145,857	10,224,441
N. Y.....	1850 Sept.....	197	48,618,762	107,132,389	10,045,330	26,415,556
	1854 Feb.....	312	79,018,980	203,008,077	14,169,905	32,573,189
N. J.....	1851 Jan.....	26	3,754,900	7,158,977	622,855	3,046,658
	1854 Jan.....	38	5,147,741	10,663,627	805,533	4,917,412
Penn.....	1850 Nov.....	53	17,926,222	39,430,145	4,327,394	11,798,996
	1853 Nov.....	61	19,765,864	48,656,884	4,331,656	17,428,348
Del.....	1851 Jan.....	6	1,293,185	2,264,313	159,773	338,960
	1854 Jan.....	6	1,343,185	2,915,602	133,367	1,286,933
Mar'd.....	1851 Jan.....	23	8,123,881	14,900,816	2,709,699	3,523,869
	1854 Jan.....	25	9,558,409	18,358,441	3,405,090	4,918,381
Virg'a.....	1850 Oct.....	6	9,324,545	19,645,777	2,928,164	10,256,997
	1854 Jan.....	16	12,796,466	24,913,789	3,721,042	14,298,792
N. C.....	1850 Nov.....	5	3,789,250	6,056,726	1,645,028	4,249,883
	1853 Dec.....	9	4,818,565	10,366,247	1,857,048	7,320,667
S. C.....	1851 Jan.....	12	13,213,081	23,312,339	2,218,223	11,771,270
	1854 March.....	16	16,073,580	24,365,690	1,621,973	9,715,783
Ga.....	1850 Dec.....	11	13,482,198	11,421,626	2,112,446	9,898,827
	1853 Dec.....	11	12,957,600	13,567,460	1,578,818	9,518,777
Ala.....	1851 Jan.....	2	1,800,580	4,670,458	1,998,820	3,568,235
	1854 Jan.....	3	2,100,000	5,865,142	1,125,954	3,171,437
La.....	1851 Jan.....	5	12,370,390	19,309,108	5,716,001	5,059,228
	1854 Jan.....	9	17,359,261	29,320,582	7,468,460	6,969,807
Miss.....	1851 April.....	1	118,460	112,275	.....	161,390
	1854 Jan.....	1	240,165	362,585	5,669	234,745
Tenn.....	1851 Jan.....	4	6,881,568	10,992,139	1,456,778	6,814,376
	1853 Oct.....	9	6,599,872	11,846,879	1,983,790	6,821,836
Ky.....	1851 Jan.....	5	7,536,927	12,539,805	2,794,351	7,048,975
	1854 Jan.....	9	10,869,655	21,398,386	4,596,249	13,573,510
Mis'ri.....	1851 Jan.....	1	1,209,131	3,533,476	1,198,263	2,522,500
	1854 Jan.....	1	1,215,405	3,958,055	987,885	2,487,580
Illin's.....	1851 Jan.....	.....	.....	.....	.....	.....
	1853 April.....	23	1,702,456	536,404	419,531	1,351,788
India.....	1850 Nov.....	1	2,082,950	4,395,099	1,197,880	3,422,445
	1853 Dec.....	31	5,554,552	7,247,366	1,820,760	7,116,827
Ohio.....	1850 Nov.....	57	8,718,366	17,059,593	2,750,537	11,059,700
	1854 Feb.....	68	8,013,154	17,380,255	2,319,064	9,839,008
Mich.....	1851 Jan.....	5	6,764,022	1,319,605	125,722	897,364
	1854 Jan.....	6	1,084,718	2,199,093	357,672	1,270,939
Wis.....	1851 Jan.....	.....	.....	.....	.....	.....
	1854 Jan.....	10	600,000	1,163,066	182,482	485,121

In the above statement are included, it is believed, all the incorporated banks that were in operation in the beginning of 1851 and the beginning of 1854, a few scattering ones excepted, and these consisting chiefly of banks that had but lately commenced business.

"In the State of Texas there is one bank, doing a small business, from which no returns have been received.

"In the States of California, Florida, Arkansas and Iowa, and in the Territories of New-Mexico, Oregon, Washington, Utah and Minnesota there are no incorporated banks.

"In the returns from some of the banks of Pennsylvania, and those of some other States, a considerable amount of specie is believed to be embraced under the head of "specie funds," but the exact amount cannot be ascertained."

In addition to the banks proper, the following branches are reported:

	1850-1.	1853-4.		1850-1.	1853-4.
Connecticut.....	2	2	Georgia.....	10	7
New York.....	1	1	Louisiana.....	20	10
Pennsylvania.....	5	5	Tennessee.....	19	19
Delaware.....	3	3	Kentucky.....	21	26
Maryland.....	2	0	Missouri.....	5	5
Virginia.....	31	39	Indiana.....	13	13
North Carolina.....	13	16	Michigan.....	1	1
South Carolina.....	2	2			
Total.....	148	149			

The Union accompanies its table with the following remarks:

"The summing up is given in the tables which we have yet to publish. To-day we will content 000,000, and of deposits \$188,000,000; making a total of current credits of \$392,000,000.

ourselves with stating that the total of circulation, according to returns nearest Jan. 1, 1854, was \$204,- "As the total of circulation on the 1st of January, 1837, when the inflation of 1835-'37 was near its height, was less than \$150,000,000, the present amount of paper circulation may seem alarming, but it is not so if we make due allowance for the difference in the condition of the country at these two periods.

"Omitting other considerations, to which we shall advert hereafter, the banks now return fifty millions in specie, to which probably several millions should be added that are included under the ver-

indefinite head of "specie funds." In addition to this, there was on the first of January twenty-five millions in gold and silver in the treasury offices, and more gold and silver in circulation among the people than at any previous period.

"Every man who knows anything about banking knows that it is not by the modicum of specie in the vaults, but by the whole amount of specie in the country, that the banks are sustained in their operations."

"These bank returns are as sure an indication of the monetary condition of the country as the thermometer is of the state of the weather. They are far from being all that is wanted to form a judgment of the prospects of the farmer, merchant, and manufacturer; but so essential are they that neither merchant, banker, nor statesman, can without them, come to a satisfactory conclusion on many points which must necessarily engage their attention."

"The returns of the banks for the present year are such as ought to make bankers and merchants very cautious, but not such as we conceive ought to occasion alarm."

The following is a comparative view of the condition of the banks in the United States, according to the returns nearest to January 1, in 1837, 1843, 1848, 1851, and 1854.

	1837.	1843.	1848.	1851.	1854.
Number of Banks.....	634	577	622	731	1,059
Number of Branches.....	154	114	129	148	149
Number of Banks and Branches.....	788	691	751	879	1,208
Capital paid in.....	\$290,772,091	\$228,861,943	204,833,175	\$227,807,553	\$301,376,071
RESOURCES.					
Loans and Discounts.....	525,115,702	254,544,937	344,476,582	413,756,799	607,287,428
Stocks.....	12,407,112	28,380,050	26,498,054	22,888,989	44,350,330
Real Estate.....	19,064,451	22,826,807	20,530,955	20,219,754	22,367,472
Other investments.....	10,423,630	13,343,599	8,229,682	8,935,972	6,841,429
Due by other Banks.....	59,663,910	20,666,264	38,904,525	50,718,015	55,516,085
Notes of other Banks.....	36,533,527	13,306,617	16,427,716	17,196,083	22,659,066
Specie funds.....	5,366,500	6,578,375	10,489,822	15,341,196	25,579,253
Specie.....	37,915,340	33,515,806	46,369,765	48,671,048	59,410,253
LIABILITIES.					
Circulation.....	149,185,890	58,563,608	128,506,091	155,165,251	204,689,207
Deposits.....	127,397,185	56,168,628	103,226,177	128,957,712	188,188,744
Due to other Banks.....	62,422,118	21,456,523	39,414,371	46,416,928	50,322,162
Other liabilities.....	36,560,289	7,357,033	5,501,401	6,438,327	13,439,276
Aggregate of current credits, i. e., of circulation and deposits.....	276,583,075	114,732,236	231,732,268	284,122,963	392,877,951
Aggregate of immediate liabilities, i. e., of circulation, deposits, and dues to other Banks.....	339,004,193	136,188,754	271,146,639	330,539,891	443,200,113
Aggregate of immediate means, i. e., of specie, specie funds, notes of other Banks and sums due from other Banks.....	139,479,277	74,067,062	112,191,828	131,926,342	163,164,667
Gold and silver in United States Treasury depositories.....			8,101,353	11,164,727	25,136,252
Total of specie in Banks and Treasury depositories.....			54,471,113	59,835,775	84,546,505

Mississippi Ouachita and Red River Railroad.

PRELIMINARY SURVEYS.

The charter of this road contemplates the most eligible route from a point on the Mississippi river at or near Gaines' Landing, by way of Camden on the Ouachita, to a point on Red River at or near Fulton. There will doubtless be a slight deviation from the charter.

The parties took the field for their survey last October. The initial point on the Mississippi river has not been selected, although the examinations were made from points sufficiently near Gaines' Landing to come within the charter.

Gaines' Landing presents less attractions for a terminal point than many other plans, and this is a matter of extreme importance, to select such a place on the river as will be safe from future depredations, such as the formation of sand-bars, mud banks, changes in the shape of the channel, &c.

The Engineer recommends *Ferguson's Point*, as the eastern terminus. It is a mile longer than from Gaines' point, but is capable of being built at a cheaper cost. The country on this line is well adapted to the building of a road.

From Ouachita river to Red river there were

three surveys made, and in point of grades curvature and practicability, there is no particular preference to be given to any of these routes until you reach the approaches to Red river, when that by way of *Dooley's Ferry* is regarded the best; because here the banks of the river are gained over an elevated ridge, instead of through the overflow.

The whole route from *Ferguson's Landing* to *Dooley's Ferry* is 155 miles by way of Camden, 153 by way of the Saw mill, one mile south of Camden. By the first route the cost will be \$421,254.92, by second \$463,915.74.

Mr. Ferguson has donated sixty acres of land to the Company, if the Eastern terminus be fixed at *Ferguson's Point*.

There is some hesitation as to the point where the Ouachita river should be crossed. One point where it is practicable is what is called Saw Mill route, another is *Matlock's Ferry* Route. Many very valuable donations have been offered to the Company by citizens favorable to one route or the other, in order to secure the route they desire; but the Engineer recommends as preferable a crossing of the Ouachita near *Matlock's Ferry*. Proceeding then upon the recommendation of the Engineer, and selecting *Ferguson's*

Point and Dooley's Ferry, as the termini on the Mississippi and Red rivers, and *Matlock's Ferry* for the crossing.

We have total cost of Graduation... 421,254 92
 " " " Supersurcture & Equipment... 1,568,850 00

Total cost of road ready for use... \$1,990,104 92
 Average cost per mile... \$12,797 40

If the above estimation may be relied on, it certainly will be a low figure for a railroad.

Texas has made a grant of lands for the construction of a railroad through her territory, whose eastern terminus will doubtless be very near the point where this road strikes the State line. This then will make a convenient and direct line from the Western part of Texas, and eventually still farther West, to the Mississippi. It is hoped to have this road finished by 1857, giving it the greatest allowance.

The company hopes to have this a continuation or at least an important branch of a road to the Pacific, which they claim will reach from the southern States to San Francisco. The cotton trade of Red river is very heavy, and corn is raised extensively, West and Northwest of the road; so that if the road continue no farther than the charter prescribes, it is calculated that the trade with New Orleans will make it a profitable road.

The Chief Engineer concludes his report of the M. O. & R. R. road with these remarks:

To the President and Directors of the M. O. & R. R. R. Co.:

GENTLEMEN—In obedience to an order of your Board, passed February 16, I have solicited proposals for the gradation, masonry and bridges, and cross ties, on the first twenty miles Westward, from the Mississippi and Ouachita rivers, respectfully.

I have now the great satisfaction of announcing to you, that I have closed all the contracts for the same, with highly responsible parties, each and all of them bound in heavy bonds for the faithful performance of their contracts.

It is another strong proof of the confidence felt by every one in the value as well as the success of your road, when I say that the above amount of work, embracing the heaviest on the line, has been let at my estimate, with payments of 60 per cent. in cash, and 40 per cent. in the stock of the Company, and that I could as easily have contracted for the whole road, on the same terms.

Respectfully submitted.

LLOYD TILGHMAN, Chief Engineer
 And General Agent M. O. & R. R. R. Co.

Railroad Convention at Baltimore.

A convention of railroad Companies was held in Baltimore on the 19th inst., in obedience to a resolution adopted by the Philadelphia, Wilmington and Baltimore Railroad Company, recommending "that a general Railroad Convention be held at Barnum's Hotel, in Baltimore, on Friday May 19th 1854, at 11 A. M., for the purpose of memorializing Congress against the reduction proposed by the Postmaster General in compensation for carrying the Mails, and to present to them all the statistics in relation to the subject."

The Convention was organized by the choice of Thomas Swann, Esq., President of the North-Western Virginia Railroad Company as Chairman, and Robert S. Hollins, Treasurer of the Baltimore and Susquehanna Railroad Company, and John H. Done, Master of Transportation of the Baltimore and Ohio Railroad Company, Secretaries, being one from each Company represented.

The following gentlemen, were appointed a committee to prepare business for the Convention viz:

Russell Sage, New York and Erie.
S. M. Felton, Philad. & Wilmington.
W. G. Harrison, Baltimore and Ohio.
J. Edgar Thompson, Penn. Central.
Nathan Randall, New York Central.
E. A. Stevens, Camden and Amboy.
W. S. Alexander, Philad. and Trenton.
J. P. Jackson, New Jersey R. R. and T. Co.
A. W. Eichelberger, Hanover Branch.
J. W. Sullivan, Central Ohio.
G. W. Hughes, Balt. and Susquehanna.
A. McRae, Wilmington and Raleigh.
Dr. W. S. Collins, Sea Board and Roanoke.
L. J. Fleming, Wilmington and Manchester.
Edwin Robinson, Rich. Fred. and Potomac.
Judge Warren, Boston and Providence.
Joseph Grinnell, New Bedford and Taunton.
Juman Horner, Orange and Alexandria.
G. D. Phelps, Del. and Lackawanna.

The committee having retired for deliberation, upon their return reported the following resolutions, which after full discussion were unanimously adopted:

Whereas a recommendation has been made to Congress, to reduce the pay heretofore allowed to railroad companies for the transportation of the mails upon their respective routes, by an attempt to establish a rate of compensation wholly inadequate to the magnitude and nature of the service performed; and

Whereas, the leading railroad interests in the United States, by a tacit acquiescence in the views of the Post Office Department, might encourage a favorable response on the part of Congress; and thereby greatly embarrass the mail service of the country—a responsibility which they are not willing to assume; Therefore,

Resolved, That the various railroads represented in this Convention cannot, under any circumstances, submit to the terms indicated by the Post Office Department, in the Bill now pending in Congress, entitled "A Bill to modify the 19th section of the Act of November, 1845, concerning the compensation of Railroad Companies."

Resolved, That the rate of compensation heretofore allowed under existing laws, said laws having been passed at a period when the service required to be performed by the Department was far less onerous and expensive than that now claimed, is an inadequate compensation for the present service and ought not to be submitted to by said Railroad Companies, longer than they can show to the Department the value and extent of the service rendered by the said Railroad Companies, with any hope of even partially compensating the stockholders interested in said roads.

Resolved, that in order to show the entire willingness of the Companies represented in this Convention, to unite with the Department in any plan which may tend to a fair and equitable understanding of the claims of said Railroad Companies, either in regard to classification or any other matter likely to arise in fixing the principle or rate of compensation between the Department and any of said companies. Under existing laws, a commission of three disinterested umpires shall be appointed, one by the Governor of the State within which the election of Directors of said road is held; one by the Post Office Department, and the third by said Railroad Company; said commission to have power to decide upon all matters in dispute, provided said matters be adjudged as within the limits of existing laws regulating the pay of Railroad Companies.

Resolved further, That a Committee of five be appointed, whose duty it shall be at the earliest practicable moment to embody in a memorial the spirit of the resolution herewith submitted, and to embrace in such memorial any argument and illustration calculated to impress upon Congress and the public the inadequate compensation allowed under existing laws to the railroad interest generally.

Resolved, That the Companies represented in this Convention pledge themselves to carry out in good faith, the object and spirit of these resolutions.

The resolutions having been adopted unanimously on motion of Mr. Thompson, it was

Resolved, That the Committee to memorialize Congress consist of seven, and that John P. King President of the Georgia Railroad Company, be appointed a member thereof.

The President of the Convention then announced the names of the following gentlemen to compose a Committee to prepare the memorial to Congress—a motion having been previously adopted that the President of the Convention should be chairman of the Committee.

Nathan Randall, New York Central.
J. Edgar Thompson, Pennsylvania Central.
S. M. Felton, Philadelphia and Baltimore.
Geo. W. Hewes, Balt. and Susquehanna.
John H. Done, Baltimore and Ohio.
John P. King, Georgia Railroad Co.

Journal of Railroad Law.

RAILROAD COMPANY NOT RESPONSIBLE FOR CARELESSNESS.

Aspell vs. Pennsylvania Railroad Company.—The above case was recently averred in the Supreme Court of Pennsylvania, and the decision of the Court below was reversed.

The circumstances were these. The plaintiff's took the cars at Philadelphia for Morgan's corners, one of their stopping places. Upon arriving at the place, owing to the same defect in the bell rope, the Conductor failed to give notice to the Engineer to stop the cars, and so they passed by; but at a reduced speed, on account of a switch over which they had to pass. The plaintiff upon seeing them pass by, became excited and jumped off the cars, thereby seriously injuring himself. The Court below awarded him damages of \$1500.

Chief Justice Black of the Supreme Court, remarked that Railroad Companies should not be made liable for the carelessness and imprudence of passengers, and particularly when it is out of their power to change the circumstances which may give rise to an accident, resulting from such carelessness of a passenger. And premiums should not be paid for accidents to extort money from Companies. The decision was reversed.

A DAMAGE WITHOUT INJUSTICE.

The Common Law boasts that it will remedy every wrongful damage. But for damage without wrong it has no cure but patience.

At the March Term of the Court of Appeals the following decision was made in the suit of the Auburn and Cato Plankroad Company vs. Peter Douglas:

The plaintiffs, a corporation organized under the Plankroad acts, had built their road and erected a toll-gate thereon, pursuant to such acts, opposite to the defendant's farm, which lies upon one side of the road, and contiguous thereto. After the erection of the gate the defendant moved his fence from the line of the road where it originally stood, back upon his farm some twenty or thirty feet, and graded a track by the side of the road, but entirely upon his own land, and thus avoided the gate. The plaintiffs, in their complaint state these facts, and aver that the acts of the defendant were done for the purpose and with the intent to injure the plaintiffs and defraud them of their rights; and pray for an injunction, together with damages for the injury sustained.

The answer of the defendant denies the motives attributed to him in the complaint, and insists that the fence was removed and the track graded to facilitate his farming operations, and to afford him convenient ingress and egress to and from his barn and other premises.

To this answer the plaintiffs demurred.

The Court held that the legislative acts granting franchises to corporations are to be construed strictly according to their terms and that the grantees in such acts take nothing by implication either as against the power making the grant, or against other corporations or individuals.

That the acts authorizing the formation of Plankroad Companies give to such companies no interest or easement in or upon the lands adjoining their road, and no rights to restrict the use which the proprietor of such lands may make of his own premises.

That every proprietor of land has the absolute control over his own property, and may do with it whatever he pleases, unless he thereby infringes some fixed legal right of another; loss or damage to one person arising from the use made by another of his own property being *damnum absque injuria*, unless the former has previously acquired some legal right to restrict the use which the latter shall make of such property.

That where no such right of restriction exists, it is immaterial what may be the motives of a proprietor for dealing with his own property in a particular way. If, in such case, he violates no legal right of another, although he expressly intends to do the other damage by such use, and although such damage actually results, yet no action will lie.

Held, therefore, that the present action could not be maintained, although every fact stated in the complaint was established—*Auburn Daily Advertiser*.

LIABILITIES FOR ANOTHER'S NEGLIGENCE.

It is the settled rule that to make A liable for B's negligence, A and B must respectively stand in the relation of master and servant.

If B is a person with whom A has made a contract to perform certain work not as a servant but upon his own responsibility, then B will be alone personally liable for his acts and those of his servants. Hence our superior Court have given the following decision in the case of *Weyan against the Harlem Railroad Co.*

Plaintiff was injured by a car in Canal-st, bet longing to the New Haven Railroad Company which was driven (by contract) for the New Haven Railroad Company by the horses and driver, of the Harlem Company. The question is, Which, Company is liable for the damage? The Court considers that the Company is liable which owned the horses and driver (the Harlem Company.) Judgment for plaintiff on the verdict.

THE RIGHT OF PASSENGERS WHEN LOCKED OUT FROM CARS.

The following case was tried in our Common Pleas, by Judge Woodruff, last week.

The New York and New Haven Railroad Company vs. William M. Abbat.—In this case the railroad Company were the plaintiffs, and one of their commuting passengers the defendant. The action was brought to recover damages for his having broken open one of the Railroad cars. It appeared that the defendant was an annual commuter, and was entitled to a seat in the train to and from this City. For some time before the occurrence in question it had been the practice of the Company and their agents to reserve the rear car for the accommodation of way passengers and commuters, and that car was kept locked to prevent other passengers entering between Rye and the other stations, until all the seats in the front cars had been filled.

The defendant in this suit entered the cars at Rye to come to this City, and passed through the train from the front to the rear without finding a seat. He then applied to the Conductor, and got on the platform of the rear car. The Conductor said he would get a seat for the applicant, and if unable to do so, would open the rear car to accommodate him. The train was, however, moving then, and the defendant without waiting the re-

turn of the Conductor, took the liberty of kicking in the door of the rear car, which was locked, and finding a seat for himself. The Conductor testified that at this time there were seats vacant in the foremost part of the train, in which the defendant might have been accommodated. On the part of the defendant it was contended, that inasmuch as all the seats were filled at Rye, and many passengers standing on the platform for want of accommodation, and the train starting at speed, the defendant who had paid for his passage, was justified in using force in order to obtain a safe transit to the City.

His Honor, in his charge to the Jury, said that the right of the plaintiffs to recover in this action did not depend upon the question whether there was a seat for the defendant in the forward cars or in that which he had entered by violence, although this might have a bearing on the case when the Jury came to consider the damages. If the Company thought proper, for any reason, to refuse the defendant a passage or a seat in the cars, that alone would not justify him in taking one by violence, against their will. In such a case, the commuter had his legal remedy, and had no right to take it in any other way, or, in other words, had no right to take the law into his own hands. It might as well be said, that if one of that Jury owed another a sum of money the creditor had a right to enter the debtor's house and take it by force, as to say that one who has commuted his passage by a rail-car, has a right to take his seat by force. If any railroad company refused to perform their contracts, they were liable. But it is the duty of railroad companies when they bring their trains to a station, to stop a sufficient time to allow the passengers to get in and out, and the agents of the train have no right to hurry the passengers on the platforms, at the peril of life and limb; and if this defendant was so placed that it was incumbent on him, for his personal safety, to break into the cars, he had the moral and legal right so to do. The train stopped for one or two minutes, and it was for Jury to say, whether the Company allowed proper time or convenience for the passengers to get seats in the cars. The Jury must consider all the facts and circumstances of this case, and if the plaintiffs were entitled to a verdict, they could recover not only to the extent of the pecuniary damage they had sustained by the violence of the defendant, but the Jury might give such exemplary damages as would operate as an example to others, and thereby prevent a repetition of the wrong if there was any in the case.

The Jury retired, and after a short consultation gave the plaintiffs a verdict for the sum of twenty-five cents. There was some surprise manifested at the result.

Clinton Line, and Clinton Line Extension Railroad.

The Clinton Line, and the Clinton Line Extension Railroad Companies, were incorporated in July, 1852, and April, 1853, and are distinct companies, other than as proprietors of connecting links of one chain of road.

The Clinton Line road is located at an average distance of about 30 miles from the Lake Shore road in Ohio, running from Kinsman or the State line, as far as Tiffin, by means of the Clinton Line Extension road; and it is proposed to make these two lines a link in a direct chain from the Atlantic to the Mississippi.

The line from Hudson to Parkman was located in May last, and the graduation, masonry and bridges have been contracted since. This work is now being steadily prosecuted. Since then both lines have been let, and the work has been commenced on the heaviest sections.

There has been expended on construction, at this date, \$93,161 73, of which \$69,575 94 was paid to contractors for grading and masonry, it

being 80 per cent. of the amount returned in the regular monthly estimates; \$13,485 79 for engineering and agencies, and \$10,100 for contingencies, including land and land damages.

The grading, masonry and bridging to Kinsman from Parkman, embracing a distance of about 29 miles, was put under contract on the 21st of November, to be completed the 1st of May, 1855.

The following tables exhibit the characteristics of the entire route from the Pennsylvania State Line to Tiffin:

CLINTON LINE.

Grades.

Level.....	5.53 miles.
Under 10 feet.....	11.21 "
From 10 to 15 feet.....	3.77 "
" 15 to 20 ".....	3.46 "
" 20 to 30 ".....	9.66 "
" 30 to 35 ".....	10.10 "
" 35 to 40 ".....	17.10 "

Alignment.

Straight line, 46.87 miles, or 85 per cent.	
Curved ".....	8.43 "
Viz. 11,460 ft. rad. 0.66 "	
5,730 " " 5.16 "	
3,820 " " 1.48 "	
2,865 " " 1.15 "	

CLINTON LINE EXTENSION.

Grades.

Level.....	15.79 miles.
Under 10 feet.....	22.58 "
From 10 to 15 feet.....	12.46 "
" 15 to 20 ".....	4.63 "
" 20 to 25 ".....	14.85 "
" 25 to 30 ".....	9.79 "
" 30 to 35 ".....	16.22 "
" 35 to 40 ".....	10.27 "
" 40 to 45 ".....	4.70 "

Alignment.

Straight line, 82.22 miles, or 87 per cent.	
Curved line, 12.23 "	
Viz. 11,460 ft. rad. 3.98 "	
5,730 " " 1.51 "	
3,825 " " 4.39 "	
3,502 " " 1.20 "	
2,865 " " 1.15 "	

The estimated cost of the Clinton Line is \$1,382,500; of the Clinton Line Extension, \$2,500,000; total, \$3,882,500, or between \$25,000 and \$26,000 per mile.

Adaptation of Locomotives.

The Pennsylvania Railroad, at the expiration of the year 1853, had 79 locomotives for freight and passenger business. As the freight business of the road is large and rapidly increasing, and as the road has heavy grades, the economy of the concentration of power has been recognised, and the Company have, out of the whole number of 79, 23 engines of a very heavy class, as follows:—

No.	Builder.	No. of drivers	No. of Trucks	Diam. of Drivers	Whe' weight lbs.	Wght on Drivers lbs.
5	Baldwin	6	4	3 ft. 6 in.	64,500	46,100
6	"	6	4	3 " 6 "	59,600	48,200
1	"	8	0	3 " 6 "	43,350	43,350
1	"	8	0	3 " 6 "	50,975	50,975
4	Sm. & Perk.	6	2	3 " 8 "	55,800	44,600
2	"	6	2	3 " 8 "	54,200	41,800
4	Winans,	8	0	3 " 7 "		

23 These engines are competent to take from 18 to 30 heavily loaded eight-wheel cars over grades of 53 feet per mile. These engines, by the report of the officers of the road, are run at a less average expenditure than most of the other engines in use while from their distribution of weight they are not, probably, much more severe upon the rails.

We are pleased to record the success of our great roads, which have adopted, to a considerable degree, the great principles of railroad economy for which we have contended. We look with confidence towards a better development of railroad machinery, such as will modify the relative economy of railroad and water carriage, giving the former a greater advantage than it has heretofore possessed. Railroads have felt the heavy burden of the present prices of iron, labor and fuel, and find themselves compelled to consult the true principles of economy to sustain a profitable business. In proportion as companies acquire a practical sense of the economy of the concentration of power, distribution of weight, and in short the great idea of *maximum freight trains at low velocities*, so will their prosperity and usefulness be promoted.

In the contest for the great internal carrying trade of this country, those channels which attempt to compete in price, without having a corresponding economy in their facilities, will suffer. A disregard of this principle has depreciated the productiveness of several of the leading roads of New England, and is now producing an exciting inquiry as to other supposed causes of this decline.

Indiana and Illinois Central Railroad.

We gather from a statement recently submitted at a meeting of the stockholders of this company the following facts:

The whole work has been undertaken by a most responsible firm in New York, M. C. Story & Co., who are to complete the road for \$22,000 per mile as follows:

To grub, grade, and construct the road from Indianapolis to Decatur, with the bridging, culverts, cattle-guards, switches, road crossings, drains and ditches, furnishing and laying down the superstructure, and completing the same ready for ballasting, also to expend \$75,000 under the direction of the company, in the erection of suitable station-houses, water-stations, turn-table, &c., and to supply furniture as follows:

10 Locomotive Engines of twenty tons weight.	
10 First Class Passenger Cars.	
4 Baggage Cars.	
2 Mail Cars.	
30 Gravel Cars.	
50 Box Cars.	
25 Platform Cars.	
25 Stock Cars.	
15 Hand Cars.	

The aggregate sum of all the excavations not to exceed fifteen thousand yards per mile.

ESTIMATED COST.

149.54 miles at \$22,000 per mile.....\$3,289,880
Estimate for excess of excavation over fifteen thousand yards per mile..... 448,620

\$3,738,500

Which sum, by the contract, is to be paid as follows:

50 per cent. in the 7 per cent. bonds of the company, secured by a first mortgage on the road.....	\$1,869,250
20 per cent. in stock.....	747,700
30 per cent. in cash.....	1,121,550

The following is a statement of the

STOCK ACCOUNT.

Cash stock subscription.....	\$339,500
Land stock subscriptions.....	1,566,050
Stock issued to Solicitors.....	3,400
Stock issued to Contractors for construction.....	6,100

\$1,914,050

Several divisions of the work have been sublet, embracing the entire Western division from the

Wabash River to the Decatur, a distance of eighty four miles, and a large force is now upon the line. Ample means for the summer's work, have been provided, and the prospects for the future are of the most flattering character.

A careful survey of the route from this city to Decatur, Illinois, made by the Chief Engineer, John C. Campbell, Esq., presents the following results:

GRADIENTS.

57.55 miles, level.
26.26 " under 20 feet per mile.
18.87 " from 20 to 30 feet per mile.
46.86 " over 30

149.54 total length.

LINES AND CURVES.

139.05 miles, straight line.
6.14 " curved, radius 5730 feet.
2.08 " " " 2865 "
2.27 " " " 1910 "

149.54

Giving 93 per cent. of straight line.
Longest tangent, 70 60-100 miles.

American Railroad Journal.

Saturday, May 27, 1854.

Long Island Railroad Company.

The annual report of this company gives a very favorable exhibit of the operations of this road, for the past year. The increase of passengers this year over last is 25,584. A corresponding increase has been realized in the earnings, the amount being for the year ending April 1st 1854 \$247,611.04, an increase of \$30,044.81 over that of last year. Some important improvements have been made during the year. There has been permanent track constructed around the curve at Hicksville and at Wampmissic. Their length is nearly a mile. Two new bridges with stone abutments have taken the place of trestle bridges. And the rolling stock has been improved making the expenses of last year quite heavy.

A contract was made last November, between this company and the Hicksville and Cold Spring Branch Railroad Company, by which the construction of that road is insured. It will be finished to Ketchum's "now called Syossit" on or before the 15th June next, distance 4½ miles, at a cost of less than \$50,000.

The road Long Island extends from Jamaica to Greenport, 84 miles. A branch owned by the Company, extends from the main track to the village of Hempstead: its length is 2½ miles,—making the length of road owned by the Company, 86½ miles. It is a single track throughout, laid chiefly with a rail weighing 66 lbs. per yard of H pattern.

The Road from Brooklyn to Jamaica belongs to the Brooklyn and Jamaica Railroad Company, is leased and operated by this Company 11 miles in length, making the entire length of Road to be kept in repair and used 97½ miles.

It is rented by this Company, until the year 1870, at an annual rental of 11 per cent. of the gross earnings of both roads, provided the same shall not be less in any one year than \$21,000, and shall not exceed \$33,000. This lease has so long to run, that it is equivalent to a permanent interest in the Road, and viewed as such, in 1852

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	824,363	1,043,540	2,036,140	177,003	80,053	none	30
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,069	.....	6	98
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	8,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	83
Nashua and Lowell..... "	15	600,000	none.	661,214	182,545	51,513	8	104½
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	.....	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	.....	12½
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	.....	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	8½
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	97½
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	90
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	104½
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6½	81½
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	100
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	253,220	102,098	4	57
Eastern	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	82
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	97½
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	90
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	57
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,897	122,866	none	98½
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	15½
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	96
Stonington..... R. I.	50	.....	467,700	.....	220,572	110,892	.....	66
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	120
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	93
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	56
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Eric, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	69
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	65
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	51
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	104½
Ogdensburgh (Northern).... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	18½
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,425	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Eric and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	78½
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	74½

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Total cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna.. "	57	.....	.....	.....	413,673	152,536	.....	....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,360	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia.. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga.. "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.... "	.....	.....	.....	In prog.	.....	.....	.....	46
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	76½
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	92½
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta.... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky.... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley.. "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis.. "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	70
Terre Haute and Indianapolis "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,162	.....	126
Michigan Southern and Ind. N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	119½
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	104½
Pacific..... Mo.	38	.....	non	In progress	Recently opened.	.....	.....	.....

this Company laid a new track all the way from Brooklyn to Jamaica.

The following statement exhibits the financial condition of the Company.

Stock	3,000,000
Loan of 1850.....	520,000
New York State Loan.....	84,632 46
Miscellaneous.....	59,846 32

Total Stock and Loans.....\$3,644,466 34

The ordinary expenses of conducting the business of the road were \$161,707.71.

The total expenses for the year up to March 31, including sinking fund debt to the State, interest, rent, etc., were \$292,971.21.

There are 19 locomotives upon the road, with an aggregate value of \$76,500, and the whole amount of stock amounts to \$211,050.34.

There have been no accidents on the road during the year, except outside accidents, for which there is no blame to be attributed to the Company. The road appears to be in good condition, and paying well, for a local road as it is.

Excavation and Embankment Tables.

We invite the attention of Engineers and Surveyors to the advertisement in this Journal of the work recently published by P. LYON Esq. Civil Engineer, Philadelphia, entitled, "New and improved tables; with the method of their application to finding the mean heights of cross sections, (or equivalent level cuttings,) and cubic contents of excavations and embankments."

Mr. Lyon's publication is a neat octavo volume of 45 pages handsomely bound, and very convenient for use. Judging from the numerous enquiries we have had for works of this character, it will meet with a good sale. It can hardly prove otherwise than a valuable assistant to all young engineers, as well as an extensive economizer of time to those of larger experience.

The price of the work is one dollar and a half for which amount sent to this office, we will promptly send to any address by mail or otherwise a copy.

Disturnell's Railway Guide.

We have upon our table *Disturnell's Railway and Steamship Guide*, for 1854, a full and convenient statement of distances and fares upon all the principal railroad and steamboat routes through the United States and Canada, and Steamship and Packet Lines across the Atlantic Ocean, to California, &c. There is in it also a brief description of the principal places in England, and on the Continent, with the lines connecting them, and accompanying it are two maps, one of the United States, and the other of Central Europe.

Akron Branch Railroad.

The city of Cleveland has loaned \$100,000 to the Akron Branch Railroad, payable in the stock of the Cleveland, Columbus, and Cincinnati Railroad.

Watertown and Rome Railroad.

The stockholders of the Watertown and Rome Railroad have voted to authorize its board of directors to indorse the bonds of the Potsdam and Watertown Railroad Co., under the recent act of the Legislature.

Cincinnati, Logansport and Chicago Railroad.

We invite attention to the report of this company in another column. In our next issue we shall add something of our own to the report.

Fictitious Capital in Railroads.—New York Central Railroad.

The stock of the Central railroad begins to show the effect of the excessive "*watering*" it underwent in the process of "*consolidation*." It is well known, that at that time, the several companies divided among themselves about \$9,000,000, being an *estimated* excess of the value of their stock above par. The premiums were paid by the creation of a debt by the *consolidated* company to an equal amount, and which added more than one quarter to the capital account.

The reasons upon which this dividend was declared were—that the excess of value of the stocks of the several companies above par, was *profit*; and that upon the winding up of the old concern, this profit was a legitimate subject of *dividend*. This being made, the value of all was reduced to an uniform standard, allowing each company to enter the new copartnership on equal terms.

The consolidation of the companies forming the Central line was the first act of the kind in the country deserving attention. It may therefore be discussed under two aspects: as an *experiment* affecting the interests of the stockholders alone, and as a *principle* in which the rights of the *public* are involved.

The interests of the stockholders would not appear to be materially influenced either way by declaring dividends from *capital*. Should the capital stock of the company be doubled, and the dividends cut down one-half, they, *ipso facto*, would be neither richer nor poorer. If by the process, the expenses of the company be increased, as they must in a greater or less degree, so far are the stockholders losers, and the act which produced such a result an unwise one.

But a much stronger objection to dividends, based upon an excessive *estimated* value of stock, is, the spirit of speculation which it is sure to engender. The process to this end is a natural one. Take the case of the stockholders in the Central Railroad. They have made 80 per cent. upon their stock, by issuing to *themselves*, and for which they paid *nothing*, evidences of debt against the company, which they sell at *par*, leaving the original investment still at a premium. Their success will naturally lead the same and other parties to seek similar opportunities to accomplish a similar result. The transaction is regarded an honorable one. The success has been such as should gratify the most grasping cupidity. It may be urged to be sure, that a *similar* case will not happen. But this is begging the question. There are few roads so productive, we will admit, as has been the Central. But it is yet to be decided, in this case, whether the road can continue to pay the legal rate of interest upon its stock, and the interest upon its indebtedness. That it can do so is still a matter of *opinion*, and any case that arises must be matter of opinion; and this, in any supposed case, will be very likely to sanction the desired measure. The example of the Central has been followed by two important companies in Ohio, where a similar dividend, equal to fifty per cent. of the stock of one of the roads has been made. Other cases will follow. Where millions can be realized simply by giving a few slips of paper, which costs no more than the paper itself, the art being once discovered, there will not be wanting a plenty of imitators, who will be ready to try their experiments upon any subject to

which their arts can secure a considerable degree of public confidence, no matter how worthless this may be, or how unjustifiable may be the means resorted to, to accomplish their objects.

In the cases instanced, we think it very probable that the incomes of the two companies will allow them to continue satisfactory dividends. Such being the fact, the public, we are aware, will hardly see any thing objectionable in the principle upon which the acts of consolidation were based. But let the above or any other company find themselves unable to pay dividends upon their capital, and the absurdity of inflating their stock beyond their means of making it productive will at once be admitted on all sides. Such cases as these test the *principle* of the thing, which is in no way changed by the mere fact of *success*.

But we are not sure that the condition of the Central railroad, even, does not furnish a test of the character named. This company have just divided the *surplus* value of their stock, amounting to about \$9,000,000, the annual interest upon which is about \$550,000. The company now propose to add \$3,000,000 more debt, in the shape of a loan. Now the interest on the debt created by the act of consolidation will, in less than six years, exceed the amount of the new loan. We presume that there is no pretence, that but for this debt the new loan would not be wanted nor called for. This loan is rendered necessary by the enormous increased demands upon the company's treasury. In less than six years, the whole amount of it will be required to meet the interest on the *fictitious* debt. The new loan, therefore, is made to supply a necessity that never would have existed but for the creation of this debt, and is, in fact, a case of borrowing to pay interest on fictitious capital, though the present *application* of the money may be to entirely different objects.

But the objections which we have urged we consider insignificant, in comparison with the wrong done to private right, to the commerce and to the general welfare of the country. *Cost* is inseparable from all *movement*, both of persons and property, and in its degree is a tax upon the industry of the country. The addition of a dollar to its price for transporting a barrel of flour from Buffalo to New York, does not benefit, *per se*, either the producer or consumer. Cost of transportation is so much added to the price of any thing that is eaten, drank or worn. The ingenuity of society has been exercised upon no subject so intently and perseveringly as in its efforts to reduce the *cost* of transportation. The problem always set, is to obtain the *greatest amount of movement with the least outlay*. For the cost of the former is measured by the extent of the latter. Now the act of consolidation of the roads that compose the Central line, was a palpable violation of public and private right, by the measures it took to increase the cost of the transportation, instead of reducing it. Previous to the act, the aggregate cost of the movement on the Central route required a capital of \$24,000,000. The same movement (with such ordinary increase as is common to all roads) now involves an outlay of \$33,000,000. In other words, the company, to pay the former rates of interest and dividend, must add nearly 30 per cent to their former rates, by the creation of a fictitious capital, upon which, if possible, interest will be paid. The Central company, in fact, arro-

gate to themselves, and exercise the paramount attribute of the supreme power of the State. In other words, they *levy and collect* taxes at discretion, and that, too, without returning a single compensating advantage; an act which no government of a State dare exercise, without, in theory, at least, yielding an equivalent to the payer.

The Central company, therefore, have saddled upon the commerce between Buffalo and Albany a burden of nearly \$9,000,000, by which this commerce in return is not benefited a dollar. It must pay \$550,000 annually, for all time, to the lucky possessors of the Central road. Every person and every pound of freight which passes over the road must pay a portion of this tax. It is levied upon no other principle, than that "might gives right." This tax is liable to be increased to any point that will not defeat its object, by diminishing the movement upon which it is levied.

We know it will be answered that the Central company have not increased their rates, and that the public are as well accommodated as formerly. This, though a specious, is no satisfactory answer. If the fictitious debt had not been created, the Central line would have made important *reductions* in their rates. It makes no difference that no new burden be imposed, so long as a company places itself in a position which renders it impossible to make the concessions that the public have a right to demand. In nothing has greater progress been made in this country than in the lessening the cost of transportation. Not thirty years since, it cost \$100 to transport a ton of flour from Buffalo to New York. The charge for the same service is now reduced to *five* dollars. The amount saved has been gained to the producers and consumers, not to the carrier. Both in theory and in practice are the public the gainers by the reduced cost of transportation. The charges of railroad companies are, as a general rule, graduated by the *cost*, and have been steadily reduced in proportion to an increased movement, and to the great improvement which experience has effected in the ordinary operations of these works.

It is for the reason stated that we have been pained to see such enormous amounts of fictitious capital creeping into a great number of our railroads; in some instances in the manner stated, but oftener in *bonuses* paid by companies in exorbitant contracts for construction, for favors which they feel bound to ask, or for alleged services where no equivalent is returned. We can point to instances where one, two, and even three millions of dollars of stock have been subscribed by contractors, every cent of which was expected to be paid for out of the profits of the work. To make this stock pay high dividends, commerce must be taxed accordingly. This tax, if it is to be measured by the amount of fictitious capital existing in all the roads in the country, must soon come to be a very great and serious burden. It is increasing every day. The eagerness of new and weak companies to push forward their lines, and their ignorance of the actual cost of their works, renders them an easy prey to the skillful operator, whose address and superior knowledge enables him to secure the contract, upon such terms that the cash payments of the company will meet his engagements, leaving the stock which was subscribed, with an ostentatious announcement of his confidence in the road—an entire bonus.

We submit the above remarks, not in a spirit which should call for any unkind feeling toward ourselves. In the cases cited, no improper motive need be imputed. The acts of both were regarded as entirely proper. We are satisfied, however, that they established a pernicious precedent, and one which will be likely to inflict a heavy blow upon the commerce of the country. We have no doubt that the amount of fictitious capital in our roads at the present time equals \$50,000,000.—Supposing this to receive interest and dividend at the rate of seven per cent., an annual burden of \$3,500,000 is thus imposed upon the productive energies of the country. Colossal fortunes are reared in the manner indicated, a fact which accounts for the anxiety manifested on all hands to get hold of lucrative railroad contracts, and for the undertaking of works not called for by any existing business, nor resting upon any permanent basis. The parties in charge hope, however, to give their schemes sufficient vitality to secure their construction, and to inspire such a degree of confidence on the part of the public as will enable them to work off their profits, which they have received in the shape of stocks or securities. This done, and they will be indifferent to any result that may follow. Against a policy so injurious in its consequences to the public, and so demoralizing to the entire railroad interest, we feel called upon to enter our protest at this early day.

Annual Report of the State Engineer and Surveyor on the Railroads of the State of New York.

The length of all the railroads in operation in the State is,	2,432 miles.
The length of railroads laid is about,	2,497
The length of double track in addition to the above is,	664
The number of locomotives in use is,	586
The number of passenger cars in use is,	834
The number of baggage and freight cars in use is,	6,895
The number of miles run by passenger trains is about,	6,594,963
The number of miles run by freight trains is,	4,227,807

Total number of miles run, 10,822,770

The whole number of miles traveled by the passengers is about,	531,572,298
The whole number of miles each ton of freight was moved, or the number of tons moved one mile, is,	246,554,492
The capital stock of which is about,	\$112,038,131 45
do do paid in is about,	61,238,829 22
The amount of funded and floating debts is,	59,669,478 38
The amount paid for construction and equipment, is,	117,797,620 58

The average distance which each passenger traveled would appear from the footing of the report to be 44 1-3 miles, and the average distance which each ton of freight was moved, would appear to be 65 1-3 miles. But these average distances should be slightly increased, in consequence of a portion of the passengers and freight being carried over two or more roads, and the number of passengers and tons of freight being in those cases reported on each road. Twenty-three railroad corporations have made full reports, from which the following statements are made

The length of railroads is,	2,103 miles
The capital stock as per charter,	\$54,748,800 00
do do subscribed,	50,137,263 03
do do paid in,	47,430,865 03
The amount of funded debt is,	43,346,781 27
The amount of floating debt,	7,111,590 64
The amount expended in grading and bridging,	35,457,962 75
The amount expended on superstructure,	7,681,097 75
The amount expended in station buildings,	3,214,424 73
The amount expended in engine houses and machine shops,	1,209,205 76
The amount expended for land damages and fences,	7,781,299 73
The amount expended for engineering and agencies,	3,254,501 64
The amount expended for locomotives and cars,	9,686,520 77
The total amount expended in construction and equipment, including grading and superstructure,	95,466,243 59
The total amount expended in construction and equipment including grading and superstructure during the year,	19,130,411 44
The whole length of the road laid is, miles,	2,098
The whole length of second track laid on the above is miles,	554
The number of locomotives,	490
passenger and emigrant cars,	595
baggage and freight cars,	5,388
miles run by the passenger trains for the year,	5,234,963
passengers carried in the cars as reported,	2,841,147
The number of miles traveled by all the passengers,	397,272,298
miles run by the freight trains,	3,564,807
miles of movement of the freight,	219,451,492
The cost of maintenance of way (17 roads, only reporting this item),	\$1,417,876 65
Charged to passenger business,	\$874,895 51
freight business,	606,893 08
The cost of repairs of machinery on 18 roads reporting is,	1,403,154 81
Charged to passenger business,	\$817,570 51
freight business,	564,771 35
The cost of operating on 19 roads reporting is,	4,159,310 51
Charged to passenger business,	\$2,155,597 92
freight business,	1,945 990 64
The receipts on 19 roads reporting are:	
From passengers,	\$6,799,953 82
freight,	5,890,638 10
other sources,	602,298 46
	13,292,890 38
The payments, other than for construction, on 19 roads were:	
For transportation,	\$6,418,187 61
interest on debts,	2,644,252 63
dividends,	2,217,536 04

The average cost of construction and equipment per mile of road of those railroads which have reported these items, has been as follows:

For graduation, masonry and bridges for 2,066 miles of road,	\$17,162 61
superstructure, including iron for do,	11,915 61
station buildings for do,	1,555 87

*The actual number of passengers carried is considerably less than the number above stated.

engine houses and machine shops for do,	585 29
land and fencing for do,	3,751 30
Total expense per mile of construction and equipment for 2,105 miles of road,	45,091 84

The average cost per mile of single track:

For graduation, masonry and bridges for 2,663 miles,	\$13,315 04
For superstructure, including iron, for do,	9,244 30
For station buildings for do,	1,207 00
For engine houses and machine shops for do,	450 96
For land and fencing for do,	2,922 00
All expenses of construction and equipment for 2,723 miles,	35,059 32

The number of locomotives on 2,076 miles is one to 4 1/3 miles of road.

The number of passenger cars on 2,076 miles, is one to 4 1/3 miles of road.

The number of freight cars on 2,076 miles, is one to 38-100 mile of road.

The average mileage of the passengers for each mile run by the trains, 76.

The average distance travelled by each passenger is nearly 48 1/2 miles.

The average speed of the express trains when in motion is 40 miles per hour.

The average number of tons of freight for each mile run by the trains is 62.

The average distance each ton of freight was moved is 72 1/2 miles.

The average speed of the freight trains when in motion is 16 miles per hour.

The average weight of the freight trains, exclusive of the freight carried, is 160 tons.

The roads reporting the amount of freight carried show an aggregate of 2,831,336 tons passing over those roads, but as the same freight is frequently carried over two or more connecting roads, on each of which it is reported, the footing of these several amounts does not show the true aggregate of the tonnage carried. As near as can be ascertained, about one and a half millions of tons of freight were carried on all of the railroads of the state.

The reports furnish the number of tons of each classification of freight carried, but as the aggregate returns must necessarily contain the errors above mentioned, these aggregates are only useful to show the proportions of each description of freight shipped, which are nearly as follows:

Of the whole tonnage—	
That of the product of the forest is 1/2 per cent.	
" " animals is 20 "	
" vegetable food is,	22 "
" other agricultural products,	4 "
" manufactures,	12 "
" merchandize,	11 "
" unclassified articles,	17 "

The average cost of maintenance of way, per mile of road, is as follows:

	Charged to the business of Passengers.	Freight.
For repairs of road bed,	\$374 31	\$259 61
do buildings,	22 87	17 62
do fences,	11 38	6 83
For taxes,	46 87	38 75

All expenses of maint'e of way, \$455 43 \$322 81
For all expenses both passenger and freight, \$699 12.

The average cost of repairs of machinery per mile, run by the trains.

	Cents.	Cents.
For repairs of engines,	8.78	7.70
do cars,	6.07	7.30
do tools,	0.64	0.70
do oil and waste,	0.97	1.10

For all repairs of machinery, 16.45 16.80

For all repairs both of passengers and freight, The average cost of repairs of machinery per passenger and per ton freight, carried one mile:

For repairs of engines.....	Mills. 1.10	Mills. 1.20
do cars.....	0.80	1.20
do tools.....	0.10	0.10
do oil and waste.....	0.11	0.10
For all repairs of machinery	2.11	2.60
For all repairs, both of passengers and freight, The average cost of operating the road per mile, run by the trains, is :		

	Charged to the business of Passengers. Cents.	Freight. Cents.
For office expenses, stationery...	0.90	1.10
Agents and clerks.....	4.30	5.56
Labor, loading and unloading		9.33
Porters, watchm. & switchm.	2.60	2.31
Wood & water station attend.	0.93	0.79
Conductors, baggage & brakem.	5.00	6.10
Enginemen and firemen.....	5.00	6.10
Fuel, cost & labor of prepar'g.	13.60	15.50
Oil and waste for engines...	1.83	2.24
do cars.....	0.69	1.30
Loss and damage to goods and baggage.....	0.57	1.30
Damages for inj. to persons..	1.20	0.32
do to property & cattle	0.48	0.44
General superintendence....	1.20	1.38
Contingencies	4.50	3.90
All expenses of operating..	42.80	57.67

The same per passenger and per ton, carried one mile.

For office expenses and stationery	Mills. 0.10	Mills. 0.20
Agents and clerks.....	0.54	0.90
Labor, loading and unloading		1.60
Porter, switchmen & watchm.	0.34	0.30
Wood & water station attend.	0.10	0.10
Conductors, baggage & b'men	0.64	1.00
Engine and firemen.....	0.64	1.00
Fuel, cost & labor of preparing	1.70	2.50
Oil and waste for engines....	0.23	0.30
do cars.....	0.10	0.20
Loss and damage to goods and baggage.....	0.10	0.20
Damages for inj's to persons..	0.32	0.05
do to property & cattle	0.06	0.10
General superintendence.....	0.17	0.20
Contingencies.....	0.52	0.65
All expenses of operating....	5.56	9.29

The average receipts per mile of road, are as follows:

From passengers.....	\$3,270 78
Freight	2,833 40
Other sources.....	289 70
	\$6,393 88

The receipts per mile run by the trains are as follows:

From passengers.....	\$1 34
Freight.....	1.73
Passengers, freight, and other sources, 1 56	

The receipts per passenger per mile carried, was 13¼ cents.

" ton of freight, carried one mile..... 27½ "

By comparing the foregoing average expenses with those furnished in the last report, it will be observed:

That the cost of repairs of the track per mile of road, exceeds that of the preceding year nearly fifty per cent., but that the repairs of machinery per mile run by the trains is about the same. The better condition of the track has prevented the expense for repairs of machinery from increasing with the increased rates of speed which are now adopted.

The expenses of operating the roads have increased about twenty per cent. over those of the preceding year, owing to the increased speed of the trains and to the higher price of labor.

The tables which have been prepared, show the comparative cost of construction and repairs, and of operating each road, and the average results

afford very useful and reliable information on these interesting subjects.

It is to be regretted that all the railroad companies do not prepare their reports with the same care and accuracy that is generally observed.

The manner which has been adopted for preparing these tables, furnishes the means of detecting many of the errors, and it is believed that the publication of the errors will be found one of the most effectual means of inducing more care in the preparation of the reports.

In my last report I pointed out some striking discrepancies, and suggested that additional authority should be conferred on the State Engineer, to enable him to inquire into the accuracy of the returns made to his office, I respectfully renew this recommendation.

The following statements, which are exhibited by the tables, will show how widely the cost and expenses of the various roads differ from each other.

Cost of graduation & masonry, per

Highest. Lowest. Average.

mile.....\$35,099 38 \$5,540 57 \$17,162 61

Superstructure—per mile..... 25,218 02 5,040 14 11,915 61

Land and fences, per mile..... 9,448 93 1,080 28 2,750 30

Construction and equipm. p. mile 81,812 16 16,848 98 45,091 84

Construction and equipm't, single track..... 50,131 68 16,040 41

Maintenance of way per mile, run by passeng. trains, cents... 31 39 10 98

by freight do 56 39 8 05

Rep. of machinery per mile, pass. trains, cents.. 25 57 4 31

freight do.. 27 53 7 93

Operat. machin. per mile, pas- senger trains.. 72 79 22 48

freight do 226 79 30 12

Rep. of engines. 14 44 3 27

" cars.... 9 29 0 70

" tools.... 1 59 0 03

By freight trains, rep. of engines 17 68 1 69

cars... 18 02 2 54

tools.. 0 85 0 16

Cost of operating, per mile, run by trains.

Pass. agents, cts. 10 85 1 17 4 30

Fuel..... 29 15 2 89 13 60

Conductor, etc.. 10 49 0 86 5 00

Enginemen..... 8 33 2 96 5 00

Freight agents.. 67 86 1 84 5 56

Fuel..... 52 75 5 58 15 50

Conductors, etc.. 48 12 3 05 6 10

Enginemen..... 40 12 2 75 6 10

To obtain an accurate average, it has been necessary to reject some of the lowest results, and such of the reports as appeared to be evidently erroneous.

The tables, in some cases, show pretty plainly that these errors are caused either by carelessness or design, probably for the purpose of reducing the expense of some particular item.

The number of passengers carried on the cars, as reported by 26 roads, was..... 5,172,154

The number of miles traveled was.. 390,677,283

The whole number of passengers injured was..... 19

Of whom were killed..... 11

The whole number of employees injured was..... 97

Of whom were killed..... 56

The whole number of others injured. 90

Of whom were killed..... 67

Making the total number injured.... 203

Of whom were killed..... 130

One passenger was killed for every 35,516,116 miles traveled, and one passenger was injured for every 48,834,660 miles traveled.

The classification of these accidents is as follows

Passengers. Employees. Others.

Kld. Inj. Kld. Inj. Kld. Inj.

Jumping on or off trains while in motion..... 5 1 9 4

Fell or thrown fm. the train..... 3 1 16 7

Collision of trains, 2 5 7 7

Trains thrown fm. the track..... 1 5 5

Run over while walking or standing on the track, 9 1 46 16

Collision at road crossings..... 1 .. 8 2

At work on, or stand. by trains, 4 14 1 2

Standing on platf. 1 .. 2

Defective machin'y 3 2 4 2

Other accidents.. .. 1 2 6 1

The whole number of persons carried in the cars on 20 railroads was..... 8,174,363

The number of miles traveled was... 397,272,298

The whole number of passengers injured was..... 19

Of whom were killed..... 11

The whole number of employees injured was..... 97

Of whom were killed..... 56

The whole number of others injured was..... 93

Of whom were killed..... 70

Making the total number injured,... 209

Of whom were killed..... 137

One passenger was killed for every 36,115,663 miles traveled, and one passenger was injured for every 49,669,037 miles traveled.

The classification of these accidents is as follows:

Killed. Inju.

Jumping on or off trains in motion.. 14 5

Fell or thrown from trains..... 19 8

Collisions of trains..... 9 13

Trains thrown off the track..... 5 5

Run over while walking, standing, or lying on the track..... 57 17

Collisions with vehicles at road crossings..... 10 2

At work on, or standing by trains.. 5 16

Standing on platforms..... 3 ..

Defective machinery..... 7 4

Other accidents..... 7 3

Total..... 136 73

The Albany and West Stockbridge; Buffalo Corning and New York; Buffalo and New York city; Sacketts Harbor and Ellisburg, and Schenectady and Troy companies, have not included in their reports any statements in relation to accidents; and it is not known to the department whether or not any have occurred upon these roads.

It will be observed how few accidents have occurred to passengers from causes beyond their own control. One passenger was killed from such causes for every 198,636,149 miles traveled, and one passenger injured for every 66,212,050 miles traveled.

Twenty-one per cent only of the accidents causing death, and thirty-three per cent of the accidents not causing death to the employees, were from causes beyond their control.

By a comparison of the ratio of accidents, and miles traveled in 1852 with that of 1853, it will be observed that during the last year, the passengers traveled nearly three times the distance traveled in the former year before meeting with an accident causing death, and one quarter farther before meeting with an accident not resulting in death.

These evidences of the increased safety of rail

road traveling, both to the passenger and the workman, will be as gratifying to the passengers of railroads as they are to the public, especially when it is remembered that the speed of trains has been greatly increased during the past year.

This is partly due to the better condition in which the track and machinery are now maintained, and partly to the observance of greater care on the part of the travelers, and to the exercise of greater skill on the part of the managers and workmen.

WILLIAM J. McALPINE.

Exhibit of the Cincinnati, Logansport and Chicago Railway.

The Cincinnati, Logansport and Chicago Railway is constructing under a perpetual charter granted by the State of Indiana. The Company was organized in November, A. D. 1850, under the title of the Newcastle and Richmond Railroad Company. Under the authority of a law of the State of Indiana, their name was changed to its present name. Its construction is of a first class road, and is now ironed from Richmond to Newcastle, a distance of twenty-eight miles. From Newcastle to Anderson, the recent examination of the engineer shows, \$11,000 will finish the grading and bridging of the road, and lay the iron to the Indianapolis and Bellefontaine railroad, securing a continuous gauge from this city to Indianapolis, and bringing into profitable use, this part of the road within ninety days. From Logansport to the Madison county line, it is reported by the engineer that \$25,000 will finish the road complete, ready for the iron; that the grading, bridging and ties are ready to receive the iron from Logansport to Kokomo, at which point it crosses the Peru and Indianapolis railroad, and could be profitably run so soon as ironed. The principal part of the iron has arrived from England, and is lying at Toledo and Cincinnati, and in transitu from New Orleans and New York.

This road is part of the line of roads directly connecting the city of Cincinnati with Chicago, and will be in effect, when completed, one road, and in one interest from the Lake to the Ohio river. The contracts with the several companies are of the most favorable character, and are published to show those who may become interested in our securities, that the Cincinnati, Logansport and Chicago railway, although occupying an interior position, commencing at Richmond and extending to Logansport, a distance of one hundred and eight miles, and of cheap construction, yet divides upon the basis of distance the profits of all through business, and has finished, in the city of Cincinnati, depot facilities of the best character on the most favorable terms, for freight and passengers. The road, from Richmond to Cincinnati, is most favorably located to suit the course of trade. The Hamilton and Eaton road, keeping down the valley of seven mile, and the Cincinnati, Hamilton and Dayton the valleys of the Miami river and Mill Creek, gives the most favorable down grades to Cincinnati, and enables the same motive power to forward all the accumulation of freights. From Newcastle to Chicago, by reference to the map, it will be seen the line is direct, not exceeding three miles of an increased distance over an air line, and is the nearest practicable route to Chicago—the only departures being caused by the depressions of the streams, and for the purpose of reducing the grades at such crossings. From Newcastle to Cincinnati a departure from an air line was necessary, to avoid high grades, tunnels, heavy curvatures, and secure an easy descent into the valley of the Ohio. Of the growth, magnitude, and commercial importance of the cities of Cincinnati and Chicago we need not dwell upon, or the character of the country tributary to this line of road, further than to say, it is the richest and most fertile portion of Indiana. The connections of this road, as shown by the contracts, extend to the Mississippi river, at Burlington, Iowa, and Lake Michigan, at Chicago. Traversing different latitudes, of an eastern bearing from Chicago, a large amount of travel in the winter will pass down our road to a milder

latitude, to take an eastern route from Richmond or Cincinnati. The vast region of the northwest, that is yet to be populated, the intercourse between these Western cities, the resources, trade, now large, and future dense population of the intermediate counties, are a sufficient guarantee of the value of its stock. But when we add to conjecture the fact, that the stocks of all finished roads at Chicago, and the roads completed at Cincinnati, all bear a premium, and the fact that the Cincinnati, Logansport and Chicago railway connects directly, with ore guage in one interest, those cities, traversing a fertile part of Indiana, now containing one-tenth part of the population of the State, demonstrates the character of the road, the value of the stock, and the undoubted reliability of its securities.

This road, of one hundred and eight miles in length, divided into four divisions—from Richmond to Newcastle, first; from Newcastle to Anderson, second; from Anderson to Kokomo, third; and from Kokomo to Logansport, fourth—presents two divisions, second and fourth, so near finished that it requires an expenditure of only eleven thousand dollars upon the grading and bridging to prepare it for the iron, and have, with the expense of laying track and ballasting (with the first division now running), seventy miles of road brought into use. The iron being purchased and bonded could be forwarded, and these two divisions completed in ninety days. The third division, from Anderson to Kokomo, will require an expenditure of some fifty thousand dollars to prepare it for the iron, and open up the entire line; this can be accomplished by the first of October next. The road being of the Ohio gauge, will form, at Anderson, a connection with the Indianapolis and Bellefontaine road, of the same gauge, and give a through line, from Cincinnati to Indianapolis, of uniform gauge, which would, for freights, give this a decided preference, as on all other lines between these two cities bulk is broken. From Logansport to Kokomo, a distance of twenty-one miles, could be run with profit until the completion of the third division, as this large, prosperous place has no finished railroad outlet, and this would give quite a direct line with the Peru and Indianapolis road to Indianapolis.

EXPENDITURES NECESSARY TO COMPLETE THE ROAD.

1. From Richmond to Newcastle 28 miles, finished and in successful operation, the aggregate cost of same, being \$575,009.52, exclusive of machinery.

2. From Newcastle to Anderson, 21 miles: Grading, Bridging, &c., required to finish this division ready for the iron, as per report of John Meinsenger, Resident Engineer,

\$11,958

Duties on 22 miles Iron,..... 26,400

Freights on ditto to Line of Road,..... 8,800

Laying down 22 miles Iron,..... 6,600

Ballasting 22 miles Road,..... 15,400

\$69,158

All the Iron for this division is now lying in Bond at Cincinnati and Toledo, and there are spikes sufficient on hand.

3. From Anderson to Kokomo, 38 miles: Grading, Bridging, &c., including superstructure complete for the iron, as per reports of John Meinsenger and T. Lincoln, Resident Engineers, \$50,000

Duties on 38 miles of Iron,..... 45,600

Ocean Freights on 3500 tons yet

to arrive,..... \$40,000

Inland Freights on 3500 tons yet

to arrive,..... 26,500

66,500

Chairs and spikes for laying down 38

miles,..... 12,540

Laying track on 38 miles,..... 11,400

Ballasting do do 26,600

\$212,640

The company have in this country 8 miles of

Iron more than is required for completing divisions

2 and 4, to be applied to this division. The de-

ficiency is yet to arrive, being balance on a contract for 5500 tons, bought on a credit of 15 months from date of each bill of Lading.

4. From Kokomo to Logansport, 21 miles: Grading, Bridging, and superstructure complete, ready for the iron, and will therefore require duties on 20 miles Iron, (one mile being already finished.)

\$24,000

Freights from Toledo,..... 3,750

Laying track,..... 6,000

Ballasting,..... 14,000

\$47,750

The Iron for this division being all now in Bond at Toledo, can be shipped by canal to Logansport, and laid down during July, when the whole division can be brought into profitable use immediately—connecting, as it does, at Kokomo with the Indianapolis Road.

RESOURCES.

Real Estate in Cincinnati,..... \$143,400 00

Real Estate out of Cincinnati,..... 13,400 00

Cash installments due from the Cincinnati, Hamilton and Dayton

Railroad, the balance of their

subscription being payable in machinery at cash price, which will

be sufficient at present to stock

the line,..... \$125,000 00

Machinery now thrown out of use

by change of gauge, as per contract with the Cincinnati, Hamilton

and Dayton Railroad; this machinery is now for sale, and

will cash,..... 50,000 00

Original subscriptions of stock not

collected, being mostly last install-

ments not yet due,..... 200,000 00

Bills Receivable,..... 250,000 00

\$238,000, ten per cent. income

Bonds not yet sold,..... 288,000 00

Resources aside from sale 6 per cent

Sterling Bonds,..... \$1,069,800 00

\$231,200, six per cent Sterling

Bonds at \$4.44 and 90 cents to

the dollar,..... 923,874

Deduct amount required to

be paid in London, on the

Iron necessary to com-

plete the road,..... 395,000 528,874 00

\$1,598,674 00

LIABILITIES

And amount required to complete the Road.

Domestic debt,..... \$377,737

To finish division No 2,..... 69,158

do do No 3,..... 212,640

do do No 4,..... 47,750 707,285

Leaving a surplus of \$890,389

To be appropriated as follows: Build a Bridge

across Wabash river, enlarged Depots at Logans-

port and other important points; to accommodate

the increasing business of the Road; Retire the

issue of \$300,000, of Newcastle and Richmond

Bonds; Redeem the issue of \$300,000. Ten per

cent income Bonds now offered.

The Railroad Adjustment—Cleveland, Philadelphia and Erie.

Messrs. CASE and STONE have just returned from Harrisburgh, bringing the gratifying intelligence of the final and permanent settlement of the railroad difficulties at Erie. And we think the parties to the arrangement have been singularly fortunate, considering the embarrassed state of the questions involved, in agreeing to a plan of adjustment which seems so well suited to accommodate all interests concerned, and to produce friendship and concord where bitterness of feeling has so long prevailed.

The leading points in the arrangement agreed upon are as follows:

1st. The Cleveland & Erie Railroad Company are to resume that portion of their track within

the State of Pennsylvania, and to enjoy the right of way through Erie, without break of gauge, subject only to such taxation as may, by general law, be imposed upon all the railroads of that State.

2. The Cleveland and Erie Company are to subscribe five hundred thousand dollars to the stock of the Erie & Sunbury Railroad to be paid in their bonds, bearing seven per cent. interest—the Erie & Sunbury Company guaranteeing a return thereon of six per cent.

3d. A track is to be laid to the harbor of Erie.

The mutual advantages and concessions of the settlement, are obvious. Philadelphia, Erie and Cleveland, have special cause for congratulation in the important aid thus secured for the construction of the Sunbury road. This will open a valuable line of travel and trade, and the arrangement made so interlaces the interests of the three cities named as to make this great line at once a bond of harmony and union.

Messrs CASE and STONE, while at Harrisburgh and Philadelphia, communicated freely with Philadelphia and Erie gentlemen, and a disposition was manifested all round to remove existing asperities, and unite in a satisfactory settlement. In Philadelphia, the subscription to the Erie and Sunbury road was not held to be as important as the connection secured to them with the great line of western travel; and Cleveland will assuredly hold it to be no unimportant advantage that one outlet to Philadelphia is secured for business taken through our city and over the line of roads particularly interested in this settlement, thus securing to us the benefit of a competition with the more southern lines.

All will rejoice at the fortunate termination of the difficulties; and Messrs. Kelly, Witt, Stone and Case, through whose exertions it has been effected, are entitled to the thanks of the community.—*Cleveland Herald*.

Sewall & Crehore

CIVIL ENGINEERS,
ST. PAUL, MINNESOTA.

JOSEPH S. SEWALL. CHAS. FRED. CREHORE.

Lyon's Tables of Cubic Contents, Etc.

These valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1 gives correct mean heights of cross sections with either two or three cuttings taken. Table 2 finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise.—Price \$1.50. 21.17

Railroad Iron.

500 TONS, best English make, 57 lbs. per lineal yard, now in port. For Sale by

THEODORE DEHON, 26 1/2 Broadway.
Contracts made as above for Rails delivered at any English or American port at lowest rates and customary credits. 21.57

Notice to Contractors.



PROPOSALS will be received at the office of the North Western Railroad Co., in Butler, Butler Co., Pennsylvania, until the 7th of June, 1854, inclusive, for the grading and masonry of that portion of the North Western Railroad, extending from Blairsville to Freeport, a distance of 35 miles, comprising some heavy excavations, bridging and two tunnels varying from 1000 to 1400 feet each. Plans profiles and specifications will be ready for examination on and after the 29th inst., at the Engineer's Office, in Blairsville,—Indiana County, and Butler.

This line offers superior advantages to Contractors, the country being healthy and easy of access, and provisions very cheap.

At the same time and place, some of the heavy sections between Freeport and Butler and west of Butler will be offered for letting.

MALONE, PAINTER, CLARK & GONDER.

21.21

D. Mitchell, Jr.,

Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley Railroads, Pittsburg, Pa.

Samuel McElroy,

Assistant Engineer, New York Navy Yard.

Charles B. Stuart,

Civil Engineer, New York.

Edward W. Serrell,

Civil Engineer, 157 Broadway, New York.



No. 22 Pear Street, below Walnut, PHILADELPHIA.

MONTREAL & NEW YORK AND Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6 30 a.m. and 6 p.m., arrive at 8 a.m. and 7 30 p.m.

Leave Plattsburgh for Montreal 7 30 a.m. and 4 p.m., arrive at 10 a.m. and 6 50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and inter mediate station.

Trains connect at Moores Junction with Northern (Ogdensburgh) Railroad for Ogdensburgh and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequaled for comfort and dispatch, and attended with less fatigue and delay than any other. It possesses moreover the advantage of a short Ferriage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.

For particulars see Freight and Passenger Tariff.

BAGGAGE checked through.

H. W. NELSON, Superintendent.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to THOS. CHAMBERS, President.
September, 1850.

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN C. Engineer
Huntingdon May 6 1854, 4t

To Contractors.

PHILADELPHIA, WILMINGTON AND BALTIMORE RAILROAD OFFICE.—PHILADELPHIA, April 21st, 1854.—PROPOSALS will be received at this office until May 25th, 1854, for driving the piles, protecting the foundations, and for the Masonry above and under water, of the proposed Bridge across the Susquehanna River at Havre-de-Grace, Maryland.

Also, for the Grading and Masonry of the new location of the Road adjoining the Bridge, and of the Port Deposit Branch Railroad.

Plans, profiles and specifications may be seen at the Engineer's Office, in Havre-de-Grace.

S. M. FELTON,
Pres. P. W. and B. R. R.

17,4t

Notice to Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND TEXAS RAILROAD COMPANY,
Monroe La., March 8th, 1854.

SEALED PROPOSALS will be received at this office until the 1st day of June next, at 2 o'clock p. m., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty miles, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the sections, or any portion thereof, not less than one mile, and those proposing to take stock of the company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN.

President.

P. J. TOURNADRE,

Chief Engineer.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,

287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.

N. York and N. Haven R. R.

NOTICE OF SUMMER ARRANGEMENTS,

Commencing Monday, May 9, 1854.

TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A.M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A.M.—Commutation from New Haven.
9.10 A.M.—Special for Port Chester.	6.15 A.M.—Accommodation from New Haven.
11.30 A.M.—Accommodation for New Haven.	8.15 A.M.—Accommodation from New Haven.
3.00 P.M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	9.35 A.M.—Express from New Haven, Stopping at Bridgeport, Norwalk and Stamford.
4.00 P.M.—Accommodation for New Haven.	1.07 P.M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
5.00 P.M.—Express for Boston, stopping at N. Haven.	4.00 P.M.—Special, from Port Chester.
5.35 P.M.—Commutation for N. Haven.	4.00 P.M.—Accommodation from New Haven.
6.30 P.M.—Special for Port Chester.	9.30 P.M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Sup't.
New Haven, May, 1854.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and Warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.
December 18, 1852. WM. A. SAMPSON, Agent.

New York and Erie R. R.

PASSENGER TRAINS
leave Pier foot of Duane street,
as follows, viz:—
BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without
change of baggage or cars.
Dunkirk Express, at 7 a. m. for Dunkirk.
Mail, at 8½ a. m. for Dunkirk and Buffalo, and intermediate
stations.
Way Express, at 12½ p. m. for Dunkirk.
Rockland Passengers, at 3.30 p. m., (from foot of Chambers
Street) via Piermont, for Suffern and intermediate stations.
Way Passenger, at 4 p. m., for Otisville, and intermediate
stations.
NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.
Emigrant at 6 p. m.
On Sundays only one Express Train—at 6 p. m.
These Express Trains connect at Buffalo with first-class
splendid Steamers on Lake Erie for all ports on the Lake; and
at Dunkirk with the Lake Shore Railroad for Cleveland, Cincin-
nati, Toledo, Detroit, Chicago, etc.
D. C. McCALLUM, General Supt.

Great Western Mail Route.

SIXTY MILES DISTANCE SAVED TO CHICAGO AND ST. LOUIS. THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD LINE, carrying the Great Western United States Through Mail, have the following staunch first-class Steamers running on Lake Erie in connection with the NEW YORK AND ERIE RAILROAD from Dunkirk, touching at Cleveland, and connecting with their Road at Toledo, and connecting directly with the CHICAGO AND ROCK ISLAND RAILROADS at Chicago, in the same Depot, thus forming a Daily Line for Passengers and Freight from New York to the Mississippi River. **NIAGARA**, Capt. Miller; **EMPIRE**, Capt. Mitchell; **KEYSTONE STATE**, Capt. Richards; **LOUISIANA**, Capt. Davenport. Also a DAILY LINE FROM BUFFALO DIRECT TO MONROE, by those well-known magnificent Floating Palaces, **EMPIRE STATE**, J. Wilson, Commander, leaves Buffalo Mondays and Thursdays; **SOUTHERN MICHIGAN**, A. D. Perkins, Commander, leaves Buffalo Tuesdays and Fridays; **NORTHERN INDIANA**, I. T. Phetratt, Commander, leaves Buffalo Wednesdays and Saturdays.

One of the above splendid Steamers will leave the Michigan Southern Railroad Line Dock, at 9 o'clock, P. M. every day, (except Sundays) and run direct through to Monroe without landing, in 14 hours, where the LIGHTNING EXPRESS TRAIN will be in waiting to take passengers direct to Chicago in 8 hours, arriving next evening after leaving Buffalo.

Running time from New York to Buffalo..... 14 hours.
Running time from Buffalo to Monroe..... 14 hours.
Running time from Monroe to Chicago..... 8 hours.

Total..... 36 hours.

Connecting at Chicago with a fine line of Low Pressure Steamboats to all places north of Chicago to Green Bay; also with Chicago and Rock Island Railroad to La Salle, and there connect with Illinois River Line of Steamboats, or Express Trains of ILLINOIS CENTRAL AND CHICAGO AND MISSISSIPPI RAILROADS, or connecting at Rock Island with regular line of steamers for all points above and below, making the cheapest and most direct Route to St. Louis, Rock Island, Minnesota, and the Great West.

THE AMERICAN LAKE SHORE RAILROADS from Buffalo and Dunkirk connect with this line at Toledo, forming the only direct and continuous line of Railroads from the Atlantic Seaboard to the Valley of the Mississippi.

Running time to Chicago, 36 hours; to St. Louis, 56 hours.

FOUR DAILY TRAINS by Railroad all the way.

TWO DAILY LINES by Steamers on Lake Erie.

Thus the Traveller and Shipper can see at a glance that no other Line can enter the lists as competitors.

Passengers Ticketed Through from New York with privilege of stopping over at any point on the route, and resuming seats at leisure, either by the New York and Erie Railroad, via Dunkirk, New York and Erie and Buffalo and New York City Railroad via Buffalo; People's Line of Steamboats, Hudson River or Harlem and New York Central Railroads, via Albany and Buffalo.

For any further information, Through Tickets, or Freight, apply at the Company's Office, No. 193 Broadway, corner of Dey st., N. Y., to
JOHN F. PORTER, General Agent, or
L. P. DUNTON, Ticket Agent.

Notice to Contractors.

PROPOSALS FOR THE ENTIRE CONSTRUCTION and equipment, or the graduation, bridging and masonry, separately, either in whole or in part, of the Mississippi and Tennessee Railroad, (extending from Memphis to Grenada, Mississippi, about 97 miles,) will be received at the office of the Company, in Memphis, till the 20th of July next. Proposals for the entire construction and equipment, and otherwise as favorable, will have preference. Profiles and estimates of the first 60 miles may be seen on application at the Engineer's Office in Memphis. Bidders must furnish satisfactory evidence of their ability to complete the work.

MINOR MERIWETHER,
Chief Engineer.

May 4th, 1854.

Notice to Contractors.

PROPOSALS will be received for all the heavy work on the Blue Ridge Rail Road, South Carolina; Blue Ridge Rail Road, Georgia; Tennessee River Rail Road, North Carolina; Knoxville and Charleston Rail Road Tennessee. The above lines of rail-way are consolidated and under the management of one Company, Extending from Anderson South Carolina, via Clayton, Georgia, Franklin North Carolina, to Knoxville Tennessee, a distance of 194 miles. That part of the road from Anderson South Carolina, to the Turniptop Mountain, a distance of 40 miles is principally earth excavation, of about equal quantities of cut and fill, with several bridges. From the Turniptop Mountain to the Rabun Gap, a distance of 24 miles, the work is very heavy, there being on the line one tunnel of 5800 feet, one of 1400 feet, and one of 400 feet in length; a suspension bridge across the Chatunga River 500 feet long, with some very heavy earth and rock cuts. The rock in the Tunnels is gneiss stratified. From the Rabun Gap to twenty miles below Franklin, a distance of 50 miles, the line follows down the Tennessee River; the class of work is principally side hill excavation, some of which is rock; their will also be several bridges. From the point 20 miles below Franklin to Hardens, a distance of 35 miles, the line follows the Tennessee River the entire distance, causing heavy side rock excavations. On this portion of the line will be several expensive bridges, and a tunnel of about 1000 feet. From Hardens to Knoxville, a distance of 45 miles, the line follows the river about eight miles, then leaves it, running across the Chilbona mountains almost a north line to Knoxville; this portion of the road is heavy work, with about equal quantities of cut and fill, an expensive bridge 1000 feet long and 45 feet high, crossing the Holston River at Knoxville. The character of the rock from Knoxville to Hardens is limestone, and from Hardens to Franklin gneiss rock stratified, and from Franklin to Anderson, stratified sandstone and gneiss rock. The character of the earth is sandy and clay loam. The line for the whole distance runs through high table lands, well settled, remarkable for its health, good water and ample resources for subsistence. The above line of railway offers great inducements to experienced contractors. The undersigned will be prepared to receive proposals and enter into contracts for the graduation, bridging, tunneling and masonry for the heavy portion of the line, from and after the 1st day of May next, at Knoxville Tennessee, Franklin North Carolina, and Pendleton South Carolina, and will continue at such places, until the same is under contract. Profiles and maps of approximate location can be seen at each of the above places after the 1st day of May. Proposals are asked with cash payments, also eighty per cent cash and twenty per cent in the Capital Stocks or Bonds of the Company. All communications prior to may 1st must be addressed at Pendleton South Carolina.

4,13

ANSON BANGS & Co.

To Contractors.

The Virginia Central Railroad Co. proposes to contract for taking up about 36 rails of superstructure now laid with the strap rail, and relaying with a heavy rail, the contractor furnishing every thing except the ties which will be distributed by the company.

Sealed proposals will be received at the office of the company in Richmond, until the 24th day of May next, at 9 o'clock.

The Rail to be used must weigh from 55 to 60 lbs. to the yard. Payments to be 50 per cent. cash, and 50 per cent. in the Bonds of the company running 30 years, and secured by a mortgage on the whole property of the company.

Specifications may be obtained at the Engineer's office at Richmond, after the 10th day of May.

CHARLES ELLET, Jr.
Chief Engineer.

April 26th 1854.

8t.18

To Contractors.

PACIFIC RAILROAD OF MISSOURI
THIRD AND FOURTH DIVISIONS.

It is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. ALLEN, Pres.
THOS. S. O'SULLIVAN, Chief Eng.
Pacific R.R. Office, St. Louis, Feb. 1854.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—special red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

Ogdensburg, N. Y., April, 1853.

G. PARISH.
15,3m*

S. SEYMOUR & CO. GENERAL RAILROAD AGENCY, Office, Metropolitan Bank Building. No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years.
OHIO AND MISSISSIPPI R.R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R.R. STOCK.

SCIOTO AND HOCKING VALLEY R.R. STOCK.

SCIOTO AND HOCKING VALLEY R.R. FIRST MORTGAGE CONVERTIBLE BONDS, at 11 years.

LOUISVILLE AND NASHVILLE R.R. STOCK.

BUFFALO AND STATE LINE R.R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors, locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of weight or pattern as may be required.

VOSE, PERKINS & CO.,
9 South William Street.
New York, June 1, 1851.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West,
W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
Feb. 18. 1m.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day. On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloohah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

MR. WILLIAM NAISH, of Newport, Monmouthshire Inspector of rails, begs most respectfully to acquaint Importers of rails, engineers and others connected with the railroads of America, that he still continues to execute orders of inspection, throughout the various districts of South Wales and adjacent Iron works, and confidently refers to the satisfaction which his supervision has given during the last ten years to exporters of rails, and others below named; as a proof of the fidelity, carefulness and promptitude of his inspections.

BARING BRO. & CO., London.

PALMER, McKILLOP, DENT & CO., London.

LEWIS HOPE, Esq.

COLLMAN & STOHLETERFOHT.

HON. JAS. WADSWORTH, Buffalo New York

JAMES SPENCE, Esq., Liverpool.

NAYLOR, VICKERS & CO. " 191y

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot gauge, 22 tons weight, 16 + 20 inch Cylinders, and 5½ and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.
Dec. 24

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,

No. 61 Camp Street,

New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N.Y. 191y

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of

Bolts and Bolt Ends

for Sale by

BRIDGES & BROTHER,

64 Courtland st., N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

Or BRIDGES & BRO.,

64 Courtland st., New York,

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality by THOMAS HUNT,

No. 53 Fulton Street,

New York.

Notice To Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND TEXAS RAIL ROAD COMPANY
Monroe, La., March 8th, 1854.

SEALED PROPOSALS will be received at this Office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty mile, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the entire sections, or any portion thereof, not less than one mile, and those proposing to take stock of the Company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the Company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract; or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,
President.
P. J. TOURNABRE,
Chief Engineer.

7c14

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

JOHN H. HICKS,
90 Beaver street.

2d Feb'y.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in June and August, for this port—for sale by

BOORMAN, JOHNSTON & CO.,
80 Broadway, New York.

**Brass Tubes for Locomotive
and Marine Boilers.**

THE undersigned having been appointed Agent for the highest respectable manufacturers Messrs. Allen, Everitt & Son or Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to

JOHN H. HICKS,
90 Beaver str.
March 1854.

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio,) issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburg, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 22]

SATURDAY, JUNE 3, 1854.

[WHOLE No. 946, VOL. XXVII.]

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Pacific Railroad	337
Patent Law—Winans vs. Denmead	342
Adaptation of Power on the Western Railroads	343
Stock and Money Market	344
Ohio and Mississippi Railroad	344
Coal Railroad to New York	346
Express Locomotives	346
Lehigh Coal and Navigation Company	347
Locomotives for Burning Anthracite Coal	347
Journal of Railroad Law	348
Elevated Railroad for Streets	348
Freight Locomotives on the N. Y. & Erie R. R.	349
Railroad in Arkansas	349
Evansville and Indianapolis Railroad	349

American Railroad Journal.

Saturday, June 3, 1854.

Pacific Railroad.

The subjoined paper, upon the subject of the proposed railroads to the Pacific, was read before the American Geographical Society, on Thursday evening, the 1st inst., by H. V. Poor, Esq., *Editor of the Journal*. It was illustrated by a magnificent map of the society and by profiles of the Mississippi, Missouri, Ohio, Tennessee, Cumberland, Arkansas, Platte, and Rio Del Norte rivers; and also by profiles of the several routes proposed. The paper derives the greater part of its value from the illustrations used on the occasion. We have, however, concluded to copy it into the Journal, erasing such allusions to the maps and profiles as would not be readily understood without them.

We would refer the reader to a valuable map prepared by E. F. Johnson, Esq., and which accompanied the number of the Journal of the 12th of November, last. Subscribers to the Journal since that date can be furnished gratuitously with copies of this map, on application by letter or otherwise.

In an age particularly distinguished for its progress in the mechanical sciences, it is natural that an achievement which presents the greatest difficulty, to be followed by the greatest reward that has yet crowned human effort, should possess a paramount interest with a people as utilitarian

as our own. It is characteristic of them that they never rest satisfied until they have brought into their service whatever improvements in the economy of life, science has discovered and art wrought out. The pioneer, as he moves forward over the prairies of the West, carries with him the railway,—as necessary in his catalogue of wants as are the axe and the plough. The railway keeps pace with the frontier line of settlement; so that the crop this year, of the frontier farm, in the great march of civilization, has only to be held to the next, to be sent whizzing to the Eastern market in the rail-car, at the speed of 30 miles to the hour!

The progress of railways kept pace with the onward march of our people, till the Mississippi was fairly crossed, when the intermediate territory to the Western ocean, was cleared at a single bound. Upon its shores have been achieved in five years, what have required two hundred to accomplish upon the Atlantic coast. Five years have witnessed the birth and growth, to the features of a mature manhood, of a mighty State upon the Western slope of the continent, which, in addition to more than *fabulous* wealth in its soil, commands the trade of the Pacific Ocean and the innumerable lands it washes. The focal point of all this commerce is the little island upon which we stand. To reach and enjoy this commerce, we have been unable to bring into use the greatest of all human contrivances—the *railway*. So accustomed have we become to the luxury of its use, that we cannot visit a neighboring village, a few miles distant, without it. It is proof conclusive that no business nor people worth visiting exist, where no such work is found. If we have, perchance, a country friend, whose *locus* cannot be found in a guide-book, we coolly inform him that when the railroad finds him out, we will try to. What wonder, then, that we are impatient at being cut off from California, from Oregon and Washington Territories, from the Pacific Ocean—its beautiful shores and islands teeming with wealth and busy populations, and ready, if we could reach them, to pour a flood of wealth into the lap of our people. "We must have a railroad to the Pacific," is the demand of a great nation. How shall we get it? is the problem before us for solution.

The American Geographical Society has not

shown itself indifferent to a subject which is exciting such general and profound interest. The object of its organization was, to collect and diffuse "*geographical information*." It was felt that there was no more appropriate or interesting field for their labors, than that portion of the country through which is to be constructed the great commercial avenue to the Pacific. As the most important step toward accurate geographical ideas is an intelligible and authentic map of the earth's surface, one of the first labors of our infant society was to construct the magnificent one which now hangs upon our walls. This map, though unfinished, is by far the most complete of the kind yet executed of the western portion of the territory of the United States, and presents to the eye an amount of information that can be had from the perusal of no other single work. The construction of such a map was a proper initiative for a society like our own. When completed, so as to embrace the whole of the United States, with the territories contiguous, its value, as a means of diffusing correct information, will repay, not only its cost, but all the efforts that have yet been put forth to found and rear the "Geographical Society."

"A railroad to the Pacific" is a complex proposition, in which are united numerous elements entirely *dissimilar* in themselves. One of these, and a very important one, is the degree of inclination of the earth's surface upon the whole, or any part of the line. Another are the obstacles in the way of a *direct* line. A third is the ability of the route to supply to the road wood and water. A fourth are the expedients to be resorted to for the crossing of rivers and mountains. Considerations like these belong to the *scientific* or engineering department of the road. To another department belongs the duty of providing the ways and the means; a third, the general administration of affairs. In a work like the Pacific railroad, it is not easy to say which of the departments involve the greater difficulties. The engineering, probably, presents the fewest, as, at the present day, nothing is difficult or impossible with *money*. The tunneling of the mountain barrier itself is a mere question of dollars and cents. These supplied, and the engineer has nothing before him but *plain sailing*.

It will be seen, from what I have said, that were I competent, I might occupy a month of your time in discussing the subject of a Pacific railroad, without saying all that was interesting or desirable to be known. A single paper, for an hour's entertainment, were it only to touch upon the various heads embraced in the general proposition, would be valueless for its superficiality. Were it to attempt to do more, it would be insupportable from its prolixity. I shall not attempt either, but what will be much more interesting and useful, I propose to offer a few remarks in description of some of the leading characteristics of the country upon the several routes proposed, with such observations as these may naturally suggest, bearing upon the general question. In other words, I propose to read a brief paper, the principal object of which will be, to illustrate the subject of a railroad by the use of the map and profiles which you have before you.

The United States, in reference to its geography, may be divided into three grand, well-defined divisions, each possessing characteristics peculiar to itself. They may be termed generally the *Eastern*, *Middle*, and *Western* divisions. The first lies between the crest of the great Allegheny ridge and the Atlantic; the second extends from the former to the commencement of the great American desert, at the base of the Rocky Mountains; the third is, the intermediate territory from the last to the Pacific Ocean.

With the first and second of these divisions most of us are personally familiar. There are some strong points of resemblance between them. They have a nearly uniform climate upon similar parallels. They are sufficiently watered from rains, and wooded, for agricultural purposes. They are both penetrated by navigable rivers. The surface or topographical features of both are favorable to the easy construction of railroads and ordinary highways. In these particulars, these divisions are in fact so homogenous in their leading aspects, that, contrasted with the third, they may be regarded as one.

The third grand division presents a most striking contrast to the two already described. Perhaps its most remarkable characteristic is its great general elevation above the level of the sea, as it is to this elevation that many of its other peculiarities are due. This feature must be thoroughly studied and understood, in order to form a correct idea of the character of the country on the several routes, and the difficulties in the way of the construction of a railroad.

The Mississippi river, in connection with its main affluent, the Missouri, is the dividing line between two great *planes*, one descending to its left bank from the summit of the Alleghenies, the other to its right, from the summit of the Rocky Mountains. The uniform and gradual descent of different portions of this great river is very remarkable. From the Gulf of Mexico to the grand falls of the Missouri, there is no obstacle to the running of light-draught steamboats at all seasons of the year when the river is unobstructed by ice. From the mouth of the Ohio to the Gulf, a distance of about 1200 miles, the fall is 275 feet, or nearly 2 3-10 inches to the mile. From the mouth of the Ohio to the Grand Falls of the Missouri, and to the Falls of St. Anthony on the Mississippi, the descent of the two rivers is nearly uniform; that

of the Missouri being the greatest by about one inch in the mile. From the Falls of St. Anthony to the junction with the Missouri, the descent is about 495 feet in a distance of 760 miles, or at the rate of 6 1/2 inches to the mile. From the Grand falls to its mouth, the descent of the Missouri is about 1900 feet in 2600 miles, or at the rate of 7 3-10 inches to the mile. Gov. Stevens estimates the elevation of the river, at the mouth of the Yellow Stone, at 2000 feet above the sea, and at the Grand Fall 2300 feet. As the distance between these points is about 700 miles, the descent of this portion of the river is only about one-half as great as it is near its mouth. We presume that the first few hundred miles of the Mississippi, immediately below the Falls of St. Anthony, exhibits a similar peculiarity. If so, the upper portions of both rivers show a remarkable fact in the topographical features of this country, and present a striking exception to a general law which seems to be observed in the fall of rivers.

At the Grand Falls of the Missouri, the river descends over a series of cascades 368 feet, in the course of 18 miles. Above the Falls, the inclination of the river does not appear to increase very rapidly, as it is navigable for canoes for five hundred miles, and to a point within 38 miles of the waters of Clarke's Fork of the Columbia. This was the route pursued by Lewis and Clarke, on their way to the Pacific. At this point their expedition left the river, the elevation does not probably exceed 3168 feet. From thence to the source, in a distance of about 25 miles, the rise is probably not less than 3000 feet. The uniform inclination of this great river, throughout its whole course, constitutes one of the most remarkable facts in the topographical features of the North American continent.

As before stated, the Mississippi and Missouri rivers mark the boundary of two great planes, reaching to them from the summits of the mountain ranges on either side. A striking contrast presented by these planes, is in their *dip* or inclination to the point of their intersection, and their geological structure. While there is a great difference in the elevations of their upper angles, there is still greater difference in the inclination of the rivers which traverse them. The rock forming the Allegheny ranges being chiefly limestone, the rivers that fall from them have cut for themselves deep channels, far below the general surface of the country. They consequently have a gentle flow, with sufficient water to render them navigable for a great portion of the year. The main tributary entering the Mississippi from the East is the Ohio. The descent of this river from Pittsburgh to its mouth, a distance of 975 miles, is 424 feet or at the rate of 4 32-100 inches to the mile. Following up the Allegheny to *Olean*, in the State of New York, the head of steam navigation, a distance of 250 miles, we find the descent rapidly increasing. The elevation of this point is 1403 feet above the sea, or 704 above Pittsburgh, showing a fall of 2 feet 8 inches to the mile. In 50 miles more we reach the sources of the river, in the town of Friendship in this State, 1678 feet above the sea, and 2456 miles from the Gulf.

If we examine the Tennessee and Cumberland rivers, which, with the Ohio, drain the greater part of the western slope of the Allegheny range, we find them possessing the same general charac-

teristics as the Ohio. The Tennessee river at Chattanooga, 600 miles from its mouth, is 351 feet above the Ohio, showing a fall of about 7 inches to the mile. Above Chattanooga, the ascent increases rapidly; and upon entering the State of Virginia, about 300 miles from Chattanooga, an elevation of about 1000 feet is obtained. From the State line to its source, the ascent is about 1550 feet, in about 125 miles.

The Cumberland, lying within the circle described by the Tennessee, has less descent; the fall from Nashville to its mouth being only 104 feet, in a distance of 240 miles, or at a rate of 5 1-5 inches per mile. The inclination of the head waters of the Cumberland river does not differ much from those of the Tennessee.

I have been particular to give you the inclination of the rivers draining the western slope of the Alleghenies, or the great eastern plane of the Mississippi, that you may better appreciate the consequences that result from the greater slope of the corresponding plane upon its western side. The slight descent of the Ohio, Tennessee and Cumberland rivers, give them gentle currents and deep channels, peculiarly adapting them as avenues of commerce. On the other hand, in ascending the table-lands which fall towards the right bank of the Mississippi and Missouri, we find that the rivers which traverse them have an inclination nearly ten times greater than those which enter the former upon the left. For the purposes of this paper, the comparison will be confined to the Arkansas and Platte, as these define two routes for the proposed road, and constitute, from their positions and general directions, appropriate contrasts to the Ohio, Cumberland and Tennessee, and also afford the best illustration of some of the peculiarities of the great western plane they water.

The Arkansas river, entering the Mississippi only about seven hundred miles above its mouth, within what may be termed the great *della* of the Mississippi, and at an elevation of upwards of 150 feet above the sea, the lower portion of it presents some of the characteristics of its recipient. It has a steamboat navigation to *Fort Smith*, about 500 miles, by the course of the river.

In this distance the descent is probably 250 feet. In longitude 97° west from Greenwich it probably reaches about the same altitude as the *Platte* River at its mouth in longitude 96°. At these respective points the two rivers present similar characteristics, having rapid currents over wide sandy bottoms with low banks, and are entirely unfitted for any commercial purposes. Their elevations above the sea are about 1000 feet. As we ascend the great *plane*, the two rivers maintain nearly the same altitude, showing a remarkable uniformity in the general surface of the country. From the mouth of the Platte to Fort Laramie the distance is about 575 miles, and the descent of the river 3,550 feet, showing a rate of fall of about six feet to the mile, or sixteen times greater than the Ohio. From Fort Laramie, to the South Pass, the descent is at the rate of 10 1/2 feet to the mile in 185 miles; the crest of the Rocky Mountains at this point being 7,490 feet above the Sea. The descent of the head waters of the Platte are nearly five times greater than that of the head waters of the Ohio. The rate of the fall of the *Arkansas* very nearly corresponds to that of the *Platte*. From the great Bend of this in longitude 98 west

from Greenwich to Bent's Fort, which like Fort Laramie, lies at the base of the mountains, the descent of the river is 2,300 feet, in 311 miles, or, at a rate of $7\frac{1}{2}$ feet to the mile. From Bent's Fort to the summit of the *Sangre De Christo* Pass, the descent is 4,942 feet in 121 miles, which is at the rate of 40 feet to the mile. Bent's Fort is 3,858 feet above the sea, and the summit of the *Sangre De Christo* Pass, is 8,800 feet according to Capt. Gunnison. The fall of the upper portion of the Arkansas is more than twenty times greater than that of the Allegheny.

Another great river possessing characteristics very similar to the above, though having a different direction and outlet, is the Rio Del Norte. All three take their rise in the same great elevated Plateau, the Platte and Arkansas draining its Northern and Eastern, and the Del Norte its Southern and South Western slopes. The descent of the upper part of this river is much greater, probably, than either of the former. From San Felipe, in latitude $35^{\circ} 30'$ to a point near the Mexican boundary, the river falls at the rate of 4 feet per mile, San Felipe is 5,158 feet above the sea, Santa Fe 6,846. San Felipe is more than 300 miles south from the source of the river in the famous *Cochatopee* Pass, the water from the southern slope of which fall into the Del Norte. At the rate of twenty feet to the mile, which is only one half of the descent of the Huerfano from Bent's Fort to the *Sangre De Christo* Pass, and which Fremont and Heap describe as a very level route, we have 11,158 feet as the elevation of the *Cochatopee* Pass, which is only 76 feet higher than the measurement of Gunnison makes it; viz. 11,082 feet.

It must be borne in mind that the elevations I have given are not those of mountain summits, but of the lowest depression between them, such as are followed by the water courses and have been selected on account of their great depression and favorable features as the great routes of travel to the Pacific. The general elevation of the neighboring planes is much greater, while upon all sides of these passes tower mountains covered with perpetual snow.

It is easy to see that the inclination of the above rivers entirely unfits them for navigable purposes. They have wide shallow channels with beds but slightly depressed below the general elevation of the country contiguous. In some parts of their course they nearly lose themselves in the sands over which they run. In many places the Del Norte disappears for miles, presenting when it reappears its full volume of water.

These facts render the country traversed by these rivers inaccessible by the *steamboat*, which has thus far been the pioneer in the westward movement of our people, and constitutes one of the great obstacles to the construction of a Railroad to the Pacific.

The foregoing remarks have been descriptive of the *Eastern* and *Southern* slopes of the great Rocky Mountain Range. Upon reaching the summit of the plane or plateau from which these mountains rise, we find it extends with very little depression, except where it is intersected by the waters of the Colorado and Columbia, to the Sierra Nevada on the Pacific. The great uniform elevation of the territory embraced within these mountain ranges, is one of the most distinguishing features in the topography of this Conti-

nent, and one of the most remarkable of the globe. Nearly every portion of it is thickly studded by ranges of mountains some of which vie in elevation with those that enclose them. If possible, the country is still more barren than that already described. Throughout is the same absence of water and wood. The sands drink up the feeble streams as they descend from the snowy hills. Nothing can be cultivated except by irrigation, which is confined to the narrow bottoms of the water courses. All else presents the desolation of the desert in all its hideousness. From North to South, this desert extends from an unknown distance below the Mexican boundary nearly to the British Possessions, and probably covers the larger portions of Oregon and Washington territories. Its breadth embraces about 22 degrees of longitude and measures from 900 to 1100 miles. Its general elevation is about 4,500 feet, while throughout its whole extent rise mountains from 10,000 to 15,000 feet high. Within it is the desert of the Great Salt Lake which is elevated 4,200 feet above the sea, and which has a system of mountains and rivers peculiar to itself.

The first grand consequence that results from the great elevation of so large a portion of our continent, is the absence of rain. Its height above the sea would largely reduce the quantity, were there no other causes which influence the same result. Either side of the great plateau is flanked by the ranges of the Rocky and Sierra Nevada Mountains, which, intercepting the moisture borne into the interior from the sea, precipitate it upon their lofty summits. This fact explains the cause of the immense masses of snow which collect in the mountain gorges, particularly of the Sierra Nevada. Upon crossing these mountains into the great desert, the snow which accumulates in such immense bodies upon the western slopes, disappears. The same fact is noticed upon the Rocky Mountains, although their influence is not so striking as that of the Sierra Nevada, from the greater elevation of their base, distance from the sea and the drier atmosphere by which they are surrounded. Upon their eastern slopes only a small amount of moisture falls. This is collected upon the lofty mountains, whose heights are sufficient, by the changes of temperature which they cause, to disturb the ordinary equilibrium of the atmosphere, and condense upon their summits the moisture held by it.

This great elevated plateau which embraces the Eastern and Southern slopes of the Rocky Mountains, extending from 250 to 300 miles from their base, presents all the characteristics of a true desert. On the East the boundary of this desert may be described by a line drawn from the mouth of the Yellowstone to the great bend of the Arkansas near the point of intersection of the parallel of latitude 38, with longitude 99. The line thence extends very nearly South, inclining a little to the west after entering Texas and inclining to the East again on approaching the Rio Grande, and leaving a wide belt of desert country East of the river, to its mouth. Within the limits of this desert is the great Llano Estacado of Texas, an elevated and treeless plain. In latitude 31, 30, Bartlett's Expedition crossed it, and for seventy miles from the Choncho to the Pecos, found no water. In latitude 32, 30, its width is more than double the above. Between the Pecos and the

Rio Grande a distance of about 200 miles, is a high barren plain, portions of it being 5000 feet above the sea.

One of the most remarkable features of portions of this great desert, particularly that of the great Salt Lake basin, is in aspect of *newness* which it presents. Rain is the grand disintegrator of the earth's surface. Where it does not fall, the lapse of ages produces no perceptible change in the aspect of nature; consequently portions of the great American Desert present the same appearance they it did ten thousand years ago. It seems not to have been disturbed since the warring forces of nature laid down their arms.— This warfare would appear to have ended but yesterday. The yawning chasms, the blackened hills, the angular and jagged masses of rock piled up in endless confusion, the heaps of scoria glistening as if it ran from the furnace of yesterday, the vast plains unenlivened by a single specimen of organic or animal life, all bear witness of the external action of those terrific agencies, which now quietly repose in the bowels of earth. Over the scene of their warfare, through the agency of milder forces, no veil has been thrown. It remains, and always will remain, intelligible alike to the lettered and unlearned, a record of a great crisis in the earth's history.

Throughout this desert wherever running water is found, its sources are always in lofty mountains. These streams constitute the oases of the desert and are often times separated by *jornadas* or sandy plains without water, all the way from 10 to 100 miles in extent. In the winter, which is the rainy season, these are crossed by mule trains with comparative safety, as portions of them abound in grass. In the summer or dry season they are nearly impassable both for man or beast.

Such is not an overdrawn picture of the physical characteristics of a territory embracing nearly one half of the breadth of the North American Continent, and over which must be the route of most, if not all, the proposed Railways to the Pacific. I have been particular not only to describe it with sufficient distinctness for the object I have in view; but, to contrast its peculiarities with those portions of the country with which we are all familiar. In this manner only can a correct idea be formed of the magnitude, and difficulties in the way of construction of a Pacific Railroad. We are apt to regard the obstacles to such an undertaking the same in *kind*, as those encountered in the construction of a railway east of the Mississippi River. If the Erie Railroad with a line of 500 miles, has cost \$35,000,000, we take it for granted, that a Railroad to the Pacific of 2000 miles of line would cost \$140,000,000. Nearly every person in the United States takes the road with which he is the most familiar as a proper illustration of what the Pacific Railroad is to cost, and solves the problem by multiplying the length and cost of his own into the one proposed to be built.

To this fact we may ascribe the ready garrulity of all of us upon a subject, of which those who really appreciate its magnitude, approach to say the least, with awe.

The proposition before us involves the construction of a railroad for a distance of nearly 2000 miles through an uninhabited, and for the greater

part we may, say an uninhabitable country, nearly destitute of wood, extensive districts of it destitute of water; over mountain ranges whose summits are white with eternal snows; over deserts, parched beneath an unclouded sky, and over yawning chasms which the process of disintegration since the volcanic fires were put out, has not yet filled up. How is a sufficient force to be maintained upon such a work for its construction? And how is the road to be kept in repair and operated after it is built? How is the locomotive to be supplied with its food, wood and water? These are some of the questions that are to be discussed and solved; not the necessity that exists for the work. This requires no demonstration.

For the Pacific Railroad five routes are proposed, which may be designated as the Northern or Missouri, the South Pass, the Central or Benton's, the Albuquerque and the Southern. I propose to notice, briefly, the features peculiar to each.

1st.—THE NORTHERN ROUTE.

The proper base of this route, is the western extremity of Lake Superior. From thence it is prolonged in a generally westerly direction toward the great bend of the Missouri, the valley of which it follows to the summit of the Rocky Mountains. Crossing these, it falls into the valley of Clark's Fork of the Columbia, which it follows to its junction with the Columbia, and thence along that river to its mouth. This is a route, the entire practicability of which, Governor Stevens, as we understand, claims to have demonstrated. He entertains a belief that a practicable route may be found from the Columbia to Puget Sound by following up the Yukima and crossing the Cascade range in the Snoqual-me Pass, which is about 3,500 feet above the sea.

A superiority claimed for the Northern route is the fact that it coincides with a great depression in the surface of the country extending entirely across the continent, as indicated by the course of its three great Rivers, the St. Lawrence, the Missouri and the Columbia. The St. Lawrence entering the Atlantic Ocean in longitude 56 takes its rise in Lake Superior in longitude 92, spanning in its course 36 degrees of latitude, or more than one half of this Continent. The distance from Lake Superior to the Pacific is a few degrees less, or thirty two degrees. Lake Superior is 690 feet only above the sea, from which it will soon be accessible to large vessels. Here then is a highway, already provided, extending one half the way across the continent and the best possible one for commercial purposes.

From the head of Lake Superior in latitude 47, the line has a generally westerly direction, crossing the head waters of the Mississippi at an elevation of about 1200 feet above the sea, and those of the Red River of the North, a short distance below Lake Traverse, at an elevation of about 1000 feet. From thence it gradually ascends the *coteau* of the prairies of the Missouri which are crossed at an elevation, probably, of 2300 feet.—On entering the valley of the Missouri, the route adopted by Gov. Stevens avoids the immediate vicinity of the river, keeping upon the elevated prairies for the purpose of obtaining a more direct and better line. In the latitude of the Grand Falls its line is seventy miles north of that point,

and 1300 feet above, or 3600 higher than the ocean. This elevation is gradually increased till the summit of the mountain is reached, some 6000 feet above the sea. The formation of the mountain ridge is such as to allow of a tunnel of about two miles in length by which the elevation of the road bed will be reduced to 5000 feet. From the summit, the descent to the waters of the Columbia is very gentle. At about 100 miles from the summit, the elevation of the waters of the river are about 1000 feet higher than those of the Missouri at a corresponding distance; showing the same general fact with regard to the elevation of the country west of the Rocky Mountains, already noticed. By taking the Columbia River to its mouth, a favorable route, according to Gov. Stevens, may be had, involving easy grades and no insurmountable obstacles.

The advantages of this route, and in which it is probably superior to all others, are easier grades, a better supply of wood and water, a country upon its line, the agricultural capacities of which are equal to the sustenance of a population sufficient for the maintenance of the road, and the ease with which large bodies of men and material can be thrown upon the work.

The route involves much less rise and fall than any other. Water can probably be found in sufficient abundance upon all parts of its line. Upon the eastern division, abundant supplies of good timber are found on Lake Superior, the Mississippi, and the Red River of the North. From the last named river to the mouth of the Yellow Stone, timber is scantily supplied, and will have to be sought for off the main line. One source of supply will be Devils Lake, in latitude 49, longitude 99. The James and Mouse rivers furnish cotton wood; a wood, however, poorly adapted for mechanical purposes. On reaching the mouth of the Yellow Stone, pine and red cedar can be obtained from that river. An abundance of good timber is found in the valley of Milk river. On crossing the mountains, the line at once enters a wooded country, which continues on all the water courses to the Pacific. Throughout the whole of this portion of the route, the forests are composed entirely of evergreens.

Another striking advantage which this route possesses over all others, are the greater facilities it presents for cheap and rapid construction. East of the Rocky Mountains, the western shore of Lake Superior, the Great Bend, and the Falls of the Missouri, can each be made the base of independent systems of operations. From the two latter, the work of construction can be pushed in either direction. The great advantage resulting from the accessibility of its line, will be better appreciated when we remember that any required force of men and provisions can be thrown upon it by means of steamboat navigation, which reaches within about seventy miles from the summit of the mountains, upon the meridian of 110. To reach a corresponding point on any other route, 600 miles at least of desert must first be crossed, over which the only mode of transportation is by the ordinary wagon trains. It is this fact which constitutes the great obstacle to the construction of all but the northern route. The operations of a railroad company are like those of an army, the cost and difficulty of the maintenance of which increases in inverse ratio as the scene of its

action is removed from its base. Upon all other routes the railroad as it progresses, must constitute the only means of keeping up communication with advanced portions of its line, and of supplying to it all the materials and force employed in construction. To a person familiar with the construction of roads of inconsiderable length, the increased delay and cost arriving from the causes named will be readily understood. It is not too much to say, probably, that a given amount of work upon any route proposed, except the Northern, will cost thrice as much, and occupy thrice the time that would be required for an equal amount upon any road east of the Mississippi.

Upon crossing the mountains, the Columbia will also contribute an important service toward the construction of the road, as the river can be used as a means of supplying material and labor. Governor Stevens estimates that there are only 500 miles upon the whole of this route which cannot be made accessible by navigable water courses.

The objections to this route are, its extreme northern latitude, the great degree of cold which is known to prevail during the winter months, and the fact that it does not look to San Francisco as its Pacific terminus. These are serious objections. There appears, however, to be no sufficient cause for the apprehension which exists, that the snows will constitute any serious obstacle to the running of the trains. It seems to be well settled that only a small depth of snow falls upon the plains of the Upper Missouri. Horses find no difficulty in picking up a comfortable living upon them throughout the winter. They are the winter and summer range of countless herds of Buffalo. Parties left behind by Governor Stevens found no difficulty in crossing the mountains several times during the winter with horses. As soon as the mountains are crossed, and the waters of the Columbia are reached, the influence of the genial climate of the Pacific begins to be felt.

At the present time, San Francisco is the appropriate terminus of a railroad to the Pacific; but the best route by which it is to be reached remains to be shown. There is no evidence that the Northern is not the best route, even for San Francisco. This important city is, unfortunately, the most difficult of access by railroad of any point on the Pacific within our possessions. There is no sufficient evidence to show that it can be reached at all with any amount of money that can reasonably be expected to be obtained for such a work.

2d.—THE SOUTH PASS ROUTE.

The next route in order is the "South Pass." This route is now not generally insisted upon. The leading objections to it are the exceeding sterility of the country traversed by it, the almost entire absence of wood, and the immense elevation of a very extensive portion of it, as will be seen by the profile before us. More than 1000 continuous miles of it are elevated 4000 feet and upward above the sea. The South Pass summit is 7490. The Bear Mountain summit 1000 feet higher. These elevations, in the latitude in which they occur, render this a much colder route, and one more liable to snows than the Missouri. It would probably be impossible to keep up a communication on this route in the winter season,

a fact that must prove fatal to its claims, which, I believe, have ceased to be pressed. It may be proper to state, that this is the route so long and pertinaciously urged by Mr. Whitney.

3d.—CENTRAL ROUTE.

The next route is the "Central," or what is more commonly termed *Benton's* route. If the measurements of the height of the different passes upon it are correct, their great elevation must constitute a fatal objection to its adoption. The course of the rivers indicate that this route crosses the highest table of the plateau already described, it being the source of the Plate, Arkansas, Del Norte, and Colorado rivers, all running in different directions. The indications furnished by the course of the streams are against the practicability of this route; and I expect to see them confirmed by the results of examinations and surveys. It cannot be that the lowest summits are to be found, where rivers running in opposite directions take their rise. The *Cochatopee* Pass cannot be far from the snow line at any portion of the year, and the glowing accounts which describe this valley as the favorite resort of summer, in mid-winter, must have been the creation of a poetic fancy. At 11,000 feet above the sea, in latitude 38, winter holds almost undisputed sway. Heap tells us in his Journal, that the mountains near the head of the Del Norte are called the *Wet Mountains*. He says that rain fell every day in the valleys, which was snow on the mountains, while he was in this vicinity about the middle of June. These facts attest their extreme elevation, and show that immense masses of snow must accumulate in their gorges in the winter season, without a doubt rendering them impassable. It should be borne in mind, also, that Capt. Gunnison makes the *Sangre De Christo* pass 8,800 feet high, a fact which destroys all probability of its practicability in the winter.

On entering the great desert west of the Rocky Mountains, the indications furnished by the course of the rivers are not favorable to the Central route. As yet, however, this portion of it is a *terra incognita*, about which it is useless to speculate until more is known. It is proper to state, however, that the claims of this route are strongly supported by Mr. Benton and Col. Fremont, than whom none should be better informed in reference to the country between the Mississippi and the Pacific.

4th.—ALBUQUERQUE ROUTE.

The next route in order is the Albuquerque route. East of the Del Norte, the line of this route will probably follow the valley of the Canadian, which pursues a favorable direction, with easy grades. After crossing the Del Norte, the route will take the Valley of the Zuni to the Colorado, which it will probably cross near latitude 35. From thence it can be carried either to San Francisco or San Diego, as the facts shall justify. The merits of this route are, the central position it occupies, its directness, and favorable alignment of its eastern portion. An examination of a map would, we think, indicate this to be the most favorable of all the southern routes, as far at least as the Del Norte. Beyond that point we do not yet possess sufficient information to speak with confidence. The great obstacles in the way of the construction of it are the lack of timber and water.

It would probably suffer no obstruction on account of snows.

5th. THE SOUTHERN ROUTE.

The last to be described is the *Southern* route. This may be made a convenient one for all of the lower Mississippi Country, south of, and including Memphis. Assuming Shreveport in latitude 32, 20 as a point, the line to be pursued will be a very direct one to El Paso upon the parallel of 32. From thence it will be continued over nearly the same parallel to the Colorado, near the mouth of the Gila, and thence by some route not yet defined to San Diego or San Francisco.

The characteristics of this route, do not differ materially from the one last described. East of the Rio Grande its construction will probably be more difficult. About 150 miles of it will be over the *Llano Estacado* or *Staked Plain*, a high barren and treeless table, lying between the head waters of the Colorado, Brazos and Trinity rivers of Texas, and the Pecos. The elevation of the line upon this table will be about 3,200 feet. From the Pecos to the Rio Grande, a distance of 200 miles, an equally barren and more elevated region is crossed. The summit between these rivers is 5000 feet high, which is the same as the proposed tunnel in the *Northern* route.

After leaving the Rio Grande, a still higher summit is probably attained. The general surface of the country, however, is favorable to the San Pedro, and probably to the Gila. At about the parallel of 32°, 30' according to Bartlett, "the Rocky Mountains suddenly drop off about eight miles south of the Copper Mines of New Mexico, (now Fort Webster,) and, with the exception of a few spurs, seem to disappear entirely. Here we emerge into the great plateau or table land, which with scarcely an interruption, extends more than a thousand miles to the south. The elevation of this plateau varies from 4000 to 5000 feet above the level of the sea, and is crossed by no continuous range of mountains for the distance stated. Short, isolated, mountains and hills, alone appear at intervals, and these are sometimes separated by fifty or a hundred miles of plain.

The great mountain chain which so abruptly terminates near the Copper Mines as stated, again begins to appear in about the parallel of 31°, 20', a few miles north of the Gaudalupe Pass, through which runs Colonel Cook's road. The range is here called the Sierra Madre, and forms an almost unbroken chain through the entire length of Mexico. Within fifty miles to the south there is another pass for mules, but, beyond this, none for more than 500 miles.

The Gila is closely hemmed in by elevated mountains for about one-half its length; or to a point about 50 miles below the mouth of the San Pedro river. Some of these mountains extend ten or more miles into the plain, so that it is an absolute impossibility to construct a highway near that river.

The district or belts of country which lies between the northern spur of the Sierra Madre, and the southern spurs of the Rocky Mountains, may be safely set down at from 80 to 100 miles in width, and extend entirely across the continent from the Rio Grande to the coast range of mountains on the Pacific. In it are no continuous chains of mountains, such as will present an impassable,

or even a serious barrier to the construction of a railway. This plain is crossed at intervals of from 15 to 30 miles, with short and isolated ridges of mountains, having an elevation of from 1000 to 2000 feet above the plain, and running from north-west to south-east."

The absence of mountains on this route implies a corresponding absence of wood and water. It is probably more deficient in these than either of the routes before described.

The territory upon its line is the most barren of all. Of the desert portion Mr. Bartlett states that not one-half per cent. is arable land.

Mr. Albert Pike, of Little Rock, Arkansas, in an address before the Southern Convention recently held at Charleston, speaking from his personal observations stated that the desert portion of this route was not worth a *farthing* an acre. For long distances neither stagnant nor running water is found, and trains cannot cross that portion of it between the Rio Grande and the Colorado without suffering severe privations.

On passing the Colorado we encounter the great California desert which is about 100 miles in breadth opposite to Fort Yuma and increases in width to the North. This desert is destitute of wood, grass and water. Between it and the Colorado is a belt of moving sand, which will probably oppose a serious obstacle to the construction and maintenance of a railway. The great California desert will have to be crossed by the three lower routes, unless a pass can be found to the North of Walker's Pass, which does not seem probable. It is this desert which is one of the most serious obstacles which all the Southern routes will have to encounter.

After the desert is crossed we come to the Southern prolongation of the Sierra Nevada Range, which constitutes another great obstacle to the Southern routes.

No practicable pass through them into the San Joaquin Valley has yet been found. They rise abruptly from the plains on either side not much elevated above the sea, to the height of over 3,500 to 5,000 feet, and involve grades altogether too steep for the operation of a railroad. Examinations still in progress, may discover more favorable passes, or show that the mountains can be tunnelled at a reasonable expense. By crossing directly to San Diego the summit would not be over 3,000 feet. It is problematical whether the proposed road can be carried to San Francisco at reasonable expense *West* of the Coast range.

I have thus given a few of the leading features of the country to be traversed by the routes of the proposed road. I have also, for a better understanding of the subject, contrasted some of the peculiarities of the Western portion of our Continent with the Eastern. I am aware that this paper is a most meagre and unsatisfactory statement of its subject, partly because we have so little accurate information, and from the fact that a work treating in a proper manner all the problems involved in the construction of a railroad, and in elucidating the peculiarities of the country upon its route, would be the labor of a life, and constitute of itself a good sized library. My object has been to indicate some of the leading conditions under which a road upon any route will have to be built. When these are thoroughly appreciated, we shall then go the right way to work. Having taken

the right direction, every step will carry us forward. Thus far we have been moving without compass or chart, a sport of every wind that blows.

I see no way in which either of the proposed roads can be built, without the efficient support of Government. Previous to a careful examination of the subject, I had supposed that the construction of *one* route, at least, could be secured by liberal grants of lands, and by contracts for mail service. I am now satisfied that, unless the general government will furnish a considerable portion of the cost, say \$50,000 per mile, and upon favorable terms, the construction of a road upon any of the routes is out of the question.—The value of all the lands to be given by Mr. Gwinn's Bill would hardly equal the expenses of a preliminary survey. By Mr. McDougal's House Bill, the Northern route would secure a valuable grant, by means of which 500 miles of railroad probably could be built. Upon none of the other routes would a grant of lands be of any considerable value. I should be very sorry to have Government undertake its construction or management. Perhaps our people would be better off without the road. I believe there is no necessity for this. Let government advance an amount equal to \$50,000 per mile, at an interest of $4\frac{1}{2}$ per cent., and I believe private enterprise would advance the balance required, and guarantee the former from loss, and from the necessity of exercising any interference in the matter. I believe the government should not assume to designate the route to be adopted; but should leave this, and all other questions involved in the construction entirely to private sagacity and private enterprise. If, with the proposed amount of government aid, *two* roads can be built, let us have *two* routes, a *Northern* and *Southern* one.

If private enterprise will take up only one route, this fact should be viewed as conclusive evidence against the claims of all others. In this way can government shield itself from the charge of partiality, and avoid all entanglement with a work which it is neither competent to construct or manage.

A road upon some of the routes must be built. The wants of commerce, the genius of the age and of our own people demand such a work. *One* road would doubtless prove a fair investment.—*One* commercial avenue between two great oceans and between the lands which these oceans surround, *must* pay. As members of the American Geographical Society, or of a still broader community, let us do what lies in our power to aid a work which shall constitute a prouder monument of the progress of our people in the arts of Peace, than nations of the Old World have erected in commemoration of some great achievement in the arts of Destruction.

Indianapolis and Evansville Railroad.

We are informed that the Board, at their late session, contracted with Willard Carpenter and Company, to construct the Straight Line Railroad from Evansville to Indianapolis, in continuous sections, by the first of December 1854.

Messrs. Carpenter and Love, resigned their offices as Directors, and John Law of Evansville, and Wm. F. Weld of Boston, were appointed to fill the vacancies. Henry D. Allis, of Evansville, was appointed Vice President, to fill the vacancy in that office. The work, we learn, will progress with increased energy.—*Evansville Journal*.

Baltimore, May 20th, 1854.

TO THE EDITOR OF THE RAILROAD JOURNAL.

DEAR SIR:—In your Journal of 6th May, you give a report of the case of Winans and Denmeads decided in the Supreme Court of the United States at its present term. Your readers ought to know that four of the Judges dissented from that decision which was carried by a majority of one. The dissenting Judges were the Chief Justice and Judges Capron, Daniel and Campbell. The opinion of the dissenting Judges was delivered by Judge Campbell. I herewith send it for publication that your report may be complete. You will see from the whole case that the Supreme Court does not decide that Denmead's car is an infringement of Winans' patent, but only that the question is one to be decided by a Jury. In coming to that decision the Jury will no doubt be strongly influenced by the fact that four of the Judges of the Supreme Court, have decided it to be no infringement, and that not one of them has said it is an infringement.

SUPREME COURT OF THE UNITED STATES.

December Term 1853.

ROSS WINANS, Plaintiff in Error,	} In Error to the Circuit Court of the United States for the District of Maryland.
vs.	
Adam, William and Talbot Denmead,	

MR. JUSTICE CAMPBELL.

I dissent from the opinion of the Court in this case.

The Plaintiff claims to have designed and constructed a car for the transportation of coal on railroads which shall carry the heaviest load, in proportion to its own weight.

This design consists, in the adaptation of the "conical form" "for the body of the car," whereby the weight of the load presses equally in all directions," does not "tend to change the form of the car," permits it "to extend down within the truck," lowering, "the centre of gravity of the load, and by its reduced size at the bottom, adding to its strength and durability. He claims as his *invention*, and it is the whole of the change he has made in the manufacture of cars; the making of the body of the car in the form of the frustum of a cone."

It is agreed that in a circle containing a greater area than any figure of the same perimeter; that the conical form is best suited to resist pressure from within, and that the reduced size at the bottom of the car is favorable to its strength.

The introduction of the cars of the plaintiff, upon the railroad for the transportation of coal, was attended by a great increase of the loads in proportion to the weight of the car. The merits of the design are frankly conceded—Nevertheless it is notorious that there does not exist a very great variety of vessels in common domestic use, "of a conical form," or, "of the form of the frustum of a cone," for the reception and transportation of articles of prime necessity and constant demand, such as water, coal, food, clothing, &c., &c.

It is also true that the properties of the circle, and of circular forms alluded to in the patent of the plaintiff, are understood and appreciated, and have been applied in every department of mechanic art.—One cannot doubt that a requisition from the transportation companies for cars of a diminished weight, and an increased capacity, upon the

machinists and engineers connected with the business, would have been answered, promptly by a suggestion of a change in the form of the car. The merits of the plaintiff, seems to consist in the perfection of his design, and his clear statement of the scientific principle it contains.

There arises in my mind a strong, if not insuperable objection to the admission of the claim, in the patent for "the conical form," or "the form of the frustum of a cone" as an invention.—

Or that any machinist or engineer can appropriate by patent a form, the properties of which are universally understood, and which is in very common use, in consequence of those properties, for purposes strictly analogous. The authority of adjudged cases seems to me strangely opposed to the claim. Hotchkiss vs. Greenwood, 11 How, 249—Lash vs. Hague—Web. pat. cas. 207. Winans vs. Prov. R. R. Co. 2 Story, 412.—2 Story, 190. 2 Car. & Kir. 1022.—3 W. H. & Gord, 427.

Conceding, however, that the invention was patentable, and this seems to have been conceded in the Circuit Court, the enquiry is what is the extent of the claim?

The plaintiff professes to have made an improvement in the *form* of a vehicle, which has been a long time in use and exists in a variety of forms.

He professes to have discovered the precise form, most fitted for the objects in view. He describes this form, as the matter of his invention, and the principle he develops applies to no other form.

For this he claims his patent.

We are authorized to conclude that his precise and definite specification and claim were designed to ascertain exactly the limits of his invention.

Davis vs. Palmer, 2 Brock 298:

The car of the defendants is of an octagonal form, with an octagonal pyramidal base. There was no contradiction in the evidence given at the trial, in reference to its description, nor as to the substantial effects of its use and operation. In the size, thickness of the metal employed in its construction, weight, and substantial and profitable results, the one car does not materially vary from the other.—The difference consists in the form, and in that, it is visible and palpable.

The Circuit Court, acting upon these facts of which there was no dispute, instructed the jury that an infringement, of the plaintiff's patent had not taken place. I do not find the question before the Court a compound question of law and fact.

The facts were all ascertained and upon no construction of those facts was the plaintiff, in my opinion entitled to a judgement.

In theory the plaintiff's car is superior to all others—his car displays the qualities which his specification distinguished.

The equal pressure of the load in all directions—the tendency to preserve the form notwithstanding the pressure of the load; the absence of the cross strain; the lowering of the centre of gravity of the load; are advantages which it possesses in a superior degree to that of the defendants.

Yet the experts say, that there is no appreciable difference in substantial results afforded by the two.

The cause for this must be looked for in a source extrinsic to the mere form of the vehicles, nor is it difficult to detect the cause for this identity in the results in such a source.

The coarse heavy cumbersome operations of coal transportation do not admit of the manufacture of cars upon nice mathematical formulæ, nor can the loads be adjusted with much reference to exactness.

There is a liability to violent percussions and extraordinary strains, which must be provided for by an excess in the weight and thickness of the material used then, unless the difference in the weight of coal is great, there will be no correspondent difference in the receipts of the transportation companies.

The patentee not exaggerating the theoretical superiority of the form of the car, overlooked those facts, which reduced its practical value to the level of cars of a form widely variant from his own. The object of this suit is to repair that defect of observation.

It is, that this court shall extend by construction, the scope and operation of his patent to embrace every form which in practice will yield a result substantially equal or approximate to his own.

In the instruction asked for by the plaintiff, "form and circumstances" are treated as more or less immaterial, but the verdict is claimed, if the defendants have constructed cars "which substantially on the same principle and in the same mode of operation accomplished the same result."

The principle stated in the patent applies only to circular forms:

The modes of operation in coal transportation have experienced no change for the skill of the plaintiff, except by the change from the rectilinear figure to the circular. The defendant adheres to the rectilinear form. The result accomplished by the use of the two cars is the same—A more economical transportation of coal. This result it is that the plaintiff desires to appropriate, but this cannot be permitted.

Curtis on patents. §4.-26.-27.-86.-87.-88.

2 Story, 408.-411.—

In the case of Aikin vs. Bemis, 3 Wood, and M. 349. the learned Judge said "when a patentee chooses to cover with his patent, the material of which a part of his machine is composed, he entirely endangers his right to prosecute when a different and inferior material is employed and one which he himself after repeated experiment, had rejected."

The plaintiff confines his claim to the use of the conical form, and excludes from his specification any allusion to any other. He must have done so advisedly.

He might have been unwilling to expose the validity of his patent, by the assertion of a right to any other.

Can he abandon the ground of his patents, and ask now for the exclusive use of all cars which by experiment, shall be found, to yield the advantages which he anticipated from conical cars only?

The claim of to day is, that an octagonal car is an infringement of this patent. Will this be the limit to that claim?

Who can tell the bounds within which the mechanical industry of the country may freely exert itself?

What restraints does this patent impose in this branch of mechanic arts?

To escape the incessant and intense competition which exists in every department of industry, it is

not strange that persons should seek the cover of the patent act, for any happy effort of contrivance or construction—nor that patents should be very frequently employed, to obstruct invention and to deter from legitimate operations of skill and ingenuity.

This danger was foreseen and provided for in the patent act. The patentee, is obliged by law, to describe his invention in such full clear and exact terms, that from the description the invention may be constructed and used.

Its principle and modes of operation must be explained; and the inventor shall particularly "specify and point" out what he claims as his invention.

Fullness, clearness, exactness, plainness, and particularly, in the description of the invention, its principle and of the matter claimed to be invented, will alone fulfill the demands of Congress or the wants of the Country.

Nothing in the administration of this law will be more mischievous, more productive of oppressive and costly litigation, of exorbitant and unjust pretensions and vexatious demands, more injurious to labor than a relaxation of these wise and salutary requisitions of the act of Congress.

In my judgement the principles of legal interpretations, as well as the public interest require that this language of this statute shall have its full significance and import.

In this case the language of the patent is full, clear and exact.

The claim is particular and specific.

Neither the specification nor the claim in my opinion, embrace the workmanship of the defendants.

I therefore respectfully dissent from the judgement of the Court which implies the contrary.

Adaptation of Power on the Western Railroad.

A legitimate consequence of the incapacity of the motive power of the Western road of Massachusetts, is the report and resolution of a committee of the Board of Trade of Albany, setting forth the delays in landing and loading freight from the boats to the cars of the company at East Albany. The circumstance does not proceed from the eminently great business of the road as compared with that of other lines, although it is probably brisk; but from the fact that no additions have been made to the stock of freight engines for several years, and that those in use cannot take, singly, but *thirteen* cars of produce between Albany and Pittsfield, *nine* between Pittsfield and Springfield, and *thirteen* between Springfield and Worcester.

Compare such trains with those taken over the same grades on the Baltimore and Ohio road.

	Western. Balt. & Ohio.
Ordinary load, 45 ft. grade	13 cars. 30 cars.
Ultimate " " " "	" " 45 "
Ordinary " 83 " 9 "	" " 18 "
Ultimate " " " "	" " 27 "

The difficulties which attend the shipment of freight, by the principal avenue between Boston and the West, have become such as to call for a public expression of the feeling of those engaged in that business. Boats, loaded with grain, have been delayed four, five, or more days, awaiting a transshipment of their cargo to the railroad cars. Purchasers have been compelled to pay one cent

per bushel more for having cargoes delivered on the East than on the West side, and large sums are paid for demurrage.

The Board of Trade have, in consequence, adopted the following resolution, and appointed a committee of five to confer with the officers of the road upon the subject.

Resolved, That in the opinion of the Board of Trade, the delays and hindrances to which we, in common with our merchants generally, are subjected, are of a character that call for and demand the application of prompt redress on the part of the Western Railroad Company; that we regard them as arising mainly, if not entirely, from the want of a full complement of freight cars and other rolling stock necessary to the prompt dispatch of freight and produce; and while we would not desire to censure the officers and directors of the company, we regard the hindrances and delays in the transshipment and delivery of produce and merchandise as entirely within their control, and an evil which can be fully remedied by the application of the proper corrective, viz: the furnishing of additional facilities for the transportation of property.

There is nothing in the route or capacity of the Western road, nor in the commercial wants of Boston, to prevent the transportation of half a million tons of freight yearly between Albany and Boston. provided the railroad can be properly equipped to do the business on proper terms. The present through business of the Western road is but about *one-tenth* of this amount.

The Sault Ste. Marie Canal.

Mr. Harvey of the Sault Canal, Mr. Bigelow Mr. Whitney, and other gentlemen who have passed the winter at Sault Ste. Marie, came down yesterday on the Steamer *Northerner*. They report all clear of ice, and that the steamer *Garden City* arrived at the Sault on Monday morning.

With regard to the progress of the Sault Canal in which the people of the lower Peninsula, and all others interested at Lake Superior, feel a deep concern, they report that probably eight-tenths of the earth and rock excavation have been finished. The length of the excavation from the head to the foot of the portage is 4,360 feet. The width of the excavation at the bottom is 64 feet, and at the top 100 feet. The sides of the canal are to be lined with stone for the whole distance, to prevent washing, and there are to be two locks, 350 feet in length, with foundation walls 10 feet in thickness, and they are to be strengthened by stone battlements on the outside, 12 feet apart. These locks will contain 15,000 cubic yards of stone masonry; A large portion of the timber is nearly out. The work during the winter has been done at great disadvantage, owing to the inclemency of the weather and to the depth of the snow, and the making of the ice during the night from water oozing out of the rocks. We learn that the financial arrangements of the company have not been very well digested, and that they have been compelled, in addition to the circulation of their own evidence of debt, to borrow of citizens at the Sault some \$10,000. This perhaps is not very surprising, although it might have been avoided.

There is a strong prospect, as we learn, that the Canal will be finished within the stipulated time, and if such an event be within the bounds of possibility, it will be done; but should it not be done, there is little doubt that the next Legislature will grant the necessary extension, upon a proper showing, that it was physically impossible to complete it within that period. We do not pretend to say that it is so, nor have we been so informed, but such immense jobs of work generally occupy longer time than is anticipated.

Sufficient stone for one of the locks has already been got out of Malden, and some considerable progress has been made at Sandusky in getting out the balance of lock stone. There are now about five hundred hands employed upon the

work, and we understand they are contented, and will probably for the most part, remain during the season.

The plank road, and the railroad across the Portage, were both put in order, bridged and relaid, and were ready for use by the first of May. —*Detroit Inquirer.*

American Railroad Journal.

Saturday, June 3, 1854.

A large amount of matter designed for this week's paper is necessarily left out, to make room for the paper on the Pacific Railroad. We hope to have a more interesting variety in our next.

Stock and Money Market.

Without much improvement in quotations, we think the stock market is gradually becoming stronger. As money becomes more abundant, attention will again be turned to railroad securities for investment. The present low prices are quite independent of the mere question of value; and as soon as the causes which produced them are removed, they will regain their usual figures. A great deal has already been done toward accommodating ourselves to the present condition of the money market, and the diminished expenditures upon new works must soon be felt.

The foreign demand for bonds has not yet been renewed. There is, however, some domestic demand. The generally healthy state of our great interests must leave a large amount of surplus capital for investment in our public works.

Ohio and Mississippi Railroad.

The *Tribune* fears that the report that this company has sold \$1,500,000 of its second mortgage bonds, is not entirely correct. It states, however, that enough have been sold to carry the road 87 miles, to the Jeffersonville road; and that when this point is reached, the road will "then earn the interest on the entire amount expended on the work."

Some months since the *Tribune* stated that \$9,000,000 had then been expended. Adding \$500,000 for subsequent expenditures, and the road up to this point must earn over \$1,300,000, to pay the interest on the above sum!

This portion of the road will earn, for the first year, a sum not exceeding \$350,000—probably a much less sum. Yet the *Tribune* continues to put forth such glaring falsehoods as the above, selling itself for the purpose of being used to impose upon the public. If the company is responsible for the statements in reference to its affairs which appear in the *Tribune*, it is not entitled to credit. If not, its duty is to disclaim them.

Terre-Haute and Alton Railroad.

The *Alton Telegraph* learns that the work upon the Chicago and Mississippi Railroad is progressing toward completion with all possible dispatch. The rails will be laid as far as Lexington, a point eighteen miles beyond Bloomington, on Monday. A large force is also at work upon the Chicago end, together laying nearly one mile of tract per day; and it is confidently believed that the entire line will be opened thence to Joliet by the 1st of July. There remains but about thirty-five miles to be laid down to complete the gap, when a great saving of time will be made, and much inconvenience from the changing of cars avoided.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,748	113,520	none	83
Androscoggin and Kennebec...	55	824,863	1,043,540	2,036,140	177,003	80,053	none	80
Kennebec and Portland.....	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth...	51	1,355,500	123,884	1,459,384	208,669	11,256	6	98
York and Cumberland.....	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence....	24	717,543	.....	.....	.....	.....	6	83
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,573	8	104
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	124
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central.....	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	84
Vermont and Canada.....	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	97
Western Vermont.....	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	90
Boston and Maine.....	83	4,076,974	150,000	4,111,315	803,024	418,358	8	104
Boston and Providence.....	55	3,160,000	402,326	3,579,041	509,326	226,639	6	82
Boston and Worcester.....	69	4,500,000	590,541	4,850,754	887,219	413,289	7	100
Cape Cod branch.....	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River.....	52	1,591,110	286,363	1,802,244	258,220	102,098	4	57
Eastern.....	58	2,860,000	1,192,975	3,120,391	620,810	310,875	6	80
Fall River.....	42	1,050,000	6,208	1,050,000	294,183	126,589	8	97
Fitchburg.....	67	3,540,000	191,500	3,716,870	626,659	214,633	6	90
New Bedford and Taunton... Mass.	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,169,228	953,370	2,221,068	90,315	35,214	none	.....
Old Colony	45	1,964,070	295,038	2,293,534	374,897	122,866	none	98
Taunton Branch.....	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts..	77	2,233,929	1,139,615	3,207,818	244,323	13,144	none	15
Worcester and Nashua.....	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	96
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	66
Providence and Worcester...	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	639,529	294,269	10	120
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill..	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven....	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	93
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven..	55	750,500	650,000	1,380,610	.....	Recently opened.	none	40
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	56
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,600	.....	Recently opened.	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line.....	69	879,636	872,000	1,921,270	.....	Recently opened.	.....	130
Canandaigua and Niagara F..	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira.....	47	425,509	582,400	987,627	76,760	39,300	none	.....
Cayuga and Susquehanna.....	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)...	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	69
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	66
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	50
Long Island.....	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	104
Ogdensburg (Northern).....	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	18
Oswego and Syracuse.....	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal.....	23	174,042	131,000	349,775	.....	Recently opened.	none	.....
Rensselaer and Saratoga.....	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.....	60	850,000	400,000	1,250,000	.....	Recently opened.	.....	.....
Saratoga and Washington....	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	.....	Recently opened.	.....	33
Troy and Boston.....	39	430,936	700,000	1,043,357	.....	Recently opened.	none	.....
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,498	1,388,385	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey.....	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central.....	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	20	600,000	.....	750,000	.....	Recently opened.	.....	125
Harrisburgh and Lancaster...	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading....	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	79
Philad., Wilmington and Balt.	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	74

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,000,000	1,943,827	617,625	....	97
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,251,338	2,033,420	798,193	7	58
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	162,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina..... S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,500	21,731	.....	.....
South Western..... "	50	586,887	150,000	748,525	129,395	71,535	8	.....
Alabama and Tennessee River..... Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..... "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..... Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	76½
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	92½
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Columbus, Piqua and Indiana..... "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton..... "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	.....	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	.....	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	.....	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine..... "	83	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Cincinnati..... "	90	1,128,486	1,289,000	1,869,932	.....	.....	.....	90
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	.....	.....	76
Madison, Indianapolis & Peru..... "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Terre Haute and Indianapolis..... "	72	632,387	663,100	1,353,019	106,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	126
Michigan Southern and Ind. N. Mich. "	815	.....	3,741,564	7,276,616	1,200,922	586,929	17	119½
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	104½
Pacific..... Mo.	38	.....	non	In prog.	.....	.....	.....	.....

Northern Central Railroad of Maryland.

We last week gave a notice of the condition and prospects of the Susquehanna Railroad, but without speaking fully of the new organization into which it has been consolidated.

The Baltimore and Susquehanna, York and Cumberland, and the Susquehanna Railroads have been consolidated by the mutual enactment of the general assemblies of the Maryland and Pennsylvania, thereby forming a line of some 125 miles, opening to the great center of the coal region of Pennsylvania, directly to the tide water at Baltimore. A large part of this road, embracing that lying in the Susquehanna Valley, will have an extremely favorable gradient, while on the other parts the gradient is not generally difficult although an exceptional grade of 84 feet.

In Baltimore the Canton Company have tendered the consolidation 1200 feet of water front and free right of way of 100 feet width therewith.

The State of Maryland being the creditor of the Baltimore and Susquehanna Company for \$2,000,000, had decided to relinquish one half of her claim upon the consummation of the consolidation, and the city of Baltimore had also relinquished her whole claim of \$850,000 in the same event. The action of the Pennsylvania Assembly will now relieve the Baltimore and Susquehanna road, by these sums, and will enable them to use their credit towards the completion of the Susquehanna road, and the equipment of the entire line.

The Northern Central Railroad should exert a strong influence on the business and the trade of Baltimore. It will be her great coal road, with a capacity of full 2,000,000 tons per annum. It will secure to her advantages such as in another column we have indicated for New York in the event of the completion of a similar work for herself.

Clinton Line Railroad.

"We understand that on Saturday one of the contractors on the Clinton Railroad, east of Hudson, paid off and discharged the men in his employment, for the reason that the Co. had failed to make and pay the estimates necessary for the continuation of the work. At present it is almost impossible to procure money for the construction of new lines of road in Ohio, and we are informed that within a few days work will be suspended on several other roads in this vicinity."—*Cleveland Herald*.

Covington and Lexington Railroad.

This important road is about finished as far as Cynthiana, Ky. A meeting of the citizens has been held in that place to make arrangements for a barbecue, as soon as the work is done to that point; and we doubt not it will be of the right stamp, judging from our own experience of Kentucky barbecues.

The distance from Covington to Cynthiana is about 50 miles, and cars will commence running there at once. This road, although through a rugged country in part, is yet being constructed in the most workmanlike and permanent manner, and will be, when finished, a fine paying road.

Watertown and Rome Railroad.

The stockholders of the Watertown and Rome Railroad have voted to authorize its board of directors to indorse the bonds of the Potsdam and Watertown Railroad Co., under the recent act of the Legislature.

Coal Railroads to New York.

Next to a commercial intercourse with the west, our city requires a direct access to the great coal measures which nature has placed so conveniently within our reach. The article of coal, besides being one of our principal domestic necessities, is one of the essential elements of our commercial and industrial operations. If, with all our present trade, we could export coal, we should invite additional trade by offering another commodity for exchange, and by supplying the local wants of the coal producing district. This would be, besides the direct profit of the coal trade, which never promised better returns than now. But if, on the contrary, we import coal, through another seaport we not only avert trade and lose the direct profits of the business, but what is worse, we tax our social existence, and impose a burden, heavier than any excise, on our steam marine and on our manufactures.

The city of New York offers the greatest market for coal in this country. Its population is greatest. It employs a vast steam marine, inland and sea going. It has become a seat of great and varied manufactures. And all of these means of consumption are increasing. Nearly a million of beings are already inclosed within the suburban limits of New York. But the inhabitable capacity of our island is restricted by the price of fuel. This already amounts to a charge of \$10 per annum, *per capita*. A mere lodger pays \$2 a week now, for having a fire maintained in his apartment.

The cost of steamboat transportation is largely affected by the price of coal, and the benefits which our commerce could realize from the employment of steam are thereby, relatively diminished. Coal is the *principal* object of expense in running our steamboats. For an ocean steamer, taking 800 tons on a long voyage, the difference against our port as compared with another one having a direct supply of coal might amount to \$12,000 yearly—a high *port duty* indeed, and which in any other form would drive our steam marine at once to other harbors.

Our manufactures of machinery, iron wares, sugar, printing materials, books, and numberless other articles, are large and rapidly increasing. Steam power is coming into extended use. It assists industry and cheapens production in nearly all of our business streets.

Here is the market. Let us examine:—
 1,000,000 tons yearly for domestic use.
 500,000 " " S. boats, tugs & ferries.
 300,000 " " Ocean steamers,
 200,000 " " Manufactures.
 2,000,000 " " Present consumption.

Could we cheapen coal materially, we could, aided by other causes of growth, be prepared, in ten years, to double this demand.

Say 1,600,000 tons for domestic use.
 1,000,000 " " S. boats, river & coastwise.
 800,000 " " Ocean steam navigation.
 700,000 " " Manufactures.

4,000,000 tons yearly by 1865.

Our present channels of supply are through Philadelphia and Baltimore, our Delaware and Hudson canal, carrying half a million tons yearly, and for the rest the Morris canal, and the coasters to Nova Scotia.

Now within 150 miles of our city we have in-

exhaustible supplies of coal, from which we should draw all that our operations require, for a cost of movement not exceeding \$2.50 a ton. At \$4 a ton at wholesale, the coal trade of New York would prove a paying, and at the same time the most active business of our port.

How soon shall we have a great coal road, able at least to supply the domestic wants of our city, even if we cannot engage in export; a great, double track, heavily equipped road, with coal wharves on the Jersey shore equal to the operations of a trade such as no other city in America could boast?

This is a matter urging itself upon the consideration of all having at heart the interest of New York. It is not merely a scheme for investment, although if consummated none would pay better, but it is to cheapen our household expenses, to protect our growing and invaluable steam marine—and to employ and to reward the industry for which our city offers so wide a field, that we urge the necessity of such an avenue. Our city, and our state, we believe, would consume ten millions of tons yearly could it be had. And much of the state trade would be supplied if possible from New York city.

The Lackawanna road promises us half a million tons next year, and we hope New Yorkers will not rest until the "Water Gaps" nearer to us than to Philadelphia, can pass twice as much more for our use.

Express Locomotives.

A great principle in the philosophy of railroads has been left heretofore to develop itself, and in spite of the economy which it embraces, it has been accepted only so far and so fast as was necessary, to do the business which has been forced upon our roads. This principle is that of the "concentration of locomotive power." It is well known that the prices of wages and of materials used in operating railroads are from fifty to one hundred per cent. higher now than ten years ago. Yet, it is equally well known that the operating expenses of large roads, such as have supplied themselves year by year with the current improvements of the times, are less per ton or per passenger moved, now than then. Look at the cost of carrying coal on the Reading road for each of the last ten years. In 1843, the cost of carrying coal from Mount Carbon to Richmond was 46 cents per ton. Under present prices of wages, fuel and iron, this cost would be certainly 70 cents, and probably more. But the actual cost of carriage per ton has been reduced, by a gradual development of the principle we have so often advocated, until in 1853 it was but 35 cents, or but *one-half* what it would have been under the former system. The greatest means which have effected this result have been the doubling of the capacity of the engines; so that where two hundred tons was the average weight of coal carried in one train in 1843, 400 tons are now carried.

The following are the statistics of cost of carrying one ton of coal, for each year since 1843, as by the company's last report:

1843....46.00 cents.	1849....43.62 cents.
1844....41.08 "	1850....40.69 "
1845....37.01 "	1851....38.54 "
1846....38.89 "	1852....35.36 "
1847....45.84 "	1853....35.07 "
1848....45.06 "	

Were the several costs adjusted upon the same prices as in 1843, the cost for 1853 would be about 23 cents per ton, or one-half of that in 1843.

The system, of which this is a result, has never been sought in advance, but has, to an extent, forced itself as a necessary economy upon the managements of railroads generally. It is difficult to define its ultimate limits. But there are obvious means of extending the power of locomotives to a greater extent than has been generally adopted.

We wish now to speak of express engines. The most obvious limit to the diameter of the boiler of a high-wheeled engine, is the distance across the track between the wheels. For a narrow gauge this is 53½ inches, and the boiler cannot well exceed 50 inches. The length of tubes may be, safely, 13 feet; and this united increase of length and diameter, over a boiler 43 inches in diameter and 11 feet long, would be equal to an increase of 60 per cent. of the capacity.

The only change in the structure of the engine which would ensue from this increase of diameter, would be a different mode of hanging the springs. These would either have to be placed under the edge of the firebox, on the crown of the firebox, or the boiler would have to be placed pretty high up, and the axles spread so as to have the springs clear the firebox. Norris adopts the first, Smith and Perkins the second, and Walter McQueen the third of these plans. We believe that if the forward spring be placed *under* the bearing, the back spring be placed *above* the frame, but wholly behind the firebox, and the equalizing lever be made to rest on a wide bearing on the bottom of the firebox, the result would be a strong, elastic and steady spring suspension, while greater room would be afforded for any desirable increase of the capacity of the diameter of the boiler.

We would be glad to see this mode of spring-hanging generally adopted, being well convinced that it would work as well as any other, and at the same time afford room for a diameter of boiler as great as is practically safe under high pressures. The equalizing lever should have a seat made to fasten upon the bottom of the furnace, and as wide as 6 inches, and both the beam and springs should be held from any lateral movement. Equalizing beams having a narrow bearing beneath the firebox have tilted over and broken the spokes of the driving wheels, a result easily guarded against by proper attention to the manner of securing the beam.

Tubes of 13 feet length should be of 24 inches diameter at least. This would make them stiffer in the boiler and give a better fastening in the tube sheets. But, better yet, it would increase the relative flue opening, giving a better draught, and it would relieve the "back pressure" felt in long tubes of small diameter, and also the tendency to fill and choke with ashes. We believe, too, that iron tubes, being far cheaper, stiffer, affording a more secure fastening to the tube sheets and not being subject to as rapid wear, and having *less expansion*, compared with copper or brass, will ultimately come into general favor.

Iron tubes are used entirely we believe, in all the long-boiler freight engines of the Baltimore and Ohio road, whether burning wood or bituminous coal. We know of Northern builders who have used iron in large lots, with the best success.

A set of copper tubes, proper for a first class express engine, would weigh 2½ tons and would cost \$2000. It would cost much more to repair these tubes than if they were of iron, while their actual durability would be less.

By adopting a thin edge-frame between the pedestal of drivers, and by placing the springs and equalizing beams clear of the firebox, room will be had for a grate of 44 inches width, an increase of from 4 to 8 inches over those now in general use on roads of the narrow gauge.

With all these means improved, for increasing the capacity, of locomotives by about 60 per cent. within a weight of 33 tons, we are confident that the heavy passenger business of many of our roads could be worked cheaper than now. Our long distances and often heavy grades make the heaviest practicable class of engines desirable, if for nothing besides economy.

Lehigh Coal and Navigation Company.

From the late annual report of this Company found under the date of May 2, 1854, we present the following of their operations for the past year.

The water was let into the channel in March 1853, but in consequence of the repairs on the Delaware Division, business was retarded somewhat until the early part of May; and in consequence the production of coal fell below the estimated quantity.

The shipments for the year from the Company's mines, were 476,976 tons, which are with shipments from other mines, made a total of 1,080,546 tons. The shipments of lumber were 51,896,352 feet.

Freight of every kind transported on the Company's canal during the year was 1,346,227 tons.

The profits of the year were an aggregate of \$804,715.22, an increase of \$1,715.76 over the year 1852.

The balance for the year, to the credit of profit and loss, after providing for State tax, interest, expenses and repairs, was \$375,801.11; exhibiting an excess of \$154,930.10 over the balance for the year 1852.

During the year the increase in the capital stock was \$416,050; decrease in the funded debt, \$495,123; decrease in the floating debt, \$32,884; decrease in the general indebtedness of the Company, \$435,856.

The assets comprised, at the close of the year 1853, \$500,148 of the Company's loans, held in trust as a contingent fund, subject to the orders of the Board of Managers; the increase in this fund, during the past year, being \$120,556.

On the first day of January last the entire amount of the Company's liabilities, including the capital stock, loans and obligations of every kind and including also the loans held in trust, as above stated, was \$7,276,732.

Since the close of the year 1853 the capital stock has been enlarged to \$2,469,400; the amount at which it now stands.

The funded debt has been reduced to \$4,420,470. The contingent fund stands as it did at the close of the year.

In May of last year a dividend of 6 per cent. was made in coal, and in future the Company hope to make the dividends payable in cash.

The expenditures during the year 1853 upon the Companies works have been quite moderate, and the whole outlay has as usual been charged to profit and loss.

The insufficient depth of water in the Delaware Division of the Pa. Canal continues to restrict the

trade of the Lehigh region, and numerous appeal have been addressed to the Legislature for a remedy, but so far to no purpose.

Locomotive for Burning Anthracite Coal.

The engines made by Ross Winans, Esq., have for a long time been adapted to burning Anthracite coal, and are doing so with the utmost success, at the present time, upon the Reading Railroad. There are but few practical details, about locomotive boilers, which are essentially changed for burning this fuel; the principal being the proportions of the furnace, the admission of air, and the variable exhaust.

The following are the peculiar points in the furnaces and smoke stacks of the anthracite coal engines upon the Reading road; and such as an engine builder would require to know, to construct equally as good engines, for that kind of fuel, in other localities.

The furnace has a large grate with a shallow allowance of coal room. The Winans engines have grates 7 feet long and 3½ feet wide, giving 24½ square feet, while the average depth of furnace is but 3 feet. The sides and crown of the furnace are made wholly of the best double-heat hammered iron. The tube sheets and tubes are of iron; the tubes (103 in number) being 14 feet in length and 2½ inches in diameter. The back end sheet of the outer firebox is flanged and riveted to the crown on the outside; that is to say, the end sheet is flanged outwards instead of inwards. By this plan the furnace can be quicker taken apart when it requires repairs.

The grate is made of very heavy cast iron bars, cast two together, and having a shank reaching out behind the firebox. Through a round hole in the end of this shank a lever can be applied to stir the bars and release the clinkers when the fire is burning. These bars are supported at both ends and at the center. For a grate 42 inches wide, there are six castings, or twelve separate grate bars. The spaces between the bars are about 1½ inches for lump coal. Winans has a patent for the movable grate bar.

The top of the firebox is a sloping flat surface inclining towards the tender. An opening is made in the top, about over the middle of the grate, and by a coal chest, with a sliding top and bottom, coal can be dumped directly upon the grate. The water space, over the inclined furnace crown, is about four inches thick, and the opening for the coal door is made through it.

Double cast iron doors, perforated for the admission of air, and having removable cast iron facings on the inside, are placed entirely across the hind end of the furnace at about six inches above the top of the grate bars. Between these doors and the grate, a cast iron frame, hinged like a door at one end, is placed. This frame is grated, up and down, so as to give 10 or 12 openings, 1½ by 4 inches, for still further increasing the admission of air upon the hind edge of the burning bed of coal. This frame, when swung open, just clears the top of the grate bars, there being no water space below the upper side of the door.

There is no footboard upon the engine, the engineman riding upon the top of the waist of the boiler, and the fireman riding on a platform projecting from the front end of the tender.

The ash pan is about 12 inches deep, opened only towards the tender, with the exception of openings of about 8 by 12 inches on each side for raking out cinders. The ash pan is kept flooded with two or three inches of water on the bottom, by which the life of the grate bars is increased. The ash pan has no damper. The water admitted to it is supplied through a one inch hose from the tender.

Going to the forward end of the boiler, the smoke box has vertical sides and a flat bottom; but curved pieces of boiler-plate are secured across the width of the smoke box, on the curve of the under side of the boiler, thereby leaving a round smoke chamber above, and a square chest below for holding the variable exhaust. Winans' patent variable exhaust is a cast iron box with expanding sides, worked by right and left worms, but Millholland's coal engines have simply a cast iron cylindrical nozzle with an internal cone capable of being elevated or depressed to vary the opening for exhaust. The mouth of the exhaust pipes is even with the bottom row of tubes, a pipe of 9 inches diameter, and having a flaring bottom, being placed over the blast, and reaching to the base of the chimney. The base being 14 or 15 inches in diameter, leaves three inches passage around the top of this pipe.

The spark arrester has an inside and an outside pipe, but no cone. The top of the outer pipe is made by a gridiron of bars of ½ inch thickness, and placed ½ inch apart. This grate is about 15 inches in diameter, and outside of this a sloping cap, forming a truncated cone, extends downwards at about 20 degrees from a horizontal line, until it attains an outer diameter of about three feet. The conical surface of this cap, which is over the casing of the inside chimney, is perforated with rectangular openings, ½ by ½ inch, in such a manner that the iron is cut through on but three sides of the opening, leaving the clip to ad here by its upper longest edge, and to be bent straight down so as to let the smoke rise vertically. The sparks projected against the backs of these pieces are thrown into the casing around the chimney, from whence they are taken from the bottom. As many of these openings are cut through the cap as can be made without taking out too much of the strength of the iron, which latter has to be of the best quality. This form of sparker is that designed by Mr. Millholland for the Reading road, and differs some what from that of Mr. Winans.

A small pipe, with an inside stop-valve, extends from the forward dome into the chimney, so that a draught of steam may be had when standing.

It will be seen that no copper is used about the furnaces of these engines, nor in the tubes; that materiel being too expensive and being too easily cut away by the action of the coal. The fuel is coarse lump coal. The fire is started with pine wood.

An engine having a grate such as is described has a 48 inch boiler, with 103 tubes, 2½ inches in diameter and 14 feet long; 19 inch cylinders, 22 inch stroke, and eight drivers 43 inches in diameter.

Many of the boilers burning anthracite upon the Reading Road are of the kind planned by Mr. James Millholland, the master of machinery of the road. His plan of boiler is the combination of

two old expedients; the internal smoke chamber and the flank grate. A smoke or gas chamber is placed within the boiler nearly midway of its length, and communicates with the furnace and smoke box by tubes on each side. The grate is also closed around the sides and front, to exclude air from passing up against the furnace sheets, and to deaden the combustion of coal at those points. The combination of these two arrangements forms the subject of Mr. Millholland's patent, dated February, 17th 1852.

It has never been shown that this form of boiler has practical advantages superior to others in burning coal. It has some obvious disadvantages peculiar to itself. Besides having two sets of tubes and four tube sheets, it breaks up and injures the draught, by the pressure of the gas chamber. Instead of a free and direct passage to the front end of the boiler the draught is checked on entering the internal chamber, and has to take a fresh start through the forward set of tubes. We regard this as a very serious objection, even with large tubes. It impairs the efficiency of the furnace and imposes an additional load on the exhaust. Again as the internal chamber requires a water space of 2 or 2½ inches around it, the space available for tubes is diminished, making a 48 inch boiler no larger for the purpose of attaining tube surface, than one of the ordinary kind 43 inches in diameter.

One of Mr. Millholland's passenger engines with 15 inch cylinders, 30 inches stroke and seven feet drivers, having a large boiler of the patented kind, could not supply itself with steam, and the cylinders were accordingly "bushed" so as to be but 13 inches in diameter.

Journal of Railroad Law.

CUTTING OFF WHARVES.

Upon page 182 of the present volume, will be found a brief statement of a decision of our Supreme Court, in the case of *Tillotson vs. The Hudson River Railroad Company*. The plaintiff owned a farm opposite a bay, lying in defendants' route; and before their road was constructed, plaintiff had built a wharf, extending into the bay. The defendants carried their road across the bay, upon a structure of pile bridging, furnished with a draw suitable for the purposes of navigation, and distant about 1900 feet from and in front of plaintiff's dock. The Supreme Court held that defendants had not "cut off" the plaintiff's dock, within the meaning of their act of incorporation. We have now referred to the case above mentioned, only to say that the decision of the Supreme Court therein has recently been affirmed by our Court of Appeals.

CARRIERS' RECEIPTS.

The Court of Appeals, in the case of *Ellis vs. Willard*, has, according to Selden's notes, decided as follows:

Where goods are received by a carrier for transportation, and the bill of lading signed by the carrier expresses that the goods are received "in good order," to be "carried and delivered in like good order," he is not prevented by the bill of lading, as between him and the immediate parties to it, from showing by parol evidence that the goods were not in good order when received.

The statement in such instrument of the condition of the goods, is a mere admission, and not a

part of the contract. It is *prima facie* evidence that the goods were conditioned as described; but it is not final and conclusive; it does not prevent the party signing the bill of lading from introducing evidence in contradiction of the bill of lading. Like an ordinary receipt, or the acknowledgment of the receipt and amount of the consideration in a deed, it is open to explanation by parol proof.

It is not material, in respect to a carrier's right of contradicting a bill of lading, as above stated, whether the goods were open to his inspection when the bill of lading was given by him or not.

A similar decision has been made in regard to bills of lading, by Judge Betts, of the United States Court, for the Southern District of New York.

ANNULING CARRIER'S CONTRACTS.

A contract can only be annulled or modified by the unanimous consent of both parties. Our Court of Appeals have decided in the case above mentioned, of *Ellis against Willard*, that the owner of goods, having shipped them to be transported to a particular place, at a freight agreed upon, and demanded them of the carrier at an intermediate point, and received them in pursuance of such demand, cannot change the terms of the contract to the prejudice of the carrier, without his consent.

The carrier having demanded the full freight stipulated for transporting the goods to the required place of destination, the Court held that he was entitled to recover the same.

UNFORTUNATE STOCKJOBING.

In the case of *Staples against Gould*, our Court of Appeals, as we learn from Selden's Notes, have firmly carried out the provisions of law touching stock-jobbing. On 15th January, 1851, on defendant's stating that he had sold for the plaintiff 200 shares of Canton stock, at \$66 per share, deliverable at plaintiff's option in 30 days, plaintiff gave defendant \$750, to meet any difference that might accrue against the plaintiff upon the interest, at the end of the 30 days. On 20th January defendant delivered the stock, at a loss of \$4 per share, applying the \$750 in part payment of the difference. The plaintiff had no knowledge of such delivery of the stock or payment of the difference at the time, and upon information of it did not approve of it. At the end of the thirty days the stock had fallen below \$66 per share, and had fluctuated much within the 30 days. This action was brought to recover back the \$750.

Held, that the defendant delivered the stock and paid the difference at his peril; and if there were no other grounds of defence, the plaintiff might recover.

But the whole transaction under the provision of the Revised Statutes, which declare that contracts for the sale of stocks shall be void, unless the seller *owns* the stocks. The transaction being illegal, no action being based upon it could be maintained by either party. It is true that by law a party who, in such a case, pays money by way of difference, may recover it back; but in this case, the \$750 was not paid as a difference to the seller of the stock, but as a sort of deposit to the broker, by way of security.

JUMPING UPON CARS.

The *Zanesville Courier* of the 16th says: This morning Judge Stillwell decided that railroad companies were not liable for damages to persons

who were hurt by getting off or on the cars while in motion. Suit was brought against the C. O. R. Co., by an individual who had his leg broken in an attempt to get upon the cars; and in accordance with this decision the plaintiff's claim was rejected.

IS FREIGHT DUE FOR GOODS NOT DELIVERED?

Mr. Hutchins, a banker of Louisville, in traveling lately upon the East Tennessee and Georgia Railroad, was, greatly to his surprise, required by the conductor to pay \$40 as freight upon his two small valises, which he kept with him in the cars, but which, as the conductor ascertained, contained \$40,000 in specie. The amount of freight was compromised finally at \$17.

Common carriers of passengers, in taking fare from passengers, agree to transport them with ordinary baggage, including cash for travelling expenses. Nothing more. If they find that costly goods are taken under the semblance of luggage, why should they not demand freight for them? Why should they be compelled to carry Mr. Hutchins' gold without reward?

Plan of an Elevated Passenger Railroad for Broadway New York or any other City.

Drill holes in the pavement 5 feet from the houses, about 16 feet apart, the length you wish the road; round iron rods 1 inch in diameter, 12 feet long must be put in these holes and fastened with melted lead; on the top of these rods must be welded at right angles, iron bars ¾ by ½ inch, 5 feet long, the ends secured to the houses, (or other posts). On the outside of this frame, fasten iron bars ¾ by ½ inches, 18 inches apart the whole length. This forms the road, which should be built on both sides of the street, and the ends joined by a circular road, which makes it endless. The space 3½ feet between the houses and Railroad must be covered by a tight plank platform, or open work iron as the lower tenants choose.

The carriages should each hold but one person, like an arm chair; the wheels, 16 inches diameter would be hid; a top like a buggy, which the rider could raise, or lower as they choose; enough of these chairs must be made to fill the whole road, united together making an endless train, which should be always kept in motion, by stationary steam engines of small power every mile; the cars are so fixed that they cannot turn over nor get off the track; for passenger to get on and off the cars there must be stairs in each block, (or over each cross street) where strong active men must be stationed to assist ladies, children, and invalids, the speed would be 4 or 5 miles per hour, to be determined by experience; every time St. Pauls clock strikes, it might stop one minute, (if necessary).

Although 500 persons might be on this road at one time, the weight is so divided that no wheel, nor any one part of the road, will have a pressure of more than 100 lbs., it can therefore be built very cheap and light; each rider faces front and can see both sides of the street. It would form a beautiful riding promenade, for ladies in full dress, with bonnets on or off. For further information enquire of the same person that in the year 1821 built the first railroad (in Boston) that ever was built without cog wheels, when steam was to be motive power; and proved that the adhesion of the wheels by friction was enough,

without cogs, to prevent wheels from slipping on the rail; and without which proof, no railroad would have been built for travelling to this day. The useless and expensive addition of cogs were used in England until after my public exhibition in Boston.

May 20, 1854.

CHARLES WILLIAMS,
Fallsburg Ga.

New York and Erie Railroad Freight Locomotives.

During the last season, the friends of the Erie road were encouraged with the prospect of having some 60 freight engines, of the largest class, placed upon the road, to enable it to accommodate the freight business of the present year. The purchase of engines was greatly delayed, however, to give the Company time to prepare plans and specifications in detail of what was wanted. In the meantime, the cost of engines advanced some \$800 or \$1,000. Now, the company have received about a dozen of the expected "sixty," and the deliveries are continuing at about three a month.

But the kind of engine adopted, and of which sixty are to cost some \$750,000, and to require \$400,000 a year for expense of fuel, repairs and attendance, is not what the friends of the road had a right to expect it should have, nor such as its business demands. The greatest performance of which we have yet heard, as made by any one of these engines, is that of hauling sixteen heavily loaded eight-wheel cars between Port Jervis and Piermont, and over grades of 60 feet. The weight of the train was 320 tons, the cars being loaded beyond their proper capacity. This is to be inferred as being the *ultimatum* of the Erie Railroad power.

As we have often, and at great length and precision, explained the advantages of moving maximum trains, and the important application of the doctrine of concentrated power in railroad economy, we feel impelled to a comparison of this performance with that of the engines of some of the Southern railroads.

The engines of the class of the Number 72, upon the Baltimore and Ohio Railroad, takes as an ordinary load, upon similar grades, 30 cars, weighing in all, 420 tons, and if worked to their *ultimate* power will take 40 cars, weighing 560 tons, of the same grade. One of these engines has taken 225 tons up a grade of 116 feet per mile. The curves of the Baltimore and Ohio road are frequent, and often of shorter radii than on the Erie road.

The freight engines of the Pennsylvania road take 375 tons as an ordinary, and 450 tons as an *ultimate* load, over 60 feet grades.

The new engines of the Erie road are well built, and of excellent stock, but are not adapted for the purpose intended.

Our technical friends will understand us when we say that in place of the 28 tons of adhesion of the Baltimore engines the Erie have but 21 tons, while instead of a 22 inch stroke and 3½ feet wheel, the former is 20 inches, and the latter 5 feet 2 inches.—In fact the Erie freight engines are better adapted for speed than power, and as a proof we may instance one of the number as now regularly running on the *night express* train from New York, and by which we have been drawn,

in a heavy train, at a good 50 miles an hour on a level.

The value motion of the Erie engines, is the "shifting link" with short eccentric rods, the effect of which, changes the load from 1 16th to 7 16ths of an inch in changing the expansion from full to half stroke. Any mechanic will recognize from this an unfavorable condition for great power and moderate speed, especially for an engine working on 60 feet grades.

It is the use of engines not adapted to the business and grades of the Erie road, which imposes a great annual expense for transportation upon that work, and requires increased outlay for engine houses, turn tables, turnouts, and for fixed machinery; and which, more than the actual business of the road, has created the necessity for a double track. More accidents also result in running frequent trains.

We feel convinced that if the managers of some of our northern roads could realize the economy of eight-wheel combined engines having a moderate length of wheel-base and great power, and could they become aware of the manner in which the Reading, and Pennsylvania and the Baltimore and Ohio roads have turned the adaptation of such engines to profitable account—we should see our home roads in a position to carry freight at considerably lower rates.

The average charge for moving freight on the Western Railroad of Massachusetts was, for 1853, 2.8 cents per ton per mile. On the New York and Erie road 2.5 cents per ton per mile. On the Baltimore and Ohio road 1.8 cents per ton per mile. On the Reading road less than on the Balt. and Ohio.—The Pennsylvania road, not having been opened, and having been subjected to state toll and to working inclined planes, during last year, has not established results useful for comparison.

Railroads in Arkansas.

The State of Arkansas bids fair to distance the State of Missouri in the Railroad race, although the latter had fairly started before the former had entered on the course.

The Missouri Pacific R. R. was commenced at St. Louis on the 4th of July, 1851. On the 10th of June, 1852, the Government of the United States granted lands for two Railroads in Missouri, the sum of the length of which was about 500 miles. During the following winter, the Railroad system of Missouri was determined: being 5 roads and about 1,200 miles; and on the 9th of December, 1852, the first locomotive west of Mississippi river, with its train of passenger cars, started from St. Louis and passed over the Pacific Railroad to near Cheltenham, about five miles.

Thus Missouri had fairly started on the Railroad course in 1852.

Then Arkansas was held bound by politicians on the dirt road track.

On the 9th of February, 1853, before the State of Arkansas had commenced any practical operations on any road, the Government of the United States granted lands for one Railroad and two branches in that State, the sum of the length of which was about 600 miles. During the past year, public Railroad meetings and Railroad conventions have been called throughout the State, at which speeches were made, information gained, enthusiasm aroused, and resolutions carried, by which the Railroad system of Arkansas was determined; being 7 roads, and about 1,200 miles; and though the State was overwhelmed by debt, the gallant spirit of her people is giving and gaining means to secure and speed the prosperity of their Railroad system. The longest main trunk

road in the State is the Cairo and Fulton. The next in importance are its two branches—the eastern branch being known by different names, according to the terminus contended for on the Mississippi, opposite Memphis, and at Helena, but which for convenience we will call the Mississippi and Little Rock R. R.; the western branch being known as the Little Rock and Fort Smith R. R.; which main trunk and branches extend about 600 miles, and are driven by planters and counties along their respective routes, aided by the grant of Congress above alluded to. The fourth road is called the Mississippi, Ouachita and Red River R. R., and sustains a similar relation to South Arkansas, that the Hannibal and St. Joseph R. R. does to North Missouri, running nearly due west. Camden and Fulton are main points on this road. The fifth and sixth roads are branches of the M., O. & R. R. road—the one running south through Union county to the Louisiana line, the other north to Little Rock, forming the links of the South Arkansas portion of the Great Mississippi Valley R. R. from the Gulf of Mexico *via* the Iron Mountain of Missouri to the Falls of St. Anthony. The seventh road is called the Border Railroad, and is projected to connect with the Missouri Southwestern Railroad, near Springfield, and with the New Orleans, Opelousas & Great Western Railroad of Louisiana, near Shreveport. These four last mentioned roads are together about the same length as the first three, viz: 600 miles; the whole system of Railroads in Arkansas including as above stated about 1,200 miles. The first 600 miles are provided with grants of land by Congress. The last 600 miles is in a fair way of being provided for by similar grants; which, when done, will furnish Arkansas with grants of land for 700 miles of Railroad more than Missouri has been, or, from present appearances, is likely to be furnished with, although Arkansas has already received grants of more land from Congress than Missouri has, and although the State of Missouri contains over 8,000,000 acres more than the State of Arkansas, and although the Government of the United States still holds nearly 7,000,000 acres more in Missouri than in Arkansas.—*Western Journal*.

Railroads of Missouri.

The Railroads under construction and projected in Missouri are as follows:

1. Pacific to Kansas, distance say.... 300 miles.
2. St. Louis and Iron mountain..... 80 "
3. St. Louis and South Western..... 300 "
4. North Missouri..... 250 "
5. Hannibal and St. Joseph..... 200 "
6. Weston and St. Louis..... 200 "

In all,..... 1330 miles.

Estimating them to cost \$25,000 a mile, would require the sum of \$33,750,000.

Evansville, Indianapolis and Cleveland S. R. R.

Oliver H. Smith, Willard Carpenter, Franklin Hardin, James W. Cockrum, John Love, Jeremiah Smith, Henry D. Allis, Alexander Leslie, James Crosby, John H. Johnson, and William Mason, have been elected Directors of the above Railroad Company. Oliver H. Smith was unanimously elected President; Willard Carpenter, Vice President; James Greene, Secretary and Treasurer, and Henry C. Moore Chief Engineer.

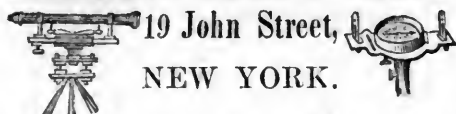
Old Railroad Iron For Sale.

ABOUT 250 TONS, mostly whole bars, flat iron of superior quality. Deliverable at Portsmouth Va. as fast as it can be hauled. Immediate offers are invited, addressed to

L. O. B. BRANCH, President R. & G. R. R.
Releigh N. Carolina,

None but the accepted offer will be applied to.
3t.22

SURVEYORS & ENGINEERS. ALBERT COOK & CO.



19 John Street,
NEW YORK.

HAVE, in connection with their Optical and Mathematical Imports, established a Manufactory of Surveying Instruments. Employing an experienced Engineer, and the best of German mechanics, their instruments will give full satisfaction.

James W. Hooker,
COMMISSION MERCHANT,
AGRICULTURAL WAREHOUSE,
AND MACHINERY DEPOT,
No. 36 Lloyd Street, Buffalo, N. Y.

Commission dealer in Portable and Stationary Engines, Iron Planers, Lathes, Universal Chucks, Belting, Oils, Rubber Packing and Hose Scales, Saws, Mill Stones, and Machinery generally. Post paid letters will receive prompt attention. 221f

STEEL.

Shortridge, Howell & Jessop,
HARTFORD STEEL WORKS,
SHEFFIELD, ENGLAND,

HAVE constantly on hand at 24 Cliff St., New York—

CAST STEEL—double Refined and Extra, Square, Flat and do. Best Warranted do. do. [Octagon.
SHEAR STEEL—Best double and single, Warranted.
MACHINERY STEEL—Round assorted.
SHEET STEEL—for Saws and other purposes, 1st and 2d
GERMAN STEEL—assorted sizes. [quality.
SPRING STEEL—for Railway and Carriage purposes, 1st and 2d quality.

BLISTER STEEL—Genuine (1), "Sykes", and other good
BLADE STEEL—for Cutlery purposes. [stamps.

All of which are guaranteed to be equal to any other make, and offered for sale on the most favorable terms, by
1y22 DUNCAN LITTLEJOHN, Agent.

Sewall & Crehore

CIVIL ENGINEERS,
ST. PAUL, MINNESOTA.

JOSEPH S. SEWALL. CHAS. FRED. CREHORE.

Lyon's Tables of Cubic Contents, Etc.

These valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1. gives correct mean heights of cross sections with either two or three cuttings taken. Table 2. finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise.—Price \$1.50. 21.f

Railroad Iron.

500 TONS, best English make, 57 lbs. per lineal yard, now in port. For Sale by

THEODORE DEHON, 26½ Broadway.
Contracts made as above for Rails delivered at any English or American port at lowest rates and customary credits. 21.5f

Notice to Contractors.



PROPOSALS will be received at the office of the North Western Railroad Co., in Butler, Butler Co., Pennsylvania, until the 7th of June, 1854, inclusive, for the grading and masonry of that portion of the North Western Railroad, extending from Blairsville to Freeport, a distance of 25 miles, comprising some heavy excavations, bridging and two tunnels varying from 1000 to 1400 feet each. Plans profiles and specifications will be ready for examination on and after the 29th inst., at the Engineer's Office, in Blairsville, Indiana County, and Butler.

This line offers superior advantages to Contractors, the country being healthy and easy of access, and provisions very cheap.

At the same time and place, some of the heavy sections between Freeport and Butler and west of Butler will be offered for letting.

MALONE, PAINTER, CLARK & GONDER.

2t.21

D. Mitchell, Jr.,
Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley Railroads, Pittsburg, Pa.

Samuel Mc Elroy,
Assistant Engineer, New York Navy Yard.

Charles B. Stuart,
Civil Engineer, New York.

Edward W. Serrell,
Civil Engineer, 157 Broadway, New York.



ENGINEERS' AND SURVEYORS' INSTRUMENTS, MADE BY
Edmund Draper,
Surviving partner of
STANCLIFFE & DRAPER,
No. 22 Pear Street, below Walnut, near Third St., PHILADELPHIA.

MONTREAL & NEW YORK AND Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6 30 a.m. and 5 p.m., arrive at 8 a.m. and 7 30 p.m.
Leave Plattsburgh for Montreal 7 30 a.m. and 4 p.m., arrive at 10 a.m. and 6 50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate station.

Trains connect at Moors Junction with Northern (Ogdensburg) Railroad for Ogdensburg and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequalled for comfort and dispatch, and attended with less fatigue and delay than any other. It possesses moreover the advantage of a short Ferriage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.
For particulars see Freight and Passenger Tariff.
BAGGAGE checked through.
H. W. NELSON, Superintendent.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to THOS. CHAMBERS, President.
September, 1850.

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN C. Engineer
Huntingdon May 6 1854, 4t

To Contractors.

PHILADELPHIA, WILMINGTON AND BALTIMORE RAILROAD OFFICE.—PHILADELPHIA, April 21st, 1854.—PROPOSALS will be received at this office until May 25th, 1854, for driving the piles, protecting the foundations, and for the Masonry above and under water, of the proposed Bridge across the Susquehanna River at Havre-de-Grace, Maryland.

Also, for the Grading and Masonry of the new location of the Road adjoining the Bridge, and of the Port Deposit Branch Railroad.

Plans, profiles and specifications may be seen at the Engineer's Office, in Havre-de-Grace.

S. M. FELTON,
Pres. P. W. and B. R. R.

17,4t

Notice to Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND TEXAS RAILROAD COMPANY,
Monroe La., March 8th, 1854.

SEALED PROPOSALS will be received at this office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty miles, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the sections, or any portion thereof, not less than one mile, and those proposing to take stock of the company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract, or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,
President.
P. J. TOURNADRE,
Chief Engineer.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,
European, American Employment Office,
287 Broadway, corner Reade-st.
3m*10 Under the Irving House, New York.

N. York and N. Haven R. R. NOTICE OF SUMMER ARRANGEMENTS,



Commencing Monday, May 9, 1854.



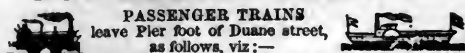
TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A. M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A. M.—Commutation from New Haven.
9.10 A. M.—Special for Port Chester.	6.15 A. M.—Accommodation from New Haven.
11.30 A. M.—Accommodation for New Haven.	8.15 A. M.—Accommodation from New Haven.
3.00 P. M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	9.35 A. M.—Express from New Haven, Stopping at Bridgeport, Norwalk and Stamford.
4.00 P. M.—Accommodation for New Haven.	1.07 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
5.00 P. M.—Express for Boston, stopping at N. Haven.	4.00 P. M.—Special, from Port Chester.
5.35 P. M.—Commutation for N. Haven.	4.00 P. M.—Accommodation from New Haven.
6.30 P. M.—Special for Port Chester.	9.30 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Supt.
New Haven, May, 1854.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and Warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.
December 18, 1852. WM. S. SAMPSON, Agent.

New York and Erie R. R.



PASSENGER TRAINS

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.

Dunkirk Express, at 7 a. m. for Dunkirk.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations.

WAY EXPRESS, at 12½ p. m. for Dunkirk.

Rockland Passengers, at 3.30 p. m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

Emigrant at 6 p. m.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Supt.

Great Western Mail Route.

SIXTY MILES DISTANCE SAVED TO CHICAGO AND ST. LOUIS. THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD LINE, carrying the Great Western United States Through Mail, have the following staunch first-class Steamers running on Lake Erie in connection with the NEW YORK AND ERIE RAILROAD from Dunkirk, touching at Cleveland, and connecting with their Road at Toledo, and connecting directly with the CHICAGO AND ROCK ISLAND RAILROADS at Chicago, in the same Depot, thus forming a Daily Line for Passengers and Freight from New York to the Mississippi River. **NIAGARA**, Capt. Miller; **EMPIRE**, Capt. Mitchell; **KEYSTONE STATE**, Capt. Richards; **LOUISIANA**, Capt. Beyerport. Also **A DAILY LINE FROM BUFFALO DIRECT TO MONROE**, by those well-known magnificent Floating Palaces, **EMPIRE STATE**, J. Wilson, Commander, leaves Buffalo Mondays and Thursdays; **SOUTHERN MICHIGAN**, A. D. Paxinos, Commander, leaves Buffalo Tuesdays and Fridays; **NORTHERN INDIANA**, L. T. Pharratt, Commander, leaves Buffalo Wednesdays and Saturdays.

One of the above splendid Steamers will leave the Michigan Southern Railroad Line Dock, at 9 o'clock, P. M. every day, (except Sundays) and run direct through to Monroe without landing, in 14 hours, where the **LIGHTNING EXPRESS TRAIN** will be in waiting to take passengers direct to Chicago in 8 hours, arriving next evening after leaving Buffalo.

Running time from New York to Buffalo.....14 hours.

Running time from Buffalo to Monroe.....14 hours.

Running time from Monroe to Chicago.....8 hours.

Total.....36 hours.

Connecting at Chicago with a fine line of Low Pressure Steamboats to all places north of Chicago to Green Bay; also with Chicago and Rock Island Railroad to La Salle, and there connect with Illinois River Line of Steamboats, or Express Trains of **ILLINOIS CENTRAL AND CHICAGO AND MISSISSIPPI RAILROADS**, or connecting at Rock Island with regular line of steamers for all points above and below, making the cheapest and most direct Route to St. Louis, Rock Island, Minnesota, and the Great West.

The **AMERICAN LAKE SHORE RAILROADS** from Buffalo and Dunkirk connect with this line at Toledo, forming the only direct and continuous line of Railroads from the Atlantic Seaboard to the Valley of the Mississippi.

Running time to Chicago, 36 hours; to St. Louis, 56 hours.

FOUR DAILY TRAINS by Railroad all the way.

TWO DAILY LINES by Steamers on Lake Erie.

Thus the Traveller and Shipper can see at a glance that no other Line can enter the lists as competitors.

Passengers Ticketed Through from New York with privilege of stopping over at any point on the route, and resuming seats at leisure, either by the New York and Erie Railroad, via Dunkirk, New York and Erie and Buffalo and New York City Railroad via Buffalo; People's Line of Steamboats, Hudson River or Harlem and New York Central Railroads, via Albany and Buffalo.

For any further information, Through Tickets, or Freight, apply at the Company's Office, No. 193 Broadway, corner of Dey st., N. Y., to **JOHN F. PORTER**, General Agent, or **L. P. DUNTON**, Ticket Agent.

Notice to Contractors.



PROPOSALS FOR THE ENTIRE CONSTRUCTION and equipment, or the graduation, bridging and masonry, separately, either in whole or in part, of the Mississippi and Tennessee Railroad, (extending from Memphis to Grenada, Mississippi, about 97 miles,) will be received at the office of the Company, in Memphis, till the 20th of July next. Proposals for the entire construction and equipment, and otherwise as favorable, will have preference. Profiles and estimates of the first 60 miles may be seen on application at the Engineer's Office in Memphis. Bidders must furnish satisfactory evidence of their ability to complete the work.

MINOR MERIWETHER,
Chief Engineer.

May 4th, 1854.

Notice to Contractors.



Proposals will be received for all the heavy work on the Blue Ridge Rail Road, South Carolina; Blue Ridge Rail Road, Georgia; Tennessee River Rail Road, North Carolina; Knoxville and Charleston Rail Road Tennessee. The above lines of rail-way are consolidated and under the management of one Company, Extending from Anderson South Carolina, via Clayton, Georgia, Franklin North Carolina, to Knoxville Tennessee, a distance of 194 miles. That part of the road from Anderson South Carolina, to the Turniptop Mountain, a distance of 40 miles is principally earth excavation, of about equal quantities of cut and fill, with several bridges. From the Turniptop Mountain to the Rabun Gap, a distance of 24 miles, the work is very heavy, there being on the line one tunnel of 5800 feet, one of 1400 feet, and one of 400 feet in length; a suspension bridge across the Chatnga River 500 feet long, with some very heavy earth and rock cuts. The rock in the Tunnels is gneiss stratified. From the Rabun Gap to twenty miles below Franklin, a distance of 50 miles, the line follows down the Tennessee River; the class of work is principally side hill excavation, some of which is rock; they will also be several bridges. From the point 20 miles below Franklin to Hardens, a distance of 35 miles, the line follows the Tennessee River the entire distance, causing heavy side rock excavations. On this portion of the line will be several expensive bridges, and a tunnel of about 1000 feet. From Hardens to Knoxville, a distance of 45 miles, the line follows the river about eight miles, then leaves it, running across the Chilona mountains almost a north line to Knoxville; this portion of the road is heavy work, with about equal quantities of cut and fill, an expensive bridge 1000 feet long and 45 feet high, crossing the Holston River at Knoxville. The character of the rock from Knoxville to Hardens is limestone, and from Hardens to Franklin gneiss rock stratified, and from Franklin to Anderson, stratified sandstone and gneiss rock. The character of the earth is sandy and clay loam. The line for the whole distance runs through high table lands, well settled, remarkable for its health, good water and ample resources for subsistence. The above line of rail-way offers great inducements to experienced contractors. The undersigned will be prepared to receive proposals and enter into contracts for the graduation, bridging, tunneling and masonry for the heavy portion of the line, from and after the 1st day of May next, at Knoxville Tennessee, Franklin North Carolina, and Pendleton South Carolina, and will continue at such places, until the same is under contract. Profiles and maps of approximate location can be seen at each of the above places after the 1st day of May. Proposals are asked with cash payments, also eighty per cent cash and twenty per cent in the Capital Stocks or Bonds of the Company. All communications prior to may 1st must be addressed at Pendleton South Carolina.

4,13

ANSON BANGS & Co.

To Contractors.

The Virginia Central Railroad Co. proposes to contract for taking up about 36 rails of superstructure now laid with the strap rail, and relaying with a heavy rail, the contractor furnishing every thing except the ties which will be distributed by the company.

Sealed proposals will be received at the office of the company in Richmond, until the 24th day of May next, at 9 o'clock.

The Rail to be used must weigh from 55 to 60 lbs. to the yard. Payments to be 50 per cent. cash, and 50 per cent. in the Bonds of the company running 30 years, and secured by a mortgage on the whole property of the company.

Specifications may be obtained at the Engineer's office at Richmond, after the 10th day of May.

CHARLES ELLET, Jr.
Chief Engineer.

April 26th 1854.

To Contractors.



PACIFIC RAILROAD OF MISSOURI

THIRD AND FOURTH DIVISIONS.

IT is intended to make contract for the third divisions of this road, (extending from the Missouri river at Jefferson City, passing near Georgetown and Warrensburg, to the Missouri river near Independence, about 160 miles,) so soon after the first of May next, as satisfactory proposals shall be made.

Contract will be made for the whole now offered, or such parts as particular contractors may select in form and quantity to suit the interests of the company. Proposals are asked for by the cubic yard, with cash payments; but contractors may, if they desire, accompany their offer with proposals for two thirds cash and one third in county and railroad mortgage bonds or other securities.

Profiles and maps of approximate location can be seen after first of April next at Pacific Railroad Office, in St. Louis, and any information will be given on application to the Engineer.

The first division of this road is now in operation; the second division to Jefferson City under present course of construction.

The third and fourth divisions now offered pass over a high, rolling mixed prairie and timbered country, and for healthfulness and supply of provisions will compare favorably with any part of the west.

THOS. S. O'SULLIVAN, Chief Eng.

Pacific R.R. Office, St. Louis, Feb. 1854.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17 tf

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—specular red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

G. PARISH.

15,3m*

Ogdensburgh, N. Y., April, 1853.

S. SEYMOUR MORTON & CO. GENERAL R. R. AGENCY, Office, Metropolitan Bank Building. No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R.R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R.R. STOCK.

SCIOTO AND HOCKING VALLEY R.R. STOCK.

SCIOTO AND HOCKING VALLEY R.R. FIRST MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R.R. STOCK.

BUFFALO AND STATE LINE R.R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of weight or pattern as may be required.

VOSE, PERKINS & CO.,
New York, June 1, 1851. 9 South William Street.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

**South-Western Car Shops,
Madison, Indiana.**

THE subscriber is prepared to execute orders at short notice, for all kinds of Passenger, Freight and other descriptions of Railroad Cars.

Work delivered at any point accessible by railroad, or by the Ohio and Mississippi rivers.

Facilities for transportation, enable the subscriber to afford peculiar advantages to Companies requiring work delivered in the South and West.

W. CLOUGH.

Refer to

JNO. BROUGH, Esq. WINSLOW, LANIER & Co.
Feb. 18. 1m.

**Ontario, Simcoe & Huron R.R.
CANADA.**

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kuloolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to take the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

MR. WILLIAM NAISH, of Newport, Monmouthshire Inspector of rails, begs most respectfully to acquaint importers of rails, engineers and others connected with the railroads of America, that he still continues to execute orders of inspection, throughout the various districts of South Wales and adjacent Iron works, and confidently refers to the satisfaction which his supervision has given during the last ten year to exporters of rails, and others below named; as a proof of the fidelity, carefulness and promptitude of his inspections.

BARING BRO. & CO., London.
PALMER, McKILLOP, DENT & CO., London.
LEWIS HOPE, Esq., "
COLLMAN & STORLTERFOHT. "
Hox. JAS. WADSWORTH, Buffalo New York
JAMES SPENCE, Esq., Liverpool. "
NAYLOR, VICKERS & CO. " 191y

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot, gauge, 22 tons weight, 16 + 20 inch cylinders, and 5½ and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.

Dec. 24

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,

New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N.Y. 191r

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of
Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

For Sale.

By the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BROS.,
64 Courtland st., New York,

191r

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality
by THOMAS HUNT,
No. 53 Fulton Street,
New York.

1y10*

Notice To Contractors.

OFFICE OF THE VICKSBURG, SHREVEPORT AND
TEXAS RAIL ROAD COMPANY
Monroe, La., March 8th, 1854.

SEALED PROPOSALS will be received at this Office until the 1st day of June next, at 2 o'clock P. M., for clearing and grading the section of road between the Mississippi river and Richmond, in the parish of Madison—a distance of about twenty miles; also, for clearing and grading the section between the city of Shreveport and the Texas State line, in the parish of Caddo—a distance of about twenty miles; and, also, for clearing and grading a section of twenty mile, beginning at the Ouachita river and running west, in the parish of Ouachita.

Bids may be made for the entire sections, or any portion thereof, not less than one mile, and those proposing to take stock of the Company in part payment, will be most favorably considered. The lines, plans, profiles and quantities of work, together with the specifications, are now ready for examination in the office of the Company. Payments in the proportion of four-fifths of the amounts due will be made at the end of each month or quarter, as may be agreed on, during the progress of the work.

The company reserves the right to accept such proposals as in their judgment will secure the prompt and faithful execution of the work according to contract; or to reject all if none are satisfactory.

Further information may be obtained from the undersigned.

N. D. COLEMAN,
President.
P. J. TOURNADRE,
Chief Engineer.

7c14

Railroad Iron.

5,000 TONS T RAILS, about one-half weighing 50 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

JOHN H. HICKS,
90 Beaver street.

2d Feb'y.

Railroad Iron.

1250 Tons Erie Pattern Guest and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—by sale by

BOORMAN, JOHNSTON & CO.,
90 Broadway, New York.

June 9, 1853.

**Brass Tubes for Locomotive
and Marine Boilers.**

THE undersigned having been appointed Agent for the highest respectable manufacturers Messrs. Allen, Everitt & Son or Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to

JOHN H. HICKS,
90 Beaver str.

March 1854.

DIVIDEND NOTICE.—The 90-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio,) issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburgh, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29; 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 23]

SATURDAY, JUNE 10, 1854.

[WHOLE No. 947, VOL. XXVII.]

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Duty on Railroad Iron.....	353
Harlem Railroad.....	355
New Haven and New London Railroad.....	355
C. Lancaster's Railway Car Ventilator.....	356
Louisville and Nashville Railroad.....	357
Locomotive Boilers.....	357
Virginia and Tennessee Railroad.....	357
Internal Communication in New York City.....	358
Financial Condition of Louisville.....	358
Journal of Railroad Law.....	359
Prices of Locomotives.....	360
North and South Railroad.....	360
Railroad to the Coal Fields.....	361
Buffalo and Brantford Railroad.....	361
Buffalo and New York City Railroad.....	362
Cincinnati, Hamilton and Dayton Railroad.....	363
Proportions of Locomotives.....	364
Charlotte and S. Carolina Railroad.....	365
Interior Railroad.....	365
Elevated Railroad on Broadway.....	366

American Railroad Journal.

Saturday, June 10, 1854.

The Duty on Railroad Iron.

On the 25th day of February last, a meeting of gentlemen representing a large number of Railroad Companies was held at the Astor House, in this city, to adopt measures to effect the removal, or suspension, of the duty on railroad iron. The proposed meeting was notified through the columns of the Journal. It was designed to be public in its character, and the attendance of every person within reach, interested in the object of the meeting, was solicited. About 30 companies were represented, among them a considerable number, measured by the extent and cost of their works, of the largest in the country.

The proceedings of the meeting, as copied from records made up on that occasion, were as follows:—

(COPY.)

"Pursuant to the notice which appeared in the American Railroad Journal on the 25th of February, 1854, a meeting was held at the Astor House, in the city of New York, at seven o'clock, on the evening of the same day, to take into consideration the removal of the duty on railroad iron. The meeting was organized by the choice of Hon. J. T. Elliott, President of the Cincinnati,

Logansport and Chicago Railroad Company, as President; Mortimer M. Benton, Esq., President of the Covington and Lexington Railroad Company, and the Hon. A. Boody, a Director in the New York Central, and other Railroads, Vice Presidents; and Henry V. Poor, Editor of the American Railroad Journal, Secretary.

M. M. Benton, Esq., President of the Covington and Lexington Railroad Company, offered the following resolutions, which, after discussion, were unanimously adopted, viz:—

Resolved, That in view of the embarrassments under which railroad enterprizes in all parts of the United States now labor, occasioned in a great degree by the onerous duty on railroad iron, and that too at a time when the wants of a redundant Treasury do not demand its exaction, it is expedient to aid those enterprizes with which the trade of the country, both foreign and domestic, is intimately identified, by a repeal of the duty on such iron.

Resolved further, That Hon. S. F. Vinton, President of the Toledo and Cleveland Railroad Company; Noah L. Wilson, Vice President of the Marietta and Cincinnati Railroad Company; John Stryker, Director in the Michigan Southern Railroad Company; George Ashmun, of Springfield, Massachusetts; and Henry V. Poor, Editor of the American Railroad Journal, be, and they are hereby appointed a Committee on behalf of the Railroad Companies represented at this meeting, and such other companies as may co-operate with us in our endeavors to procure a repeal of the duty on imported railroad iron, who are requested and empowered to take such measures for the accomplishment of this end as they may deem expedient and proper; and especially that by memorial or otherwise, they cause this subject to be brought before the Congress of the United States at as early a day as practicable, and that said Committee be authorized to add to their number and to fill vacancies.

The following resolution was also offered, and unanimously adopted:—

Resolved, That for the purpose of supplying funds incident to the application to Congress for relief, the companies here represented respectively agree to pay one hundred dollars to the Committee on demand, and a further sum, equal to five per cent, on the duties which may be remitted by Congress on the rails imported, or which may be imported or contracted for, within one year from the first of July next, which sum shall be paid to the Treasurer of said Committee on the passage of the law repealing such duties, provided however, that unless the Railroad Companies of the United States, generally interested in the repeal of the duties aforesaid, shall make like contributions, and agree to pay the five per cent,

contingent upon the passage of the law for said repeal, then said advances shall be returned.

On motion, it was ordered that the proceedings of the meeting be signed by the officers, and that copies of the same be forwarded to such Railroad Companies as are supposed to be interested in the repeal of the duty on railroad iron.

On motion the meeting then adjourned.

(Signed)

J. T. ELLIOTT, President.

M. M. BENTON, } V. Pres.

A. BOODY, }

H. V. POOR, Secretary.

The only members of the Committee present at the above meeting were Messrs. Wilson and Poor. Neither Messrs. Vinton, Ashmun, nor Stryker had any notice of the meeting, nor knowledge that one was to be held; Mr. Ashmun being at the time in Massachusetts, Mr. Stryker either at Rome or Chicago, and Mr. Vinton at Cleveland or Washington. The movement was one set on foot entirely by the Railroad Companies, who also indicated the plan to be pursued to effect the desired results, and at the same time took the necessary measures to place a reasonable amount of funds in the hands of the Committee.

The first step which the Committee took after getting together, which was not till nearly one month after their appointment, was to secure the co-operation of all the companies not represented at the first meeting, upon the basis proposed. Accordingly, they issued the following circular to all the Railroad Companies supposed to be interested in the objects of the movement:

NEW YORK March, 21st 1854.

SIR:—In entering upon the duties agreeable to appointment of the meeting of Railroad Companies held in this City, the proceedings of which were duly forwarded to your address; we find it necessary in the outset of our proceedings to correspond with all the Railroad Companies of the United States supposed to be interested, for the purpose of obtaining accurate and reliable information, and of ascertaining whether they will co-operate with us, in order that we may know to what extent we may incur obligations and make expenditures in furtherance of our objects.—

To make provisions for the expenses unavoidably incident to the prosecution of this measure, it was agreed at the meeting, that each company coming into the arrangement, should advance for this purpose the sum of one hundred dollars; and that in case of success, there should be paid by each company to the committee for the further expenses that may be incurred, and as a compensa-

tion for their time and services, (in addition to the above advance,) five per cent on the amount of duty remitted, or which may be saved to such Company, on Railroad iron heretofore imported by it, or which it may import or contract for, prior to July 1st 1855, by the passage of the law or laws repealing, remitting, or suspending for a limited time, the duty on such iron.—

If a sufficient number of Companies should not come into the measure, to make it expedient, in the opinion of the committee, for them to undertake to carry it into effect, then the hundred dollars advanced, to be returned by them to such companies as shall have paid the same.—

We enclose a copy of a Resolution which we sent to all the Railroad companies in this interest, with the request, that it be offered for consideration to your Board, or other proper authority, at your earliest convenience, and that we be advised of the result and if adopted, that we be furnished with a certified copy of the same.—

Will you also please to furnish us with information on the following points?—The length of your Road.—The number of miles in operation.—The number of miles for which Iron is to be provided.—The weight of Rail to be used.—The number of tons upon which duties will be refunded, if a retro-active law be obtained, to take effect from July 1st 1853, also January 1st 1853, also from July 1st 1852. A list of the Directors, Superintendents, and Engineers of your Company, and the Post Office address of each, as the Committee may wish to correspond with each of them on the subject.—

As the Session of Congress is already far advanced, it is important that your Company should take immediate action, and advise us of the result as the answer to this communication must necessarily be the basis of our action.—

Please enclose your communication to Henry V. Poor Esq. No. 9 Spruce Street, New York.

Very Respectfully,

Your obedient Servants,

S. F. VINTON,
NOAH L. WILSON,
JOHN STYKER,
GEO. ASHMUN,
H. V. POOR. } Committee.

Accompanying the circular was a copy of the resolution referred to, (asking for the contribution of one hundred dollars, and an agreement to pay a sum not exceeding five per cent. of the amount saved,) with a request that it be presented to the board of directors of each company, for their approbation. This circular and resolution have been published by three or four newspapers, with remarks that would lead the reader to suppose that a scheme had been exposed improper in its object, and in the means proposed for accomplishing it.

We have stated that the meeting of the Railroad Companies was a public one. The committee appointed by it determined to give a similar publicity to their acts. Everything emanating from them, addressed to all the parties whatsoever, was printed, and for the purpose of securing as wide a circulation as possible, as Secretary both of the convention of the companies and the committee, we caused a large number of the proceedings of both bodies to be prepared in envelopes for the convenience of distribution. These were handed out both by ourselves and persons employed in our office, not only to persons representing railroad companies, but to all who were supposed to feel an interest in the subject. The proceedings were sent by ourselves to 200 railroad companies many of whom we had good reason to suppose were entirely hostile or indifferent to the proposed measure; they having made all their purchases, and consequently not in a condition to be

benefitted by it. It was foreseen that by adopting such a course, the circulars of the committee would fall into the hands of the more active opponents of the repeal of duties, and that the same use would be made of them that has been; that they would be published in a few papers with remarks similar to those which have followed. But as the committee have done nothing, nor proposed to do anything requiring secrecy or concealment, it was not thought advisable to attempt either. They are quite willing that any and all parties should help to make known the plan of operations proposed by the railroad companies, in such a manner and in such a style as best suit themselves, as it is deemed highly important that a very general interest should be excited in reference to the objects proposed.

As far as the committee are concerned, no money will be called for, or expended, except for proper and legitimate objects. Had not such been the case, a very different course would have been pursued; a secret instead of an open one. The committee were designed to, and will faithfully represent the interest of railroad companies. Three of the committee are directors, or largely interested in roads that within two or three years will require iron to the amount of more than 100,000 tons. These men are not going to waste their own money, nor that of the companies in which they are interested or which they represent.

In behalf of the committee, we would state that they are at work, and intend to execute faithfully and energetically the trust confided to them. They respectfully solicit the action of all companies who have not already signified their co-operation in the plan proposed by the meeting of railroad companies held in this city. In the meantime, a bill, or to speak more correctly, an amendment to a bill, in favor of the North Carolina Railroad, and which has been accepted in its stead, has been introduced into the Senate, and which meets the views of the committee, and it is believed of railroad companies. The committee now propose to bring an influence to bear on each member of Congress from their immediate constituents. There is not probably a congressional district in the United States where a great majority of voters have not a direct interest in the suspension of the present duty. It is the plan of this committee to allow this interest to speak, believing its co-operation to be the most effectual, and at the same time the proper method to accomplish their objects. The movement is one in which the people are the parties to be benefitted, as owners of the stock in our new lines. They are to pay the duty if continued, or receive the benefit of it, if repealed.

We must add, that unless Congress interfere in the matter, we do not well see how a large number of companies are to go through the present stringency in the money market without a crisis in their affairs. The relief asked is one that Congress can extend without injury to any quarter. The Government has a redundant treasury. The domestic manufacturer is certain of full employment for three years at least, the time limited for the suspension of the duty. The overflowing treasury, the activity of our domestic manufacturing establishments, and the general prosperity which prevails, are due to the efforts of our rail-

road companies. Shall not *they*, now that the favor can be granted without prejudice to any, be entitled to some consideration in return for what they have done? This is to be the question asked of Government. The plan indicated is the one that is to be resorted to, to operate upon Congress; the money expended will be what is wanted to bring the influence of the parties most interested, the owners of railroad stock throughout the country, to bear upon the National Legislature. The contest to be fought is one of popular right against an overflowing treasury, filled by railroad companies themselves; and against capital, which is annually doubling its investment in the manufacture of iron, the profits of which have been entirely due to the demand, which railroads have created. It is not favor, but justice, that is demanded, and we assure all parties that no honorable measures will be left untried to obtain it.

At the request of several parties, we republish the article upon the removal of the duty on railroad iron, which appeared in our paper of the 27th ult., for the purpose of giving it an increased circulation, and calling renewed attention of all parties to the subject.

The removal of the duty on rails is urged, for the benefit it will confer upon railroad companies, and through these upon every interest in the land. The objections to the removal are the fear that it will reduce the profits of parties engaged in the manufacture of rails, and an apprehended reduction of the revenue.

Were it true that the removal of the duty would reduce the profits of the manufacturers of rails, this fact alone would constitute no valid objection to such a step, as there is no reason why Government should tax one interest for the support of another. There is no more reason why every railroad company should pay to the rail makers \$15 per ton over cost of production and a fair profit, than that the iron maker should pay an equal amount to the parties engaged in the construction of a railroad. The tax imposed in favor of the rail maker is on the alleged ground that his trade or employment is an advantage to the country. But it will not be denied, that where the country has been benefitted to the amount of one dollar by the manufacture of railroad iron, it has been benefitted five hundred by the construction of railroads. The principle, therefore, upon which duties are levied should exempt railroads from its application, as these works, of all others, tend more directly to promote the general welfare.

The object of the duty was to increase in an equal degree the price of the article. It was a premium paid for the production. It failed, however, to stimulate production, which always must depend upon the demand. The market steadily declined under an enormous duty, till the railroads themselves created a demand, which in two or three years nearly doubled the market price. What the Government tax could not do, railroads have done. They have taken the place of the tariff to the manufacturer, and for the year past have enabled him to realize one hundred per cent. upon cost of production, and nearly that amount over the previous market price. If railroads, by the demand they have created, have secured to the manufacturer what the duty could not do, why not remove

the duty, which was powerless to effect its object, and by encouraging railroads create a *natural* stimulus to production, upon which the profits of the maker must always rest?

Every ton of iron that goes into a railroad in the shape of *rails*, creates in the course of two years a necessity for the use of three times that amount for *other* purposes. Nearly an equal amount is required in the outset for chairs, spikes, rolling stock, and structures of various kinds.—The moment a road is opened, spring up villages, which soon expand into cities, requiring an enormous amount of iron in their construction. These become the seats of various branches of manufacture, in which iron is always the most important element. When a railroad is constructed, therefore, the iron maker may safely calculate upon orders *three-fold* greater than the quantity of rails used. Why then should the railroad company be taxed for the rails used, when it is the direct means of *trebling* the business of the manufacturer, even if he loses the make of the rails altogether?

But the duty can be taken off without the least prejudice to the manufacture of iron in this country. In 1852 there were imported into this country 439,000 tons of iron from Great Britain alone. About 200,000 tons was railroad iron. We have not the authentic figures for 1853, but we presume the amount exceeded 500,000 tons, about one-half of which was in rails. With all the increase of the manufacture in this country, it is not probable from the rapidly increasing demand, that the importations will be diminished, should the duty be removed, and should the foreigner monopolize the manufacture of rails. The domestic production would fall far short of the demand for other purposes; so that by no possibility could our manufacturers fail to have full employment upon such kinds as are protected by an enormous discriminating duty.

It is well known too, that most of the iron manufactured in the United States is not adapted to rails, it being too soft and malleable for this purpose and better fitted for uses where toughness and flexibility are valuable qualities. Experience has shown that we have very few kinds of iron in this country that make a good *head* for a rail.

The railroads have made the fortune of the iron manufacturer; not the *duties*. These may be repealed upon rails, and still enable him to manufacture at a fair profit. The duty was imposed to make up for the greater cost of manufacturing in this country over that in Great Britain. Events that have since transpired have entirely neutralized the disparity which previously existed. Wages paid for the higher grades of labor by the establishments, in the latter country, are nearly as high as in this. The enormous emigration from Great Britain, which now exceeds the natural increase of population, and the influence which the discovery of gold in Australia has produced upon the public mind, are rapidly equalizing the cost of production in the two countries.

The only other items in favor of the foreigner are a wider experience and a greater abundance of capital, to supply which in this country, will only require *time*. We have a decided advantage in cheaper food, and in a greater abundance of the raw material, so that it is doubtful whether well located establishments, and there are plenty

of such locations, to supply any existing or prospective demand, have nothing to fear from foreign competition, *with* or *without* protection.

The reason for the imposition of the duty having passed away, why not dispense with it altogether, as its only effect is to cripple the most important interest in the country, by keeping up an unnatural and injurious stimulus to another?

A similar strain of argument may be urged to the objection that the repeal of the duty will involve a loss of *revenue*. Notwithstanding the large sums that railways have paid into the Treasury, there is no doubt that they have been the direct means of payment into it, a sum exceeding five times the duties paid on rails.

They have increased enormously the importation of other kinds of iron, and have stimulated immensely importations of all kinds. Whenever a railroad is constructed, by rendering the property of the community available, it enables the people to gratify a taste for the comforts and luxuries of life. Wherever railroads go, they carry in their train, a greater or less amount of duty paying goods. The enormous revenue from duties, which for a few years has exceeded all precedent, and expectation, has been due entirely to the influence of railroads. Why not then relieve an interest which has done more for the country than all others? Were Government to set to work to attempt to adopt a policy for the increase of the revenue, it could not accomplish its object so effectually, as by encouraging railroads, as for every additional mile built, a certain increase of importations and revenue may be safely calculated upon.

By what has been said, it will be seen that no one will be injured by the repeal of the duty on rails. If the tendency of such an act be to encourage the construction of railways, every interest in the country will be promoted, and most, all, the very ones that it is claimed, would be injuriously affected, the manufacturer of iron, and the public revenue. For one, it will increase the demand, and in this way maintain the price of the ordinary varieties, which will still be protected by a heavy duty, and incidentally add largely to the receipts of the other.

We have shown that no interest is to suffer. Let us see what are to be benefitted by the proposed measure. We will illustrate this part of the argument by reference to the State of Tennessee. The people of that state are engaged in the construction of some 1,500 miles of railway. No portion of it is able to construct a railroad without a free use of their *credits*. To make a basis for these, every man in the community is called upon to contribute according to his means, toward the proposed work. He may lose, and probably expects to lose one half of his contribution. Were the duty taken off from rails, he would be benefitted just in proportion to his contributions.

The *Capitalist* who buys the bonds of the company, is not benefitted, because he will not touch them unless they are amply secured. The advantage directly inures to the *stockholders*, upon whom the railway system of the country rests, who constitute emphatically the *people*, who alone make the sacrifice involved in the construction of our railways, and upon whom fall all the losses that are sustained.

Fifty million dollars would not make good the

sacrifice already suffered by the stockholders, who as before stated, represent the *people*.

These sacrifices have been the means of adding a *thousand* million dollars, to the aggregate value of the property of the whole country. No bill therefore, more popular in its character than the one now before Congress can be framed, nor one so well calculated to do justice to the parties who have done so much for every other interest, but their own.

We are not accustomed to make popular appeals for the purpose of influencing action on the ground of sympathy for or against any particular measure; but we certainly think those engaged in the construction of railroads are quite as much entitled to sympathy as those engaged in the manufacture of rails. The latter are capitalists, who invest only *surplus* means. The former contribute from their necessities, and enrich others while they often impoverish themselves. That this numerous class should be taxed for the benefit of *capital* is, to us, a great absurdity and a great wrong.

It is objected to the removal of the duty that an important *vested* interest will be disturbed. Suppose \$2,000,000, to be invested in the manufacture of rails. There are more than \$500,000,000 invested in railroads. The lines in progress will cost \$150,000,000. Should the encouragement of an insignificant interest, involving an investment of \$3,000,000 be preferred to one involving an expenditure of *two hundred* times that amount, and one a thousand times more beneficial to all the great interests of the Country? On the score of strict *justice*, the railroad is deserving *ten fold* greater favor; and on the ground of the general influence of such works, *fifty fold*.

What argument therefore can the railmaker use in favor of Government interference in his favor that the maker of railways cannot urge with vastly greater force? None.

We again urge the effective co-operation of Railway Companies to aid in carrying the bill now before Congress. There would not be a solitary vote in Congress against the measure, should all its members reflect the interest of their constituents. This interest must be brought to bear, and to give it a proper expression, the efforts of the Committee are now being directed. When they shall have succeeded in this, they will leave the subject where it belongs,—to Congress, without any fears as to the result.

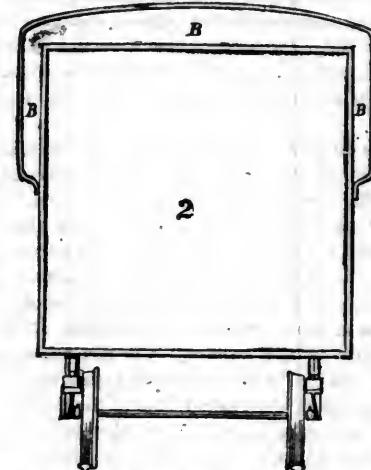
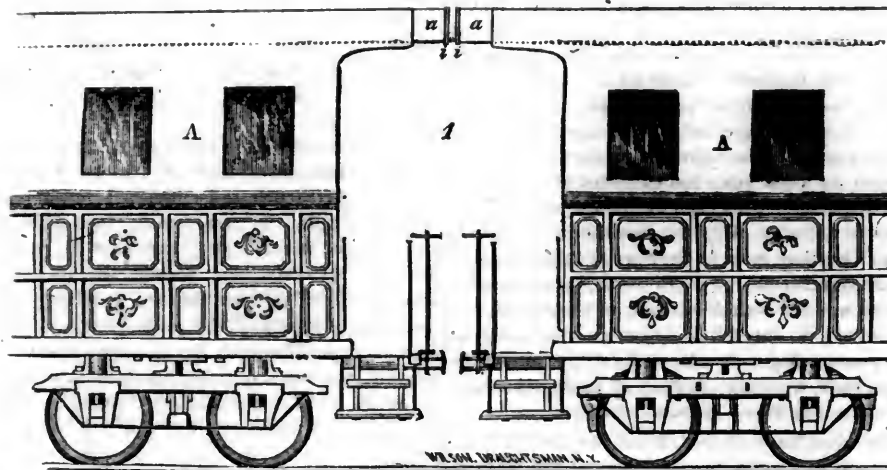
Harlem Railroad.

At the annual election of the Harlem Railroad Company, Messrs. George Schnyler, President; Denninson, Robinson, Wetmore, Ludlow, Robert Schnyler, R. M. Blanchford, Morris, Dunham, Dater, Haviland, Aiken, and H. S. Blanchford, Vice-President, were made Directors; S. M. Blanchford, Treasurer; Alexander Kyle, Secretary; J. D. Elliot, Superintendent, and W. J. Campbell, Assistant Superintendent.

New Haven and New London Railroad.

The following gentlemen have been elected Directors of this road for the present year:

M. G. Elliott, S. D. Pardee, John Bradley, Joel Tuttle, E. C. Scranton, Daniel Chadwick, Elias Perkins, C. Buckingham.
President—Matthew G. Elliott.
Secretary and Treasurer—R. D. Smith.
Superintendent—R. N. Dowd.



The improvement, of which, the above cut is a representation, consists of a spacious air channel over the entire top of every car of the Railway train, and also down over the sides, so far as to include in the same channel, the windows of the passenger cars, with glazing opposite to each one. The channel is made continuous from car to car by moveable extensions of the roof part of the channel from each end, along with, and beyond the roof of every car, to meet those of adjoining cars.

A. Fig. 1. indicates secondary walls erected over the usual primary ones to form the channel B. in the transverse section fig. 2. at an interval of one to two feet or more for the roof part, and for the side, three to six inches. The side channels are closed at each end and terminate below, near the bottom of the windows. The side channels are omitted on the baggage cars.

The motion of the train passes the pure air through the channel from the head of the train, into the interior of the passenger cars, by way of the inner windows, at the option of those who sit opposite, which thence forms a current outwards through every opening, effectually repelling the dust. Smoke and cinders are left behind the channel's mouth, before their descent.

The chief moveable piece adapted to self adjustment, and to play over the platform, is the same at each end of every passenger car. It consists of the short piece of channel, fig. 4, with one or more springs E, upon its inner end and the face flange i, surrounding its outer end. A valve door D, is hinged from above, inside the flange, closing by its own weight the channel at the latter end of the train. The valve doors at the ends of every

other passenger car is opened inwards by the hinged pin h, meeting the opposite flange on uniting the train. Baggage cars are without valves.

The flanges used are to give the separate channel ends suitable meeting faces to be held together by the springs, but to move freely upon each other in the variations of their level, and also to preserve the channel itself unbroken by such movements. The springs rest against bearings provided within, to which they are also fastened, and the balance of the whole piece is preserved by the weight of the semicircles, attached thereto. The sides being rounded it will always fill the lined cavity between the upper and lower roofs, while turning either way on curves of the road as well as reciprocate by the action of the springs.

Fig. 1. exhibits this single moveable piece in two adjacent car ends. But to give greater stability, when desirable, this channel piece as in fig. 3. is inserted into another, C, having the central pivots c, above and below; this latter has only the turntable motion, the other the reciprocating.

The appearance of these together may be observed in the general view of the train on a curve with this improvement attached, heading the above cut.

In connexion with the delineations here presented, we subjoin some of the considerations on this subject, which we presume have impressed the minds of those who study the present and future advancement of railroad enterprises. The great aim is to make railway conveyance unexceptionable in the way of comfort, as much so at least, as to compare favorably with other modes of travel. Although a confined position when protracted

many tedious hours may be looked upon, by those accustomed to activity, in the light of discomfort, the great pains taken to obviate its inconveniences has left little cause for complaint. But a profusion of dust, perpetually on the wing, to be seen and breathed, to overlay the hands, the face, the eyes, and the dress till the name may be written upon it,—this superadded to the other, may be truly called discomfort.

There have not been wanting those who have studied the possible remedies and made praiseworthy efforts to repel its intrusion.

Of the various modes of reasoning on its exclusion, and thence of devices proposed, two appear to have been prominent. Those reasonings on the one hand which infer that dust need not, inevitably, surround the train and which therefore point to mechanical contrivances to keep it down—and those on the other, whose deductions are that dust from dusty roads will inevitably envelope the train and suggest ventilation, with pure air in surplus quantity, for its exclusion.

If, as we suppose, the first sweep of the fast train, including every thing attached thereto, causes a dispersion of dust beyond the reach of attachments designed to keep it down, which dust immediately falls into the eddying current above, and therefore cannot fail to envelope the train; the first considerable effort in this country for its exclusion was perhaps as nearly in the right direction as any thing that has attracted notice up to this time. Other plans in the same direction have also been put on trial with varied success and subject to various objections. The great, and in strictness the only question is, whether a satisfactory quantity of pure air can be administered

to each passenger consistently with an entire seclusion from dust.

This becomes a question of throwing a great amount of pure air into the cars with facilities open for its exhaustion, without which latter provision it cannot be made to enter. Surplus facilities for admission of air however over the provisions for exhaustion preserve an outward pressure upon crevices where otherwise a suction inwards, —the primitive evil—will still in a small degree prevail.

The want of perfect cleanliness in passenger vehicles has been felt as a serious drawback upon the enthusiasm of the community in view of this otherwise eligible mode of travel. It is obvious to remark that if the economy and convenience of the Steamboat or the necessary entertainments of the Hotel could be purchased only by submitting to an incessant agitation of dust in the saloons of the one, or in the parlors of the other, even such a nuisance must perforce be submitted to rather than we should forego their advantages. But outraged feeling from the very center of respectable society would swell the cry "down with such a nuisance; it can and must in some way or other be brought to an end." No amount of expense, or fastidious criticism of means, could excuse neglect, with a certainty of success in view, while soliciting and expecting patronage at the humiliating sacrifice of taste and comfort on the part of the public. But enough has been said, more than enough known of the annoyance of dust in Railway travel. In conclusion we will add, that in this age of action and accomplishment this will not long remain a silent evil with railroad men, while it is a crying evil with the travelling community. It is one that must, in some way or other, succumb to the efforts of our times.

Without assuming to pronounce upon any plans presented we feel higher hopes of speedy disenchantment, by means as economical as they are efficient, when plans like the one before us, involving sound philosophical conceptions of the subject are presented for public inspection and consideration.

Louisville and Nashville Railroad.

By a recent report, made by this company to the Mayor of Louisville, we learn that the total stock subscriptions to the road amount to \$3,328,700 of which \$1,218,117 has been paid in the form of bonds, &c. The report also states that the estimates for work done on the road to the 1st of April last, amount to \$341,076 26, all paid for; that \$63,504 56 has been paid for depot grounds, right of way, and land damages; that the sum of \$44,500 has been paid on account of rolling stock for the road; that \$50,000 has been paid for railroad iron, and \$89,447 62 has been paid for engineering expenses, instruments, office expenses, salaries, &c.

Of \$500,000 Louisville city bonds, issued to the company, \$302,000 have been turned into cash and expended on the road, and \$125,000 of the remaining \$198,000 have been pledged for a purchase of three thousand tons of American iron, toward the payment for which the company have supplied \$50,000 cash, and given their acceptance for \$50,000 more.

In consequence of the want of means to prosecute the enterprise, work has been suspended on the whole line, with the exception of the section of 32 miles from the depot grounds in Louisville to the crossing of the Rolling Fork of Salt river, the tunnels and other heavy work on Muldrow's hill, and the crossing of Green river. The 32 miles here spoken of, it is stated, will be completed and equipped at an early day the ensuing autumn.

Locomotive Boilers.

The boilers as well as machinery of locomotives have been much improved during the last few years, by which result they have acquired increased strength and efficiency, with a diminished cost and weight. It is due to the Paterson boiler makers to say, that most of these improvements have originated with them, or were earliest adopted by them in this country from English practice.

One improvement of especial importance is the "elevated crown," which may be called a compromise between the old "dome-boiler" and the plain "waggon-top." The elevated crown is the elevation of the outer firebox shell to ten or fifteen inches above the barrel of the boiler, to which it is connected by a sloping gusset. This form adds very much to the steam-room of the boiler, and allows of a higher furnace crown, giving room for more tubes and additional fire-surface. It also gives a higher elevation for the mouth of the steam-pipe, and thereby prevents working water, with the steam, in the cylinders. These are the advantages of this form over the straight boiler or plain waggon-top, while it does not involve the loss of firebox heating surface, the top-weight, nor the expensive riveting, and wasteful cutting of iron of the dome-boiler. This form of boiler was first adopted in Paterson.

Another improvement is, the flanging of all flange-sheets with round corners. This form adds to the strength of the flange, as it avoids the strain caused by the square bend. It also improves the appearance of the boiler; and it gives a better fastening to the "ring" or water-space bar at the bottom of the furnace, as a rivet can be placed in the angle; whereas a square bend requires set screws on each side to lighten the outside sheet. The space-bar or ring is cheaper made than when cut and welded for square corners.

An important improvement, made at no sacrifice of safety, is the use of iron of but one quarter inch thickness for locomotive furnaces, and also for the barrel of the boiler. The soundest hammered charcoal iron, made with an extra heat, and of $\frac{1}{4}$ inch thickness, is found to be free from blisters and cracks after the longest periods in which iron is exposed to similar service. Such iron is both cheaper and better than copper, and cheaper, lighter and more durable than iron of greater thickness.

Iron is ordered from the mill mostly by guage. The thicknesses for a 48 inch boiler are mostly as follows:—

Outer crown of firebox shell.....	No. 1
Cylinder sheets.....	" 2
Side sheets of furnace.....	" 4
Furnace crown.....	$\frac{3}{8}$ inches.
Tube sheets, both of iron.....	$\frac{3}{8}$
Smoke box, if secured to cylinders.....	$\frac{3}{8}$ "

The staying and bracing of boilers have been also strengthened. The crown-bars of the furnace are made each of two parallel bars, four or five inches wide and $\frac{7}{8}$ inch thick, welded at the ends, riveted at the center, and held by T-head rivets or bolts to the crown; $\frac{3}{8}$ inch washers being interposed, to give access of water to the surface of the sheet. These bars are placed across and not lengthwise of the furnace, and have their ends resting fair upon the upper edges of

the side-sheets of the furnace. Two round braces run from each double stay-bar to the outer crown, and diagonal braces also extend from the back end-sheet to different points on the outer crown.

The courses or rings of the barrel of the boiler are successively of less diameter, by the thickness of the iron, in approaching the forward end of the boiler. Each course being placed within the one next back of it, under side has a uniform slope from the forward end downwards, for the descent of foul water or dirt when flowing off. The tubes are slightly nearer together at the front than at the back end.

Iron is rolled in larger sheets than formerly.—Sheets of 62 inches in width have been rolled for boilers constructing for the New York and Erie Railroad. This saves riveting, with its expense and weakening effects.

At Baltimore, domes of 50 inches diameter are applied to locomotive boilers, while the openings in the shells over which they are placed, are only 15 inches. This saves the strength of the boiler, gives large steam room, and obstructs the ascent of water along with the steam.

Many of the Paterson engines have two domes, giving more steam room and a more uniform draught of steam than with one dome.

Virginia and Tennessee Railroad.

It will have been seen from editorial notices and the advertising columns of our paper, that, from to-morrow, the cars will run regularly to the Central Depot, on New River, and that the opening of the Eastern Division of this great work is to be inaugurated by an excursion and a free barbecue, given by the gentlemen in the vicinity of the Depot. We cannot doubt that a large number of our citizens will avail themselves of the opportunity to partake of the hospitality of our friends in the great basin of the Mississippi.

The occasion is one of great interest, not only to this community, but to the State at large and to the cause of Internal Improvement in the United States. We do not wish to indulge in self-glorification and shall, therefore, allude, in the most oblique manner possible, to the complacency with which Lynchburg may reasonably contemplate what has been already achieved, and anticipate what another year may accomplish, towards the realization of a scheme, the conception of which was an epoch in her destiny, and gave a new impulse and consistency to the great cause of Improvement. No one familiar with its history can deny that the Virginia and Tennessee Railroad is as much the child of Lynchburg, as the Baltimore and Ohio Railroad is the child of the noble city at its eastern terminus. When we consider the relative population, wealth and resources of the two places, and reflect that, partaking of kindred difficulties, the one road is half as long as the other and that it will be completed within less than six years from its commencement, whilst the other has tasked the energies of a spirited people for a quarter of a century,—we have no reason to shrink from the contrast, when we associate the name of Lynchburg with that of the most enterprising city in the Union. But, as we have intimated, we desire to be modest, and pass from this topic to a brief notice of the division of the road now brought into use.

The whole work is of the heaviest character, particularly the first five miles from town and the thirteen in which the ascent of the Alleghany is accomplished. There are parts of this latter section which cost \$80,000 per mile. The passage of the Blue Ridge was, at one time, looked upon as something of a bug-bear. The work, it is true, was heavy, but the traveller is not sensible, by diminution of speed or any other circumstances, that he is overcoming the barrier which once made almost distinct political and social communities of Eastern and Western Virginia. The tunnel near town is 550 feet in length. Besides this there are three others on the eastern slope of the Alleghany, the shortest 200 feet, and the longest 750. The route from this city to the Tennessee line measures two hundred and four miles. The Central Depot, as its name imports, is about half way the distance. Here, very extensive freight and engine houses, as well as an extensive machine shop, are under construction. A couple of miles beyond, the road crosses New River—one of the most beautiful streams we ever saw—by a noble bridge of six spans and seven hundred and thirty feet in length. Whilst individual miles have cost immense sums, we are glad to say the whole road, when completed, and fully stocked with locomotives and cars sufficient for a very large business, will not exceed the originally estimated average cost of \$25,000 per mile.

The road is throughout admirably located and constructed. The rail is of the heaviest kind of the U. shape. The maximum grade, encountered by produce seeking an eastern market, is but 60 feet to the mile, while that going west is 68 feet.—The difficulties presented by the physical features of the region which is traversed, called for all the resources of science and experience. Professional men only can fully appreciate the triumphs which have been achieved; but laymen, at a glance, can see that no ordinary skill has been displayed. No road in Virginia, nor in the South, can compare with this in the obstacles overcome. We do no more than our duty, when we say the work reflects the very highest credit upon the Chief Engineer, CHAS. F. M. GARNETT, Esq., who has brought to bear upon it the skill and experience acquired in other states of the South. We cherish no unworthy sectional prejudice, but it may be allowed us to dwell complacently upon the fact, that the greatest work in Virginia has been executed by one of her own sons. This confidence in native talent does not seem to characterize the directories of other improvement companies, since, if we mistake not, there is but one other native Virginian employed as Engineer in Chief in the State. Col. GARNETT stands in no need of the puff direct, or collateral, from us; but, whilst calling attention to a work with which his name must be indissolubly connected, common justice requires that we should bear our feeble tribute to his high professional attainments and reputation.

The great difficulties are overcome. The route beyond New River is comparatively favorable. The work will now advance rapidly to completion. The cars will reach Newbern by 1st July, and Wytheville, 136 miles, during the month of September. All the heavy work is done as far as Abingdon, and nothing will prevent the laying of the iron at the regular rate of progression. As

the rails are supplied, of course, from this end only, this rate cannot be accelerated. There is no reason to doubt that, by the middle of the autumn of next year, the cars will reach the Tennessee line.

And this prompts us to correct a very general misapprehension—viz. that this great work has been carried on with less vigor than the public had a right to expect. Now, we venture to assert, without the fear of contradiction, that no enterprize of anything like the same magnitude, and surrounded by like difficulties, has ever been prosecuted with more vigor and success in Virginia, or in the South—if indeed in the Union.—Our files will show, when this community was first roused to a sense of its duty in behalf of this enterprize, five years constituted the shortest term within which the most sanguine dared hope for its completion. This period was fixed upon rather to soothe the anticipations of ardent friends, than from data furnished by the progress of other works of a similar character. How far then will performance fall short of promise? Work was commenced on the road four years ago last January, and, as we have said it will be in use before the close of next year—that is, within less than six years from its commencement. These facts we submit, instead of substantiating the charge of the President, Directors and Engineer of the company.—*Lynchburgh Virginian.*

Internal Communication in New York City.

Our city needs additional longitudinal thoroughfares, adequate to its present and prospective business operations. Broadway is the only one occupying the necessary route of the principal travel of the city. As an inevitable consequence it is over crowded. The mutilations which have been proposed for its relief, such as bridging its length with an elevated railroad are probably wholly impracticable of success, as steam locomotive power would not be allowed; horses would be inefficient and a nuisance to the street below; and a wire rope would be impracticable unless running upon a parallel line to the general grade of the street, which, as Broadway has several depressions and elevations, could not be done without a great elevation of the track at those points where it ought to receive the greatest travel, such as at Whitehall and at Canal street. As engineering plans, either of these could be made to work, but they would not accommodate the social demand in an agreeable way. It is practicable, to carry passengers over Broadway in balloons, led by horses in the street, but we have no hydrogen for the inflation of such an enterprize. We are anxious that Broadway should retain its distinctive character as the noblest promenade in any city, and would not deprive it of any of its optical attractions, at the expense of an enterprize proposed in the same manner, and as unlikely of success, as the *Thames Tunnel* of London.

It is known that propositions are pending for the removal of the city courts and offices to near Union Place. The Park, which with the exception of its trees, has none of the attractions of a respectable landscape, and occupied mostly by idlers, with an occasional political or popular gathering,—would then be released to its proper occupation, that of a great central square for the arrival and departure of the travel of all parts of the city. To the water there would be access by

Broadway on the right, and Nassau street and Broad street on the left hand. The interests of our city demand the widening of Nassau street by as much as 25 feet. It is the great thoroughfare to the East side of "down town," and could it accommodate any extent of carriage travel, would rank as one of the greatest business thoroughfares of the city. Above the Park, a street of good width should be opened so as to lie between Broadway and Elm street, and to extend and unite with Crosby street, which latter being opened to Lafayette place, would complete a great thoroughfare from the South Ferry to 14th street uniting the extremes of the town. The most crowded part of the city, that lying below Canal street, has avenues parallel to Broadway, at twice the distance apart as those between Canal and 14th streets.

To complete the system of relief streets, Mercer street requires extension to Union Place and southerly across Lispenard, Walker, White and Franklin streets, and thence turning into Erie Place, the depot of the New York and Erie railroad. The *Sixth Avenue* also requires a direct extension from Bleecker to the foot of Canal street, when the latter point would become what it should and will be, the great railroad and steamship depot of New York. With the extension of the Sixth avenue, the foot of Canal street would be the concentrating point of three great streets, either of which, Canal especially, could assume the commercial and architectural characteristics of Broadway.

We would deprive New York of no one of its attractions, but on the contrary while we would urge the occupation of the "Park" for its legitimate uses, we would also urge the opening of our great Central Park, the enlargement of the Battery, and the construction of our necessary and great longitudinal avenues, worthy of the unsurpassed commercial position of which we enjoy the rich fruits.

Financial Condition of Louisville.

In the very interesting and satisfactory message just made to the General Council by his Honor Mayor Speed, we have a statement of the financial condition of Louisville, which must be gratifying to every citizen who feels any thing like a just pride in the growth and honor of the city.

Mr. Speed accompanies his message with three statistical exhibits, embracing in detail the receipts and expenditures of Louisville for the year ending on the 10th of March last. The first of these statements shows that the assets of the city exceed her liabilities by the sum of \$470,255. The second of them shows that on the 10th of March, 1852, the entire amount of outstanding city bonds was \$683,710. And the third shows that of this sum \$151,710 has since been paid, together with all accruing interest, out of the resources of the sinking fund.

According to statement third, the entire amount of city bonds outstanding on the 9th March, 1854, was \$1,358,710. Of this sum, \$51,710 has since been paid, leaving now \$1,307,000 as the total amount of outstanding city bonds. Of this aggregate, the Mayor says, \$139,000 are chargeable to the sinking fund, and will most certainly be redeemed within the next two years; the remaining \$1,175,000 bonds are issued for subscriptions of Gas and Railroad stocks, except \$75,000 to the city schools. And whilst provision has been made for the payment of principal and interest on the whole of these bonds (except the \$75,000), under contracts with the corporations to which they were issued, the payment of principal and interest on the \$200,000 of bonds first issued to the Louis-

ville and Frankfort Railroad Company, \$200,000 issued to the Jeffersonville Railroad Company, and \$500,000 issued to the Louisville and Nashville Railroad Company, is provided for in the event of failure to make payments on the part of those companies.

The Mayor states further that so soon as the debts now charged upon the sinking fund are paid off, the city will have a sinking fund yielding not less than \$125,000 for the next year thereafter and annually increasing, which may be charged with the payment of interest, and gradual liquidation of the principal of all city bonds, without further resort to special taxation.

Other features of the Message, to which we shall refer hereafter, are quite as interesting and satisfactory as this.—*Louisville Courier.*

Journal of Railroad Law.

CONSTRUCTION OF NEW YORK RAILROAD ACTS IN REGARD TO DAMAGES.

Oldfield, Administrator, &c. vs. The New York and Harlem Railroad Company.

INGRAHAM, F. J.—This action is to recover damages for the death of a child produced by the carelessness of persons in the employ of the defendants. The action is brought under the statute of 1847. The child was six or seven years of age, living in the neighborhood of the accident. She was taken to the Hospital and died before night. The evidence shows that the car was driven faster than ordinary, that immediately preceding the accident, the driver of the car was looking in a direction different from that in which he was going, and that if he had noticed the child when the witnesses did, the accident might have been avoided. Evidence on the part of the defence was offered to explain or excuse any apparent negligence on the part of the driver. The evidence on this branch of the case to some extent contradictory and was submitted by the Judge to the Jury for their decision, with proper instructions as to the effect of negligence on the part of the driver, as well as on the part of the child. In regard to the child also, I think the same rule must be recognized. There are cases where permitting a very young child to be in the streets without an attendant is of itself evidence of negligence sufficient to defeat an action of this kind, but those cases are of children much younger than this one, and although there may be negligence in permitting such a child to be alone in the streets of a city, unattended, still at her age I am not prepared to say that as a matter of law such negligence is to be presumed. On the contrary I think it is properly to be left to the Jury to say whether under the peculiar circumstances of each case, a child permitted to go through the streets at such an age was or was not possessed of sufficient judgement and discretion to avoid ordinary accidents to which she might be exposed in crossing the streets of the city. The defendants moved for non-suit on this ground, and also for the want of evidence of any pecuniary damage, which motion was denied. The motion was properly denied, as to the negligence, because that was a question for the Jury, and as to the proof of damage, because at any rate there might be nominal damages. Whether the Jury might give more actual proof of damage will be considered on another branch of this case.

At folio 41, a question was asked of a witness, whether there were any guards in front of the car, which was admitted, and to which the defendants counsel excepted. Where the question was the negligence of the defendants and their servants, it certainly was admissible to inquire whether the construction of the car was such as to tend to occasion the accident. If the car had no breaks by which it could be stopped, it might be shown as evidence of carelessness. If it had no guards, and if the use of guards would have prevented it, such evidence was properly laid before the Jury for their consideration.

It is said that the complaint did not warrant such an inquiry, but the complaint did charge the negligence either on the defendants or their

agents; and although that negligence, as proven, mainly consisted in the acts of the driver, still there was ample room under that charge to add any facts of negligence on the part of the defendants in the construction of their cars which would have aided in causing such injury.

The third point of the defendants is that the Judge erred in charging the Jury "that the plaintiff could recover whatever pecuniary loss the next of kin (the mother) may be supposed to incur in consequence of the loss of the child." This was qualified by adding that the Jury were to give what they should deem fair and just with reference to the pecuniary injury resulting from the death. The Judge also excluded all considerations arising from the sufferings of the child or the anguish of the parent, and confined the rule of damages exclusively to indemnification for a pecuniary loss.

The acts under which this action is brought, are Sep. 1847, p. 575, and Sep. 1849, p. 389. They provide that the action may be maintained and damages recovered whenever a case occurs in which, if death had not ensued, the injured party could have maintained an action. The principle of liability by this section is made the same as if the injured party had survived the accident and had brought an action for the recovery of damages for such injury. In such an action by the injured party it would not for a moment be pretended that it would be necessary for a recovery to show that any actual pecuniary loss should be proven. On the contrary, the mere proof of the injury, and that it was occasioned by the defendants negligence, would be sufficient to sustain a verdict for such damages as a Jury might award.

The second section of the statute, as amended, limits the recovery to \$5,000, and provides "that the Jury may give such damages as they may deem a fair and just compensation with reference to the pecuniary injuries resulting from such death to the wife and next of kin of the deceased person."

I cannot suppose that the Legislature intended to confine the damages in such case to the proof of actual pecuniary loss. Such a supposition would render the law nugatory. The statute was intended to give damages for prospective losses, and not for what could be proven; and to require proof of such loss would be merely to obtain the opinion of witnesses in such a question instead of the opinion of a Judge. I am of the opinion that such was not the intent of the statute, but that the rule in the act is given to the Jury to guide them after they have before them the circumstances of the accident, the condition, relationship, and dependence of the parties, their ability and means of support to be derived from the deceased, (if any,) and other facts of this nature, in forming their opinion of what the pecuniary loss of the next of kin is under such circumstances. When the Judge gave them the words of the statute as the rule of damage, he certainly did not err, and when he told them that the damages were to be what the mother may be supposed to incur by the death of the child, he only told them that the damages were to be a sum which in their opinion would be the pecuniary loss of the next of kin. Any other construction would entirely destroy the intent of the statute, which was to give to the next of kin a right of action for an injury, which the injured person would have had, had not the injury resulted in her death. And we cannot adopt any other conclusion as to the policy of this law and that it was intended to compel persons and corporations engaged in a business which endangered the lives of the citizens, to be more careful than had been the case before its passage and by affording a redress for such injuries, which did not exist before, to punish them for their negligence. Such an intent is evidenced by the 2d section of the act of 1850, which inflicts upon the guilty agent or servant of a company, punishment for the offence for which damages may be recovered.

In the construction of acts passed evidently with the intent of requiring from railroad corpora-

tions, as well as others, more care in regard to the lives of travellers and persons passing through the streets and highways, it is not the duty of Courts to adopt views which would tend to render such acts nugatory and enable violators of them to escape with impunity, as was often the case before this statute was enacted, but, on the contrary, to give the statute effect by adopting the evident intent with which it was passed, and holding those who negligently destroy the lives of third persons responsible for the consequences of such negligence.

But it is said that the damages are excessive. The amount awarded by the Jury was \$1,300. A slight excess in the amount under circumstances of the kind which give rise to such an accident, would not justify a reversal of the judgement, and where the amount is resting mainly in the discretion of the Jury, although they have awarded an sum larger than the Court might have granted if the case had been tried without a Jury, such an excess does not warrant a new trial. The Jury have intended to afford an ample compensation for the loss, still although the amount of the verdict is large, it does not afford evidence of prejudice, or partiality, or corruption, and if not there is no ground for granting a new trial because the damages are large.

My conclusion is that the judgement should be affirmed.

WOODRUFF, J.—The evidence relating to the construction of the car, to which objection was made on the trial in this case, was, I think, admissible upon this ground, (even conceding that upon a strict construction of the complaint herein the plaintiff was confined to proof of negligence of the driver in the management thereof,) viz: What would be prudent and careful in the management and driving of a well-constructed car, amply provided with brakes, by which it could be stopped in due time, and with guards to prevent injury to persons in case of accident, might be very imprudent, careless, and even reckless in driving a car ill provided with brakes and guards. And especially in the streets of a city, where numbers are constantly crossing and re-crossing, a car of the latter description should be driven much more slowly and cautiously.

In respect to the rule of damages in a case like the present, I am not satisfied that the latitude given to the jury in the charge in the present case is warranted by the true construction of the statute under which the suit is brought—although the words of the statute were stated to the Jury, they seem at the same time to have been authorized to indulge somewhat freely in considering what damages the "mother may be supposed to incur;" and I think it by no means clear that, when the death of a child of six years of age is contemplated solely with reference to the pecuniary injury resulting from such death to the next of kin, it can be said that such a death has occasioned any damage; and especially where, as in the present case, the mother, who was the only next of kin, had contracted a second marriage. It is not easy to perceive that the death of her young and dependent offspring could occasion pecuniary loss to her beyond, perhaps, the expense of medical attendance and burial expenses, if borne by her.

The construction of the statute in question is not clear upon this subject. It has been supposed by some to have been only intended for the indemnity of those whose relations to the person killed were such that he or they had a legal right to some pecuniary benefit which would result from a continuance of the life, and which was lost by the death—and not to be applicable to injury like the present, where it caused the death of a child of tender years and yet in a state of dependence.

I am, however, under the circumstances and especially after three trials, (in two of which the Jury failed to agree,) disposed to concur with my brethren in affirming the judgement, leaving the defendants, if so advised, to prosecute their ap-

peal and obtain a construction of the statute in question from the Court of last resort.

American Railroad Journal.

Saturday, June 10, 1854.

Price of Locomotives.

The profits of Locomotive building are less now than at two or three years since, owing to a difficulty in obtaining advances in prices proportionate to the advanced rates of labor and materials, and to the more expensive construction of locomotives as now made. We know of a large establishment of good reputation, and commanding constant employment, but which has yielded less and less profits each year for the two or three years just passed, owing to this difficulty. Where, two years since, many roads were paying from \$7000 to \$8000 for their heaviest engines, it is difficult to advance prices to paying rates, under the present charges upon locomotive builders. The prices of engines must gradually rise to a paying point, else we fear our roads will suffer the effects of unsound work. One or two establishments of our acquaintance, who have never resorted to expedients to cheapen their engines at the expense of safety, durability or efficiency, and who are determined to sustain a reputation so richly deserved, have already boldly established prices, which while they are the lowest compatible with the present aspects of the trade, will yet pay a just profit. The limit of price of the heaviest first class engines, in demand for heavy business, will probably reach \$12,000, and we feel satisfied that proportionate prices must be paid for engines of each class in order to secure good work to the purchaser.

Engines are made in a better manner and at more expense now than at two or three years ago. A heavier engine is now built for a given cylinder capacity, while wrought iron and brass are used in many parts formerly made of cast iron, which is the cheapest material which a locomotive builder can use in the construction of his work.

North and South Railroad.

A numerously attended meeting, in favor of the above project, which contemplates the construction of a railroad from the Jersey shore, opposite the Narrows, through Eastern New Jersey, Delaware and Maryland, to the Chesapeake Bay opposite Norfolk, was held in this city, at the Astor House, on the 31st ult. A number of influential gentlemen were present from all the States named, as well as from New York. The road will run direct from Raritan Bay to Delaware Bay, where a ferry of about 12 miles will be required, thence to Cape Charles, opposite Norfolk. The whole distance between New York and Norfolk will not exceed 300 miles. It is estimated that the road can be built for \$4,000,000. The route is remarkably favorable.

The above work is an important one for New York, in opening a new avenue to a section of country that, for want of such, has but limited intercourse with this city. It would enable the traveler to reach Norfolk in just about the time it now takes him to reach Baltimore, effecting a saving of some 12 hours over the old route. It would prove a most valuable work to the city, as

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	824,863	1,043,540	2,036,140	177,003	80,053	none	30
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	98
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	none	12
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	61
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to	the Vt. C.	Cent.	92
Western Vermont..... "	51	392,000	700,000	.....	Recently	opened.	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	90
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	104
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6	82
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	100
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	57
Eastern..... "	58	2,850,000	1,192,975	3,120,391	620,810	810,875	6	80
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	97
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	90
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	57
Old Colony..... "	45	1,964,070	295,038	2,299,534	374,897	122,866	none	98
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	15
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	61
Western..... "	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	96
Stonington..... R. I.	40	.....	467,700	.....	240,572	110,892	.....	70
Providence and Worcester... "	50	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	120
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	93
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently	opened.	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	207,561	116,965	4	56
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,000	Recently	opened.	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently	opened.	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	68
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	64
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	48
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	102
Ogdensburg (Northern).... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	15
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently	opened.	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently	opened.	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently	opened.	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently	opened.	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,220	603,942	316,259	10	181
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently	opened.	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,623	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,556,332	10,427,800	17,141,987	2,480,626	1,251,987	7	78
Philad., Wilmington and Balt. "	98	6,000,000	2,399,166	8,067,285	868,038	541,769	6	74

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn. 250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton....	" 30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	" 47	.....	.....	.....	.....	.....	.....	102 1/2
Baltimore and Ohio.....	Md. 381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch.....	" 38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..	" 57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....	Va. 65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	" 27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	" 64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	" 73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg....	" 22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	" 76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	" 62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	" 107	1,673,684	469,150	2,392,215	210,032	99,077	10	50
Virginia and Tennessee.....	" 73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.....	" 32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.....	N. C. 161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina.	S. C. 110	.....	.....	In prog.	.....	.....	.....	.....
Greenville and Columbia.....	" 140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina.....	" 242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..	" 191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia Central.....	Ga. 211	4,000,000	1,214	.....	934,424	456,468	7 1/2	.....
Georgia.....	" 101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Macon and Western.....	" 71	.....	.....	In prog.	59,590	21,731	.....	.....
Muscogee.....	" 50	586,887	150,000	743,525	129,395	71,535	8	.....
South Western.....	Ala. 55	.....	.....	In prog.	.....	.....	.....	.....
Alabama and Tennessee River	" 93	776,259	400,000	In prog.	.....	.....	.....	.....
Memphis and Charleston.....	" 33	879,868	.....	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	" 88	688,611	.....	1,330,960	173,542	76,079	8	.....
Montgomery and West Point..	Miss. 60	.....	.....	.....	.....	.....	.....	.....
Southern.....	Tenn. 80	835,000	541,000	In prog.	.....	.....	.....	.....
East Tennessee and Georgia..	" 125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga....	Ky. 38	1,430,150	900,000	In prog.	.....	.....	.....	63
Covington and Lexington.....	" 29	357,218	.....	584,902	87,421	44,250	.....	80
Frankfort and Lexington.....	" 65	.....	.....	In prog.	.....	.....	.....	45
Louisville and Frankfort.....	Ohio. 100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	76 1/2
Cleveland and Pittsburgh.....	" 147	2,000,000	1,600,000	.....	.....	.....	.....	90
Cleveland and Toledo.....	" 96	.....	.....	.....	.....	.....	.....	.....
Cleveland, and Erie.....	" 135	3,027,000	408,200	3,655,000	777,793	483,464	12	116
Cleveland and Columbus.....	" 46	.....	.....	2,000,000	.....	.....	.....	65
Columbus, Piqua and Indiana..	" 61	.....	.....	.....	.....	.....	.....	.....
Columbus and Lake Erie.....	" 60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102 1/2
Cincinnati, Ham. and Dayton	" 40	310,000	550,000	925,000	.....	.....	.....	75
Cincinnati and Marietta.....	" 20	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western.....	" 36	.....	.....	.....	.....	.....	.....	56
Dayton and Michigan.....	" 31	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	" 37	.....	.....	In prog.	.....	.....	.....	.....
Greenville and Miami.....	" 84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Hillsboro.....	" 167	900,000	1,000,000	1,855,000	.....	.....	.....	77 1/2
Little Miami.....	" 57	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	79
Mansfield and Sandusky.....	Ohio. 187	1,750,700	2,450,000	.....	.....	.....	.....	.....
Mad River and Lake Erie.....	" 44	750,000	300,000	In prog.	.....	.....	.....	.....
Ohio Central.....	" 54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Ohio and Mississippi.....	Ind. 31	.....	.....	In prog.	237,506	.....	.....	77 1/2
Ohio and Pennsylvania.....	" 131	.....	.....	.....	.....	.....	.....	.....
Ohio and Indiana.....	" 83	.....	.....	.....	.....	.....	.....	.....
Scioto and Hocking Valley....	" 90	1,128,486	1,289,000	1,869,932	.....	.....	.....	90
Columbus and Xenia.....	" 62	.....	.....	.....	.....	.....	.....	76
Evansville and Illinois.....	" 159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Indiana Central.....	" 72	632,387	663,100	1,353,019	105,944	71,446	4	108
Indiana Northern.....	Ill. 135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Indianapolis and Bellefontaine	" 92	.....	500,000	In prog.	473,548	286,162	.....	126
Indianapolis and Cincinnati..	" 315	3,741,564	7,276,616	1,200,922	.....	.....	17	119 1/2
Lafayette and Indianapolis....	" 282	3,977,563	8,618,505	1,145,598	582,816	.....	8	104 1/2
Madison, Indianapolis & Peru	Mo. 38	.....	non	In progres	.....	.....	.....	.....
Terre Haute and Indianapolis	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island and Chicago.....	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.....	.....	.....	.....	.....	.....	.....	.....	.....
Illinois Central.....	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago.....	.....	.....	.....	.....	.....	.....	.....	.....
Michigan Southern and Ind. N. Mich.	.....	.....	.....	.....	.....	.....	.....	.....
Michigan Central.....	.....	.....	.....	.....	.....	.....	.....	.....
Pacific.....	.....	.....	.....	.....	.....	.....	.....	.....

it traverses for its whole length a district from which our people obtain their supplies of early fruit and vegetables. The greater part of the route is through an excellent farming country.

From the character of the parties connected with the project, we presume it will be commenced immediately, and completed at the earliest practicable moment.

Coal.

We adverted last week to the want of a great road between our city and the coal regions. Such an enterprise has remained unfinished for the want of time, in the midst of other employments of our capital and energy. The want of such a work was never greater than now. The Delaware and Hudson Company, with its stock at 116, brings us about 500,000 tons yearly; and the Morris Canal, during 1853, brought 235,800 tons; the amount of both being less than one-half of our ordinary domestic demand.

The coal regions of Pennsylvania are becoming the objects of a large amount of railroad enterprise in neighboring cities. The northern Pennsylvania, and the Northern Central of Maryland, will occupy some of the best local sources of reception. Upon the development of the coal trade of those roads it will seek New York through Philadelphia and Baltimore, unless our city secures in the meantime corresponding facilities of her own.

A consolidated line from New York to the North Branch of the Susquehanna at Pittston would secure the shortest access, not only to the coal region, but to the Western part of New York and to the whole system of roads approaching the southern border of our state from the west.

As an investment, a coal road, aiming also to a complete connection with the ultimate railroad system of Northern Pennsylvania, would command returns not exceeded by any coming from railroad business in the west.

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN, Chief Eng.

Huntingdon, May 6, 1854.

EXTENSION OF TIME.

THE period for receiving proposals for the Superstructure of Bridges and Trestle work on the Huntingdon and Broad Top Railroad, has been extended, by order of the Board of Directors, to Saturday evening, June 24th.

S. W. MIFFLIN Chief Eng.

Huntingdon, Pa., June 7, 1854.

Buffalo and Brantford Railroad.

The Rochester papers announce that the Hon. James Wadsworth, President of the Buffalo and Brantford Railroad, who has recently returned from England, where he has been on business connected with the road, has been eminently successful in the objects of his voyage—the negotiation of the bonds of the Company and the purchase of iron for the remainder of the road—and that its completion to Goderich will be prosecuted with all possible dispatch.

Buffalo and New York City Railroad.

The Committee of bondholders appointed to inquire into the causes of the non-payment of the interest recently falling due on a portion of the first mortgage bonds of the Company, and also into the condition of its financial affairs, prospects, &c., have submitted their report, which in substance is as follows:

It appears that the whole amount expended by the Company in construction has been \$3,552,638, which sum has been received from—

Capital stock.....	\$798,400
Funded and floating debt.....	2,753,635
	<hr/> \$3,552,035

For this sum the committee state that the company have a well constructed road of 91 miles in length, a large amount of real estate in the city of Buffalo, worth at least \$400,000, a complete rolling stock and equipment, consisting of 16 locomotives, 16 passenger cars, 138 freight cars, 70 gravel cars, with the usual complement of baggage, emigrant and mail cars.

The accounts of the earnings and expenses of the road are in the charge of a faithful and experienced officer, and seem to be in a high state of order and system.

The committee state they wish they could speak with equal satisfaction of the financial condition of the company, which they state to be as follows:

First mortgage bonds sold and hypothecated.....	\$1,200,000
Second mortgage do.....	500,000
Third mortgage do.....	575,000

Total mortgage.....\$2,275,000

BONDS ISSUED.

Of these of the first are actually sold.....	\$1,044,000
Of the second.....	6,000
Of the third.....	359,000
Of the first mortgage bonds are hypothecated.....	156,000
Of the second.....	494,000
Of the third.....	216,000—866,000

Total.....\$2,275,000

Of the mortgage bonds, then, there are held by *bona fide* holders.....\$1,409,000
As security.....866,000

Total.....\$2,275,000

This latter amount of \$866,000 is held against a part of the floating debt which as appears by the report, amounts to.....\$1,181,635

A considerable amount of the floating debt is without security, and a large part of it has been put in suit.

The amount of judgments actually recovered, including one of Mr. PATCHIN, the President, for \$155,632 72, (for cash advances claimed to have been made to the company rendered Dec. 3, 1853, is.....\$211,056 35

Of demands now in suit on which judgment will soon be obtained... 265,043 87

Total amount of judgments now recovered or soon to be obtained....\$476,100 22
Income bonds have been issued to the amount of.....\$163,000 00

In addition to this (says the report), on the 27th December the company executed a chattel mortgage on the rolling stock and equipment of the road to two of its judgment creditors, to secure the payment of \$86,000, of which sum a portion has been paid. [How far this chattel mortgage takes precedence of the prior mortgages on the road in which the rolling stock is specified,

the Committee do not intend to express an opinion.]

In March last the Sheriff of Erie County was required to sell the personal property of the Company, including its rolling stock, under an execution obtained against the road by the Lackawanna Iron and Coal Company, on the 27th Feb., 1854, for \$10,502 13, and did so. The property was struck off to Mr. PATCHIN, the President of the Company, (also, it will be recollected, a judgment creditor to a large amount,) in his own name and for the sum of about \$15,000.

By virtue of these proceedings Mr. PATCHIN claims now to hold the rolling stock in his own right, subject only to the chattel mortgage above referred to. As to the validity of this claim, your Committee do not intend to express any opinion, but it is proper to say that Mr. PATCHIN also expresses his willingness and intention, in case the affairs of the Company are put on a satisfactory basis, to relinquish any personal claim that he may have to the rolling stock, and your Committee have full confidence that Mr. PATCHIN will not permit any interest that he may have in this question to stand in the way of the permanent welfare of the road.

Such then is the general condition of the affairs of the company. With a capital stock of less than eight hundred thousand dollars, mortgage bonds issued to \$2,275,000, or three times the amount of the capital stock. Income bonds to the amount of \$163,000. Judgments against the Company actually obtained, or on the eve of being so, for \$476,000, or three-fourths of the amount of the stock. A chattel mortgage on all the rolling stock and equipments of the road, to secure a sum of \$86,000, and a sale of the personal property under execution, subject to that mortgage, it would be equally idle and impolitic to endeavor to conceal the fact that the present financial position of the company is one of the most serious difficulty and embarrassment.

We turn now to the next branch of the inquiry which your committee was instructed to make, viz: as to the present business and future prospects of the road: for here must be sought the real practical solution of the problem on which we are engaged. In this respect, also, the result is unsatisfactory. By the statement made by this company, as it appears in the report of the State Engineer, made to the Assembly on the 16th of February, 1854, (Assembly Documents No. 120,) the cash receipts of the road for the year ending September 30, 1853, were.....\$194,898 43
And the expenses of operating and maintaining the road cars, &c., were.....\$162,004 90

Leaving a net revenue for the year of \$32,893 53

(in fact, however, only about eleven months, as the road opened throughout the line on the 1st November, 1852.) Such is the result of the last year.

As to the present year, Schedule 2, annexed to the answers of the Board, shows that the total receipts of the company for March and April, 1854, were.....\$37,651 45
Whilst the expenses for the same time were.....34,961 75

Leaving a net business for two months of.....\$2,687 70

To which, if we had the sum of.....8,535 92
expended during the same time on repairs of the track, as appears by answer 17 of the Board, the net receipts for the last two months will be.....\$11,225 62

The above calculation is important because it goes to explain the non-payment of the interest due on the 1st inst., but if unaccompanied by further explanations would, in the judgment of your committee, give a very erroneous opinion as to the business of the road. In the first place, the sum above stated, small as it is, is a very considera-

ble increase for the same time last year. The road opened in November, 1852: the receipts in March and April, 1853, were but.....\$29,857 88 (See statement prepared by Mr. Townsend, annexed.) Showing an increase this year of about 38 per cent.

Again the business of the last year during the Fall months was very much larger. The receipts of the road for September, 1853, were.....\$36,272 34
October.....41,645 35
November.....29,401 12
While the expenses in October, 1853, were.....13,578 58
November.....13,945 79

Showing that the business of the road, and its receipts can be greatly increased without any addition of expenditure.

If the business of the road increases during the remainder of the present year, in the same ratio that it has the last two months, the revenue will be very largely augmented.

It is indeed, in the judgment of your committee, to the gradual and steady increase of the business of the road, that all parties interested in it must look for their ultimate support and production.

It would be an easy matter to involve the company in litigation—to overwhelm it with suits—to put it into the hand of receivers—to stop its operations altogether; but there is no one of its creditors in the present position of its affairs who will not consult his own interest, by pursuing a more patient and forbearing course.

The interest of the mortgage bond-holders, the most favored class of the creditors, is largely represented in your committee; but we are clearly and unanimously of opinion that it would be neither equitable nor expedient to pursue a rigorous and a stringent course to the disregard of the interest of the large body of stockholders, and of the wishes and feelings of the numerous local population scattered along the line of the route.

As regards the stockholders particularly, it appears clear to your committee that no such proceedings should be taken until they have been fully apprised of the condition of the company, and invited to give their aid and co-operation.

Looking then to the gradual growth of the business of the road, your committee do not hesitate to express the opinion that the longer the road is known, and the more it is considered, the more favorably its prospects will be regarded.

The way travel is steadily and certainly increasing—a very valuable and fertile tract of country is opened for cultivation and settlement, and the magnificent gorges and cascades of the Genesee River must soon make Portage, situated half way between Hornellsville and Buffalo, one of the principal points of attraction for summer travelers.

But other and more important considerations present themselves. The opinion appears to be rapidly gaining ground, that the natural terminus of the New York and Erie Railroad on the Lakes, is at Buffalo, and not at Dunkirk, and that in the same way as the Piermont terminus on the Hudson River has been in a good part abandoned in favor of New York, so the Dunkirk terminus must sooner or later be abandoned in favor of Buffalo. The comparative size and importance of the two places, the relative merits of the harbors, the different class of vessels that ply between the two ports, and the general course of the great western trade, seem strongly to sustain these views; and, in connection with this it is a fact worthy of notice, that the distance from Hornellsville, over the Buffalo and New York City Railroad, via Buffalo to Dunkirk, is the same, with the difference of four miles, as that from Hornellsville direct to Dunkirk over the Erie Railroad.

If your committee be correct in supposing that a due regard for their own interest must finally induce the New York and Erie Railroad Company to make their western terminus at Buffalo, then there can be no doubt whatever as to the ultimate prosperity of the Buffalo and New York City Rail-

road. There is no other connection between Buffalo and the New York and Erie Railroad, that can at all compete with it, and regarded as an indispensable link in the chain of communication between Buffalo and New York, by the way of the latter road, its importance at once becomes manifest. As compared with the Central Road, the distance is shorter by twenty-one miles, and that with the difference of gauge, the picturesque character of the country, and the great freighting interest of the southern tier of counties, must always give it a great share of the business.

For the purpose of relieving the company from its embarrassments, the committee recommended that:—

"The present stockholders of the Company raise the sum of \$150,000 by the issue of a preferred stock under the recent act of the Legislature above referred to; this sum to be applied towards the payment of the debts for which the second mortgage bonds are pledged, and to cancel said bonds, so as practically to make the third mortgage a second mortgage, provided that the holders of the unsecured floating debt will consent to receive payment thereof, part in third mortgage bonds and part in preferred stock, in as nearly equal proportions as may be, and provided, further, that the holders of the third mortgage bonds will raise the sum of \$200,000, to be applied to the object above stated, of cancelling the second mortgage bonds, and receive for said \$200,000 third mortgage bonds. This arrangement to be assented to by the parties interested by the 1st day of July next."

In speaking of the management of the Company, the committee state:—

"That after making an examination of the affairs of the Company as close and careful as the short time given as has rendered possible, everything that we have seen is highly satisfactory as to the character of the present Directory. That there have been mistakes in the management is obvious and it would not be difficult to point them out, but because we are losers we must not therefore be unjust. We have seen nothing in the slightest degree to shake our confidence in the good faith and integrity of the board, and we should be doing less than our duty if we omitted to express our sense of the devotion and energy with which Mr. PATCHIN has labored to carry through the arduous enterprise placed under his charge.

The report of the committee is as satisfactory as it can be, the condition of the company being considered. It is important to know why the expenses of operating the road bear so large a proportion to its receipts. For the length of road, the receipts though not large, are equal to those of other roads which are able to declare a fair dividend upon their cost. With receipts of only \$300,000 per annum, *one-half* should have been left for net earnings; more than enough to have paid the interest on the first mortgage. Estimating the increase of receipts at 50 per cent. which will not exceed the average of new roads, and in a very few years a net income, ample for the interest on all the bonds issued, would be realized.

We presume the connection of the above road with the Erie has been prejudicial to its interests, and accounts for the fact that nearly all the income has been absorbed in expenses. The road is properly regarded as the complement of the Erie road, taking Buffalo as the terminus of both. A road of similar character, and of corresponding equipment, was consequently built. Depot grounds and buildings commensurate with the magnitude of the business of the Erie road were purchased and constructed. In other words, *twice* as expensive a road has been built as would have been,

but for the Erie. The trains of the Buffalo and New York City Railroad have been run to accommodate those of the former, involving a very heavy cost of operating the road, without any corresponding advantage in receipts. It is undoubtedly true, that all the business carried to and received from the Erie road has been done at a loss. This Company, having an independent line to the Lake, has acted upon the idea that the interests of the Buffalo and New York City Railroad have been opposed to its own, and have probably discouraged, as much as possible, the use of the former, by passengers and freight passing over its own line.

So much for the past history of the Buffalo and New York City Railroad. Its future is what still more concerns the public. This, we think, is more flattering than what we have seen. The above road must have a fair local business, which must rapidly increase. The greater part of its line is not subject to competition from other roads. From the Valley of the Susquehanna to Buffalo, it is probably the best route. Buffalo is the proper Lake terminus of the Erie railroad. This is a city of 75,000 people, between which and all portions of Western New York, an active and constantly increasing intercourse exists. The construction of the Great Western Railroad of Canada places Buffalo *en route*, of the shortest line to Detroit and Chicago, a fact which cannot fail to make Buffalo a point in the line of the greater part of the travel between the East and the West. All these facts are in favor of the Buffalo and New York City Railroad. In addition, it is well known that both Philadelphia and Balt. are rapidly pushing forward railroads to a connection with the Erie, for the purpose of reaching the trade of the Lakes concentrating at Buffalo. These roads must make use of the Buffalo and New York City road to accomplish these objects. If the construction of these roads is warranted, certainly that of the Buffalo and New York City has been.

Our convictions are that the Buffalo and New York City Railroad must speedily prove sufficiently remunerative to provide for the interest on its funded debt. We have no doubt that its business will rapidly increase, while a better adaptation of its operations to the character of its business will secure a large reduction in expenses. As it is, we presume the net profits of the past year were sufficient to pay the interest on the first mortgage. It is generally the case in roads similarly situated, that a considerable portion of the receipts for the first year or two goes into construction. The managers, in the embarrassed condition of affairs, are apt to use the earnings to meet the most pressing exigencies, trusting to be able to meet, from other sources, those to which the earnings should be legally applied. To a certain extent, this would seem to be the case with the managers of the Buffalo and New York City Railroad, as we cannot doubt that the net earnings for a year past have been sufficient to pay the interest on the first mortgage.

The policy recommended by the Committee is undoubtedly the right one. The default of the Company can be accounted for without any implication of bad faith. That there has been a mistake in judgment they do not attempt to conceal. It is certainly the wise course to endeavor to resuscitate the company, to restore its credit, and

to put it in a position to achieve success, than to crush it. Any other course may completely destroy the rights of the stockholders, and parties holding the floating debt, and throw the road in the hands of the mortgagees. The paramount interests are the holders of the first mortgage bonds. When these are satisfied, the parties entitled to payment are in the order of their securities. We hope the success of the road will be such as not to call for the interference of any of the creditors.

The railroad interest should learn one lesson from the history of the above road; the folly of attempting to construct roads almost entirely upon credit. For the want of a suitable stock basis, the cost of the road must have been increased enormously. A very large amount of stock will not be subscribed except upon good routes. When there are a strong list of stockholders, they can carry the load should the road get into difficulty, without being forced into the market.

The Committee were continued in power, and authorized to confer with the Erie Railroad Company upon subjects interesting both companies.

Cincinnati Hamilton and Dayton Railroad.

The fourth annual report to the Stockholders of the above road, dated May 1, 1854, presents a full statement of the condition of the road.

The earnings of the year ending April 1, 1854, amount to \$463,021.45, an increase over last year of \$141,228.28. The increase in the number of passengers over last year is 106,126, the number now carried per day being more than 1200.

During the past year, two cash dividends, of five per cent. each, have been made, leaving a surplus to the credit of Income Account, of fifty thousand dollars, after carrying to Renewal and Depreciation Account the sum of forty-two thousand nine hundred and thirty-nine dollars.

The first Mortgage Bonds have all been converted into Stock, and the mortgage has been cancelled. The whole amount of stock now issued, is two millions one hundred thousand dollars—being four hundred thousand less than the authorized capital of the Company.

There have been expended during the past year, for Construction, Equipments, Subscriptions, to connecting railroads, Real estate purchased, &c., the sum of \$583,173.93. To meet these expenses 1250 additional bonds were issued last fall, \$1000 each, unconvertible, seven per cent.; but owing to the stringency of the money market only 362 have been sold.

This accounts for the floating debt of the company as seen by the Bills Payable account.

The expenses of the last year have been increased by the re-construction of the bridges which were destroyed by the flood and by fire, by the erection of a new engine house in Cincinnati, 165 feet in diameter, at a cost of \$30,000, and by the purchase of real estate to the amount of about \$30,000.

The work on a second track between Cincinnati and Hamilton, is in progress, and will probably be completed within contract time. From Hamilton to the junction with the Hamilton and Eaton road, the second track is laid, and the cars are running upon it.

At Dayton six railroad companies, whose lines terminate there, propose to erect the coming year with the present company, a commodious depot for the common use of all. The grounds are already purchased.

The gauge of this road is now to be extended to Indianapolis, to Chicago, and Fort Wayne, by the different roads connecting from those points. And the Richmond and New Castle Company, by a former understanding with this Company, having laid twenty seven miles with the Indianapolis gauge, has it now relaid by a mutual arrangement, with the gauge of this road, so that the cars now run through from Cincinnati to New Castle upon a uniform gauge. So many branch lines making use of this road for the conveyance of their freight and passengers to Cincinnati, it has been necessary at a great expense to increase the depot facilities at Cincinnati.

In return for these extra outlays, the Companies forming the line to Chicago have agreed that for all through freights, coming from or going to all points beyond Richmond, Indiana, the Cincinnati, Hamilton, and Dayton Railroad Company shall receive the profits of twelve miles of road beyond its real length.

This agreement continues 21 years, and thereafter until notice be given to the contrary. The consideration for this agreement was that this company should furnish machinery to the C. L. and C. Company, to the amount of \$100,000, and pay \$125,000, and to receive of that company in return \$300,000 stock.

These two lines will form a direct route from Cincinnati to Chicago, a route the value of which can hardly be estimated, passing through a rich portion of country, and over which there must pass a vast amount of travel.

From Cincinnati to New Castle 98 miles, the line is now complete, and by next fall the Directors hope to have it completed to Logansport. The Junction road from Hamilton to Indianapolis is all under contract, it will have the same gauge as this, and will form with it an exclusive and perpetual connection.

A connection has also been formed with Toledo and Detroit through the Dayton and Michigan road, and with Sandusky and Cleveland, through the M. R. and L. E. and C. & T. roads; and all upon a uniform gauge.

By the middle of the present month, the Company intended to connect their express trains, morning and evening, with those running East over the Ohio and Indiana road. An accommodation train has also been placed on the road this month between Cincinnati and Hamilton, in addition to the regular through trains to Dayton and New Castle.

This train is calculated to accommodate local patronage.

As an instance of the value of this road to the country adjoining it, it is stated that within two years, residences have been erected immediately along the road, amounting in value to more than a quarter of a million of dollars. Cincinnati has already become an immense city, and is constantly enlarging and becoming a great railway center; and therefore there need be no fear that any road emanating directly from this center, and belting a rich country like the Miami Valley, will not be a very profitable road.

Since last year the capital stock amount has been increased \$406,000, and the bonded debt has been decreased by the conversion of the balance of the first mortgage bonds.

The first issue of bonds having been cancelled, it leaves the second loan of \$500,000 as the first line upon the road.

Below is the amount of Stock and Bonds issued, and the amount that has been expended for construction, equipment, and in the purchase of Real Estate; the total Receipts during the past year, together with the cost of operating the road, and the amounts paid for interest, taxes, and dividends.

Capital Stock.....	\$2,100,000 00	
Mortgage Bonds, (unconvertible) due 1867,	500,000 00	
Mortgage Bonds, (nonconvertible) due 1880,	362,000 00	
		2,962,000 00
Construction Account	2,263,286 72	
Equipment do	444,127 19	
Real Estate do	254,564 41	
		2,961,978 32
		21 68

Balance Transportation Account, April 1, 1853.....	\$ 34,795 43	
Transportation Receipts, for 12 months ending April 1, 1854, viz:		
Passengers.....	\$274,650 39	
Freight.....	176,142 11	
Mail and Express.....	12,228 95	
		463,021 45
		497,816 88

Transportation Expenses for twelve months.....	187,207 55	
		310,609 33

Amount received from Rents.....	1,191 01	
Amount received from East Line.....	9,022 48	
Profits and Loss Account	26,677 98	
		36,891 47
		347,600 80

Interest Account, and Interest on Bonds.....	46,206 83	
Amount paid for Taxes..	14,469 57	
		60,676 40
		286,824 40

Dividend No. 3, August 1, Cash 5 per cent.	102,350 00	
Dividend No. 4, February 1, Cash 5 per cent.	105,000 00	
Surplus Earnings, February 1.....	34,860 26	
		242,210 26
Balance.....	44,614 14	

The assets and liabilities of the company, independent of the funded debt are as follows:

ASSETS—PROPERTY ACCOUNT.	
820 Shares D. & M. R. R. Stock.....	\$41,000 00
800 " S. & C. R. R. "	40,000 00
90 " R. & M. R. R. "	4,500 00
1100½ " E. & H. R. R. "	21,312 50
220 " G. & M. R. R. "	11,000 00
295 " C. H. & D. R. R. "	29,500 00
Amount paid on Acct of Steam Boats	97,080 71
Sundry items, Property Acct.....	507 10
624 shares Lafayette Bank Stock (surplus).....	9,984 00
Bills Receivable.....	51,630 64
Due from other Roads.....	57,022 28
Individual Accts.....	50,359 49
Suspense Acct.....	29,358 44
Carlisle & Stedman, N. York.....	32,296 42
Cash on hand.....	65,862 64
	541,414 22

LIABILITIES	
Individual Acct.....	57,599 48
Bills Payable.....	388,350 10
Reserve Fund.....	50,000 00
Renewal Acct.....	29,170 91
	525,120 44
Balance.....	16,293 78

The above statements present the principal items of importance in the affairs of the company at present date. The road-bed and superstructure are in good order, and need but a small outlay to keep up a good surface.

The equipment of the company comprises 21 locomotive engines, 25 first class passenger cars, 4 second class passenger cars, 6 baggage, Mail, or express cars, 188 Box or covered freight cars, 78 platform, rack or hog cars, and 9 cattle cars, all of which are in good running condition.

Of this list 7 engines and 7 passenger cars, besides several other freight cars, have been withdrawn, and put upon the line between Cincinnati and New Castle per agreement. This has rendered it necessary to order new cars in their place, which, to a certain extent, has been done. The bridge over Elk creek which was swept away a few weeks since, is being re-constructed as fast as possible, and that being finished, the accommodations of the Cincinnati Hamilton and Dayton Road will be of a superior kind.

Proportions of Locomotives.

We have frequently been asked for plain and simple rules for proportioning locomotives, and have at some trouble prepared the following:

PASSENGER ENGINE.

Diameter of Cylinder being the standard, and diameter of driving wheel being taken as three times the length of stroke.
Diameter of boiler 3 times diameter of cylinder.
Length of tubes 2 times diameter of drivers.
Width of grate 14 inches less than gauge of road.
Length of grate equal to diameter of boiler.
Number of tubes—as many as will occupy two-thirds the diameter of boiler, at a distance of ⅝ inch apart.
Diameter of tubes to be 1-5 of an inch for every foot of length.
Length of steam ports 9-10 diameter of cylinder.
Width, 1 inch for every foot diameter of cylinder.
" of exhaust 1¼ in. for every foot of "
Diameter of main steam pipe ⅓ of "
" branch " ¼ " "
" exhaust at mouth 1-6 " "
" chimney 9-10 " "
" piston rod 1-6 " "
" con'g rod at neck 1-6 " "
swelling 1-16 inch larger at center for every foot of length.

Length of cross head bearing equal diam. of cyl'r.
Width of do 1-5 " "
Diameter of driving axle 2-5 " "
Throw of main valves 3-10 " "
Lead on steam port with link at full stroke 1-16 in.
" with hook motion ¼ to ⅜ "
Thickness of piston 3-10 diameter of cylinder.
Diameter of cross head pin 1-5 " "
" crank pin, where the parallel rod crank pin is on the end of it, 0.22 diam. of cyl'r.
Diameter of coupling rod pins 1-6 " "
Do. valve stem 1-12 " "
(Note.—This dimension should be a little exceeded.)

Length of connecting rod 3½ times the length of stroke is the least length for a fast engine.
Diameter of pump plunger (full stroke) is ⅓ diameter of cylinder.
Diameter of feed pipes 1-7 diameter of cylinder.
" pump valves 1-6 " "

FREIGHT ENGINES.

Diameter of drivers twice the length of stroke.
Do of boiler 2¾ times diam. of cylinder.
Length of tubes 7 times length of stroke.
Do of grate 3 times diameter of cylinder.

The other dimensions are principally the same as for the passenger engine, except that the steam pipes and ports may be generally of one-eighth less capacity. The connecting rod, for convenience in arrangement, may be as short as 3 times the length of stroke, which is the least length admissible.

Charlotte and South Carolina Railroad Company—Annual Convention.

A convention of the stockholders of the above company was held in Columbia, S. C., Feb. 7th, 1854.

At the last annual convention, a committee was appointed to report the number of officers of the company, with their salaries. There was reported the annual sum of \$100,098 paid for labor and salaries to persons employed on the road. Resolutions were then adopted, to the effect that the amount paid out for salaries and wages ought to be diminished.

Mr. Palmer, President of the Company, stated in his report the income of the road to be, from the 1st October, 1852, to 1st January, 1854, a period of 15 months, \$249,667 28; and the current or ordinary expenses to be, for the same period \$143,464 97; which, added to interest on bills payable and coupons due on bonds, leaves from the income a dividend fund of \$85,544 02; out of which two dividends, of two and a half per cent. on the capital stock of the company, amounting to fifty-eight thousand dollars (\$58,000,) have been declared, and leaves the balance of the fund \$27,544 12, to be carried to the construction account.

The officers of the company, at the last meeting, presented what they believed to be an approximate estimate of the outstanding debts of the company. But from the short period allowed after the completion of the road, to make that estimate, it proved too low.

"Since their last annual reports, your officers have been engaged in closing up all the accounts for the construction of the road, and are gratified in being able to state that they have all been settled up with two or three exceptions. By the exhibit of your treasurer, who has charge of the construction accounts, it will appear that exclusive of the balance on hand, 30th September, 1852, the sum of \$314,334 90 has been received during the past fifteen months, and that the sum of \$409,215 74 has been expended during the same period, and that the payments made towards the construction of the road since its commencement, amount to \$1,580,637 66. Your officers, at your last meeting, furnished you with what they believed to be an approximate estimate of the outstanding debts of the company. But from the short period allowed, after the completion of the road, to make that estimate, it has turned out as might reasonably have been expected, that it was too low."

This company also decided, in view of the important aid that would be rendered to them by a railroad from Hamburg to Columbia, S. C., authorized aid to the extent of \$200,000 to build such road, provided \$600,000 would be raised from other sources, and the road should not cost over \$1,000,000.

The company also authorized \$10,000, or a necessary proportionate contribution, towards the

construction of a manufactory for re-rolling old railroad iron. It is believed that such an enterprise in their midst would more than make up the difference between a heavy transportation north and back again, and northern prices of iron; and at the same time it would introduce labor and capital into the State, and spread their profits among all classes.

This road is well stocked with engines, cars and machinery. It has now on the road, in good running order, 12 locomotives, 4 passenger, 3 baggage and mail cars, 59 platform cars, 7 stock, 16 dirt, 17 repairing and 3 hand cars.

During the year the grading at the junction of the South Carolina Railroad has been finished, and a freight house and cotton platform erected for the transshipment of goods. Cotton platforms have been built at all the way stations. There have also been built eight station-houses for the use of the different parties employed in the repairs of the road.

Under your direction a force was organized early in the year, and the work of filling the trestles commenced. They have been engaged at this and in hauling stone for the culverts at the different fills during the year. A contract has also been made for embanking those near Columbia, and with Mr. L. T. Sharp for those at Lock-lear's and Embers Branch.

Some difficulty has been experienced in getting rock for culverts; a good deal of which has been brought 60 or 80 miles, the cost of which makes a material difference in the estimate.

The amount expended in the construction of the road to the 31st December, is.....\$1,580,637 66
There is due for grad'n &c. \$3,063 28
" " timber,.... 1,870 44
" " buildings. 1,015 00
" " cars,..... 4,238 00
" " engines,.... 17,961 43

28,128 35

\$1,608,766 01

The amount still required to build the engine houses at Columbia and Charlotte, and freight and passenger house at the latter, and to complete the embankments at the Trestles, is..... 60,396 89

\$1,669,162 90

For cost of road and equipment up to the present time.

Mr. Bradley, Secretary and Treasurer, submitted his report of receipts and disbursements up to January 1st, 1854, embracing 16 months.

Balance in the Treasury, 30th Sept., 1852.....\$102,175 39
Amount of Company Note in Branch Bank, Charlotte, erroneously credited in report of 1852..... 1,969 75
Receipts on the capital stock of the company, from 1st October, 1852, to 1st January, 1854..... 76,815 22
Bonds issued by Charlotte and South Carolina Railroad Company in 1853 150,000 00
Receipts from Transportation Depart. 85,289 93
Receipts from other sources..... 260 00

Total receipts from 1st Oct., 1852, to 1st Jan., 1854. \$416,510 29

Total disbursements for the same time \$409,215 74

Balance in the treasury 1st Jan., 1854, \$7,294 55

The existing bonded debt of the road is as follows:

DATE OF BONDS.	NO. & WHEN REDEEMABLE.	AM'T.
Jan. 1, 1852, 50 Bonds, 1st Jan., 1859,	\$500 each.	\$25,000
" " 50 " " " 1860		25,000
" " 50 " " " 1861		25,000
" " 50 " " " 1862		25,000
July 2, " 50 " " " 1863		25,000
" 20, " 10 " " " 1863		5,000
" " 60 " " " 1864		30,000
Jan. 1, 1853, 50 " " " 1865		25,000
" " 50 " " " 1866		25,000
" " 50 " " " 1867		25,000
" " 50 " " " 1868		25,000
" " 10 " " " 1865		5,000
July 1, " 90 " " " 1869		45,000

Total amount of Bonds issued,.....\$310,000

The newly elected Directors for the ensuing year are—

- | | |
|----------------------|---------------------|
| 1. John Caldwell, | 7. Samuel McAliley, |
| 2. J. S. Boatwright, | 8. A. B. Springs, |
| 3. A. R. Taylor, | 9. A. B. Davidson, |
| 4. Edward G. Palmer, | 10. John A. Young, |
| 5. Wm. R. Robertson, | 11. C. J. Fox, |
| 6. James Pagan, | 12. Wm. F. Phifer. |
- R. J. McDOWELL,
LEROY SPRINGS,
JAMES GRAHAM, } Managers.

Interior Railroads.

We have two reasons for not devoting, in all cases, as much attention to isolated roads in the interior of the country as to those which occupy a place in the great thoroughfares of the nation. The first is that such roads are of local rather than of general importance, and the second is that roads of that character are more hazardous as speculations, and not generally as deserving of encouragement for that reason, as others commanding a broader area for support.

We will suppose a road built in an agricultural region, and diverging for a distance of 20, 30, or 50 miles from any main line of travel. Each mile of this road, if costing \$30,000, (and it is only in a few localities where a finished road will require less,) will impose a yearly charge of \$12,600 for interest, and as much at least, for operating expenses, or \$25,200 in all, upon every successive six-miles of country traversed. To pay this charge, every six miles must furnish at least 46 daily travellers, going an average distance of 36 miles each, at three cents per mile; and 48 tons of freight going the same distance at 4 cents per mile. The receipts from such a business are just equal to interest and expenses.

As the distance which we have assumed to be travelled is as great as the average on local interior roads, we see that every six-mile station must despatch one full passenger car of passengers, and six loaded freight cars daily. Here is the test of the support of a local road. How many towns, containing even 3000 or 4000 inhabitants, engaged in agricultural pursuits, can furnish such a movement? Are 92 of its citizens, and 96 tons of its products and exchanges, on the move daily?

Now there are clear distinctions between the elements of support of our railroads. An agricultural community requires less travel and trade than an other engaged in manufactures. The farmer produces for himself, the manufacturer for others. The products of the soil are to a large extent consumed where produced, and where there is a surplus for export and movement is regulated by the cost, which is cheapest, other things being equal, on a central line of trade and travel.

The construction of an interior road upon the

basis of a local support, calls for the exercise of the highest quality of judgment and skill; else it will be apt to prove unproductive. If the cost of the work, or the difficulties in the way of cheap operation, exceed a fixed limit, the scheme will be either unsuccessful or premature. As the means of support increase, such a road may assume a paying position, but unfortunately, the construction accounts of most roads increase with their incomes.

In building local roads in agricultural districts, no expenditure should be incurred not demanded by necessity and safety. The issue of bonds should be the least possible, as the payment of coupons is a permanent tax upon the road, as much as outlays for fuel or iron. And the merits of such roads being understood, they are not as able to obtain money on good terms, as roads which command a better support.

While we are unconnected in interest with any portion of the railroad system, we thus state the principles which govern our conduct towards a large class of railroad enterprises. While we perceive the ultimate success of our railroads, and the extension which they must receive, we do not wish to inflate the system in which they are included.

Elevated Railroad in Broadway.

As engineering expedients, several plans are already proposed for an elevated railroad in Broadway which are perfectly practicable. It is as easy to go over a street as a river, either lengthwise or across. The essential features of all the practicable plans now before our citizens are so obvious at first thought as hardly to have tasked the faculty of invention. In fact, the substance of them all was suggested long ago. But we doubt if there is a near prospect, or even a necessity for the execution of any of them.

The crowded condition of Broadway comes from the double circumstances that it is the great thoroughfare of life and fashion in our city, and also the most direct and capacious avenue between the two extremes of the town. Hence it is crowded with the votaries both of pleasure and of business. The business travel however, includes not only that which is incidental to the pursuits of the street, but also that of a large part of the commercial operations in other parts of the city, and such as does not necessarily originate or terminate in Broadway.

We believe that, if any plan of elevated railroad is executed in Broadway, a great feature of the street will be ruined—its perspective. It is the optical attractions of Broadway which characterize it from the Bowery or any other street equally accessible for purposes of trade. Instead of inviting travel the presence of such a scaffold as is so often proposed would avert very much of it. There are very few of the admirers of this noble thoroughfare, who would not be sorry to see it after being *grated* over head, to say nothing of the continuous double line of cars which it is claimed would be required. We are confident that no one who feels a just pride in the greatness and in the attractions of our city would willingly encourage such an encroachment on its great municipal highway, even if assured that it would y, of which event we are not satisfied.

Our city requires better facilities for the travel between its upper and lower limits. The system

of cross streets is very perfect, but no one of these is an axis of a large travel as compared with that crowding upon Broadway. It is not necessary nor expedient, however, to concentrate all of this burden upon one street. Below Union Place more avenues are needed parallel to Broadway. Let us propose one which may afford some permanent relief. Commencing at the lower end of the island, Broad Street offers a width nearly equal to Broadway. Its proper continuation, Nassau Street, imperatively requires widening, and when done it should be with reference to the demands of a travel already greater than upon any street of its length in the city. On reaching the Park, it may be considered probable, and certainly for the best, that the city buildings will be removed to the neighborhood of Union Place, leaving the Park to be occupied as a central starting and stopping point between the extremes of the town. From Chambers street, a street requires to be cut so as to connect with Crosby street, which latter street being extended to Lafayette Place, would complete an independent avenue of great capacity, between the lower end of the island and Union Place.

Here is a great scheme, worthy the attention of the whole city, and especially of the business and proprietary interests on the east side of Broadway. It is the commencement of a great system of longitudinal thoroughfares, such as the interest of our city demand.

With the continuance of the present tendencies, West Broadway, in ten years, will be one of the principal avenues of business and pleasure in the city. In that time its present character will have disappeared.

So long as our buildings are kept below ten stories in height we feel there is little danger of the spoliation of Broadway by an elevated railroad

Steam Engines and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to
EDW. BECH & KUNHARDT, 62 Beaver St.,
Or, A. TOWAR, Agent Pokepsie Iron Works,
23rd Pokespie, N. Y.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and Warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.
December 18, 1852. WM. S. SAMPSON, Agent.



No. 22 Pear Street, below Walnut,
near Third St., PHILADELPHIA.

ATLAS FOUNDRY.

FOOT OF WAYNE ST., JERSEY CITY, N. J.

THE Subscribers are prepared to furnish High and Low-pressure Stationary and Steamboat Engines, Mining Machinery, Railroad Work, Machinists' Tools, Iron and Brass Castings, etc., etc., on the most reasonable terms, and with the greatest dispatch.
J. F. WARD & CO.

Very superior Axle Turning Lathes, \$375. 6m23

N. A. Boynton's VENTILATING HEATER, PATENTED, 1853.



BRICK.

FOUR SIZES FOR BRICK WORK.

FIVE SIZES PORTABLE.



PORTABLE.

An entirely new Article, possessing advantages worthy the attention of those in want of a Powerful and Economical Heater.

SIMPLE in construction, compact in form, and easily managed and cleaned.

Is entirely of CAST IRON; has but two joints, and those so arranged, as to prevent the escape of Gases and Smoke.

The FIRE POT is lined, the RADIATING SURFACE, located above the fire, and equally exposed on all sides to the action of the cold air.

Can be set in LOW CELLARS, and, by the attachment of a SELF-CLEARING RADIATOR is especially fitted for the use of Bituminous Coal.

Of the above pattern we have four sizes, to be enclosed in brick-work, and five sizes of portables, adapted to all classes of buildings, and can be furnished at a less price than any other heaters of equal capacity in present use.

Manufactured and for Sale, Wholesale and Retail, By
CHILSON, RICHARDSON & CO.
374 Broadway, New York,
Also 101 and 103 Blackstone-St. Boston.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to
September, 1850.

THOS. CHAMBERS,
President.

New York and Erie R. R.**PASSENGER TRAINS**

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.

Dunkirk Express, at 7 a. m. for Dunkirk.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations.

WAY EXPRESS, at 12½ p. m. for Dunkirk.

Rockland Passengers, at 3.30 p. m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m. for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

Emigrant at 6 p. m.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

Great Western Mail Route.

SIXTY MILES DISTANCE SAVED TO CHICAGO AND ST. LOUIS. THE MICHIGAN SOUTHERN AND NORTHERN INDIANA RAILROAD LINE, carrying the Great Western United States Through Mail, have the following staunch first-class Steamers running on Lake Erie in connection with the **NEW YORK AND ERIE RAILROAD** from Dunkirk, touching at Cleveland, and connecting with their Road at Toledo, and connecting directly with the **CHICAGO AND ROCK ISLAND RAILROADS** at Chicago, in the same Depot, thus forming a Daily Line for Passengers and Freight from New York to the Mississippi River. **NIAGARA**, Capt. Miller; **EMPIRE**, Capt. Mitchell; **KEYSTONE STATE**, Capt. Richards; **LOUISIANA**, Capt. Davenport. Also **A DAILY LINE FROM BUFFALO DIRECT TO MONROE**, by those well-known magnificent Floating Palaces, **EMPIRE STATE**, J. Wilson, Commander, leaves Buffalo Mondays and Thursdays; **SOUTHERN MICHIGAN**, A. D. Perkins, Commander, leaves Buffalo Tuesdays and Fridays; **NORTHERN INDIANA**, L. T. Pharr, Commander, leaves Buffalo Wednesdays and Saturdays.

One of the above splendid Steamers will leave the Michigan Southern Railroad Line Dock, at 9 o'clock, P. M. every day, (except Sundays) and run direct through to Monroe without landing, in 14 hours, where the **LIGHTNING EXPRESS TRAIN** will be in waiting to take passengers direct to Chicago in 8 hours, arriving next evening after leaving Buffalo.

Running time from New York to Buffalo.....14 hours.

Running time from Buffalo to Monroe.....14 hours.

Running time from Monroe to Chicago.....8 hours.

Total.....36 hours.

Connecting at Chicago with a fine line of Low Pressure Steamboats to all places north of Chicago to Green Bay; also with Chicago and Rock Island Railroad to La Salle, and there connect with Illinois River Line of Steamboats, or Express Trains of **ILLINOIS CENTRAL AND CHICAGO AND MISSISSIPPI RAILROADS**, or connecting at Rock Island with regular line of steamers for all points above and below, making the cheapest and most direct Route to St. Louis, Rock Island, Minnesota, and the Great West.

The **AMERICAN LAKE SHORE RAILROADS** from Buffalo and Dunkirk connect with this line at Toledo, forming the only direct and continuous line of Railroads from the Atlantic Seaboard to the Valley of the Mississippi.

Running time to Chicago, 36 hours; to St. Louis, 56 hours.

FOUR DAILY TRAINS by Railroad all the way.

TWO DAILY LINES by Steamers on Lake Erie.

Thus the Traveller and Shipper can see at a glance that no other Line can enter the lists as competitors.

Passengers Ticketed Through from New York with privilege of stopping over at any point on the route, and resuming seats at leisure, either by the New York and Erie Railroad, via Dunkirk, New York and Erie and Buffalo and New York City Railroad via Buffalo; People's Line of Steamboats, Hudson River or Harlem and New York Central Railroads, via Albany and Buffalo.

For any further information, Through Tickets, or Freight, apply at the Company's Office, No. 163 Broadway, corner of Dey st., N. Y., to **JOHN P. PORTER**, General Agent, or **L. P. DUNTON**, Ticket Agent.

Notice to Contractors.

PROPOSALS FOR THE ENTIRE CONSTRUCTION and equipment, or the graduation, bridging and masonry, separately, either in whole or in part, of the Mississippi and Tennessee Railroad, (extending from Memphis to Grenada, Mississippi, about 97 miles,) will be received at the office of the Company, in Memphis, till the 20th of July next. Proposals for the entire construction and equipment, and otherwise as favorable, will have preference. Profiles and estimates of the first 60 miles may be seen on application at the Engineer's Office in Memphis. Bidders must furnish satisfactory evidence of their ability to complete the work.

MINOR MERIWETHER,
Chief Engineer.

May 4th, 1854.

N. York and N. Haven R. R.**NOTICE OF SUMMER ARRANGEMENTS,**

Commencing Monday, May 9, 1854.

**TRAINS FROM NEW YORK.**

7 A. M.—Accommodation to New Haven.

8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.

9.10 A. M.—Special for Port Chester.

11.30 A. M.—Accommodation for New Haven.

3.00 P. M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.

4.00 P. M.—Accommodation for New Haven.

5.00 P. M.—Express for Boston, stopping at N. Haven.

5.35 P. M.—Commutation for N. Haven.

6.30 P. M.—Special for Port Chester.

TRAINS TO NEW YORK.

5.30 A. M.—Special, from Port Chester.

6.00 A. M.—Commutation from New Haven.

6.15 A. M.—Accommodation from New Haven.

8.15 A. M.—Accommodation from New Haven.

9.35 A. M.—Express from New Haven, stopping at Bridgeport, Norwalk and Stamford.

1.07 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

4.00 P. M.—Special, from Port Chester.

4.00 P. M.—Accommodation from New Haven.

9.30 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Sup't.

New Haven, May, 1854.

Kentucky Locomotive Works.

CORNER OF KENTUCKY AND TENTH STS.,
LOUISVILLE, KY.



THE Proprietors of the *Kentucky Locomotive Works* would respectfully inform Railroad Companies and the public generally that, having completed their establishment, they are now prepared to receive and execute orders with fidelity and dispatch. They will contract for **LOCOMOTIVES, PASSENGER, BAGGAGE, FREIGHT, GRAVEL, and HAND CARS**, of every style and pattern, as well as all kinds of Stock and Machinery required for Railroads.

Particular attention will be paid to *Repairing*, for which they have every facility.

They are also prepared to contract, on favorable terms, for building all kinds of Machine Tools, such as Turning Engines, Lathes, Planers, Drills, Slotting, Spining, and Shaping Machines, of every variety of pattern.

Having also a large **FOUNDRY** connected with the establishment, orders for Castings are solicited, and will be filled with promptness.

Car Wheels of any pattern can be furnished on short notice. Double and single plate and Spoke Wheels of all sizes, constantly on hand.

Communications or orders must be addressed to

OLMSTEAD, TENNEYS & PECK,

1y23

Louisville, Ky.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,

287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.

James W. Hooker, COMMISSION MERCHANT,

AGRICULTURAL WAREHOUSE,
AND MACHINERY DEPOT,

No. 36 Lloyd Street, Buffalo, N. Y.

Commission dealer in Portable and Stationary Engines, Iron Planers, Lathes, Universal Chucks, Belting, Oils, Rubber Packing and Hose, Scales, Saws, Mill Stones, and Machinery generally. Post paid letters will receive prompt attention. 221c

D. Mitchell, Jr.,

Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley Railroads, Pittsburg, Pa.

Samuel McElroy,

Assistant Engineer, New York Navy Yard.

Charles B. Stuart,

Civil Engineer, New York.

Edward W. Serrell,

Civil Engineer, 157 Broadway, New York.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in A construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17 tr

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—specular red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

G. PARISH,

15,3m*

Ogdensburg, N. Y., April, 1853.

SEYMOUR, MORTON & CO. GENERAL R. R. AGENCY, Office, Metropolitan Bank Building. No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

MONTREAL & NEW YORK AND**Plattsburgh and Montreal RAILROADS.**

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6.30 a.m. and 5 p.m., arrive at 8 a.m. and 7.30 p.m.

Leave Plattsburgh for Montreal 7.30 a.m. and 4 p.m., arrive at 10 a.m. and 6.50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate stations.

Trains connect at Moores Junction with Northern (Ogdensburg) Railroad for Ogdensburg and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequaled for comfort and dispatch, and attended with less fatigue and delay than any other. It possesses moreover the advantage of a short Passage of only fifteen minutes across the River St. Lawrence at Canajoharie, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.

For particulars see Freight and Passenger Tariff.

BAGGAGE checked through.

H. W. NELSON, Superintendent.

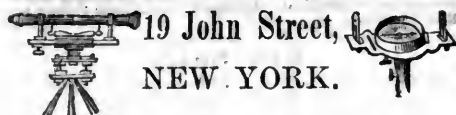
Old Railroad Iron For Sale.

ABOUT 250 TONS, mostly whole bars, flat iron of superior quality. Deliverable at Portsmouth Va. as fast as it can be hauled. Immediate offers are invited, addressed to

L. O. B. BRANCH, President R. & G. R. R.

Releigh N. Carolina.

None but the accepted offer will be applied to. 3t.22

SURVEYORS & ENGINEERS.**ALBERT COOK & CO.**

19 John Street,

NEW YORK.

HAVE, in connection with their Optical and Mathematical instruments, established a Manufacture of Surveying Instruments. Employing an experienced Engineer, and the best of German mechanics, their instruments will give full satisfaction.

Ontario, Simcoe & Huron R.R. CANADA.

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kakabeka) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

MR. WILLIAM NAISH, of Newport, Monmouthshire Inspector of rails, engineers and others connected with the railroads of America, that he still continues to execute orders of inspection, throughout the various districts of South Wales and adjacent Iron works, and confidently refers to the satisfaction which his supervision has given during the last ten years to exporters of rails, and others below named, as a proof of the fidelity, carefulness and promptitude of his inspections.

BALING BRO. & CO., London.

LEWIS HOPE, Esq., " "

COLLMAN & STOLLERFOIT, " "

HON. JAS. WADSWORTH, Buffalo New York

JAMES SPENCE, Esq., Liverpool

NAYLOR, VICKERS & CO., " 191y

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD,
Vandalia, Ill.

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot gauge, 22 tons weight, 16 + 20 inch cylinders, and 5½ and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.

Dec. 24

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Lyon's Tables of Cubic Contents, Etc.

These valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1. gives correct mean heights of cross sections with either two or three cuttings taken. Table 2. finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise. Price \$1.50.

21.1f

Railroad Iron.

500 TONS, best English make, 57 lbs. per lineal yard, now in port. For Sale by,

THEODORE DEHON, 26½ Broadway.

Contracts made as above for Rails delivered at any English or American port at lowest rates and customary credits. 21.5f

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N.Y. 191f

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of
Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York,

19 1f

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors' Compasses Manufactured on the most improved principle and of the Best Quality

by THOMAS HUNT,
No. 63 Fulton Street,
New York.

1y10*

Railroad Iron.

5,000 TONS T' RAILS, about one-half weighing 59 lbs. per yard and the remainder 56 lbs. per yard now in bond and for sale by

2d Feb'y.

JOHN H. HICKS,
90 Beaver street.

Railroad Iron.

1250 Tons Erie Pattern Onset and Co's make, weighing 57½ lbs. per yard, to be shipped from Wales in July and August, for this port—for sale by

June 9, 1853.

BOORMAN, JOHNSTON & CO.,
90 Broadway, New York.

Brass Tubes for Locomotive and Marine Boilers.

THE undersigned having been appointed Agent for the highest respectable manufacturers Messrs. Allen, Everitt & Son of Birmingham, is prepared to take orders, at fixed prices, for Brass Tubes of all diameters, for Engines.—For further particulars and inspection of patterns, please apply to

JOHN H. HICKS,
90 Beaver str.

March 1854.

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date, at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburg, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

Railroad Iron.

THE Undersigned, Agents for the Manufacturers, are prepared to contract to deliver free on board at shipping ports in England, or at ports of discharge in the United States, Rails of superior quality, and of weight or pattern as may be required.

VOSE, PERKINS & CO.,
New York, June 1, 1851. 9 South William Street.

Important to Railway Co's.

A GREAT improvement has recently been perfected in the manufacture of Dumping Gravel Cars by which the cost is materially lessened and the strength and durability much increased.

We have secured the right to manufacture these improved Cars and can supply them at prices ten per cent. lower than the ordinary kind.

Orders directed to the Hamilton Car Co., Hamilton, Ohio, will receive prompt attention.

STEEL.

Shortridge, Howell & Jessop,
HARTFORD STEEL WORKS,
SHEFFIELD, ENGLAND,

HAVE constantly on hand at 24 Cliff St., New York—

CAST STEEL—double Refined and Extra, Square, Flat and do. Best Warranted do. do. (Octagon.

SHEAR STEEL—Best double and single, Warranted.

MACHINERY STEEL—Round assorted.

SHEET STEEL—for Saws and other purposes, 1st and 2d GERMAN STEEL—assorted sizes. [quality]

SPRING STEEL—for Railway and Carriage purposes, 1st [and 2d quality]

BLISTER STEEL—Genuine (L), "Sykes", and other good **BLADE STEEL**—for Cutlery purposes. [stamps]

All of which are guaranteed to be equal to any other make, and offered for sale on the most favorable terms, by

1y22 DUNCAN LITTLEJOHN, Agent.

Sewall & Crehore

CIVIL ENGINEERS,

ST. PAUL, MINNESOTA.

JOSEPH S. SEWALL.

CHAS. FRED. CREHORE.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 24]

SATURDAY, JUNE 17, 1854.

[WHOLE No. 948, VOL. XXVII.]

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Mobile and New Orleans Railroad.....	369
Hudson River Railroad.....	371
The New York Press and American Railroads.....	371
Covington and Lexington Railroad.....	372
Northern, New Hampshire, Railroad.....	372
Bridge over the St. Lawrence.....	372
Ohio and Mississippi Railroad.....	373
Sunbury and Erie Railroad.....	373
New York Central Railroad.....	374
Car Ventilation.....	376
Stock and Money Market.....	377
Memphis and Ohio Railroad.....	377
Buffalo and New York City Railroad.....	378
Covington and Ohio Railroad.....	379
Sault Ste Marie Canal.....	379
Journal of Railroad Law.....	380
Twin Creek Railroad.....	382
Kentucky Union Railroad.....	382
Cleveland and Pittsburgh Railroad.....	382
Clinton Line Railroad.....	382
Progress of the Grand Trunk Railroad.....	382
Baltimore and Ohio Railroad.....	382

American Railroad Journal.

Saturday, June 17, 1854.

Mobile and New Orleans Railroad.

We have been favored with a copy of a report of surveys for a railroad from Mobile to New Orleans, made by Lewis Troost, Esq., an engineer of well known reputation throughout the Southern States.

The distance between the two cities by the line surveyed is 139 miles. The route follows, generally, the Gulf coast for the greater part of the way, and crossing the *strait* which connects Lake Ponchartrain and Lake Borgne, takes the line of the New Orleans and Lake Ponchartrain railroad to New Albany.

The general surface of the country is favorable. The soil upon which the greater part of the track will be laid will make a good road-bed, being sand with a clayey subsoil. Timber in abundance is found immediately upon the line, which is accessible from the Gulf in a number of places; so that the work can be carried forward in either direction, at various points upon it.

The following table will exhibit the characteristics of the line as surveyed:

Total length of line,.....	139.00 miles.
Total length of straight line,.....	133.32 "
Total length of curved line,.....	5.68 "
Total deflection,.....	322° 45'
Shortest radius of curvature,.....	5730 feet.
Total length of level grades,.....	87.20 miles.
Maximum grade each way per mile,.....	26.40 feet.
Total length of grades from 0 to 10 feet per mile,.....	26.27 miles.
Total length of grades from 10 to 26.40 feet per mile,.....	25.53 "
Total length of maximum grades of 26.40 feet per mile,.....	14.58 "
Total rise and fall in feet,.....	704.29 feet.
Highest summit above mean tide to be overcome,.....	137 "

The greatest obstacle in the way of construction will be the numerous bridges which will be required. There are 8 important water courses crossed, viz: East Pascagoula river, West Pascagoula river, Bay of Biloxi, Bay of St. Louis, East Pearl river, Great Rigolets, Little Rigolets and Chef Menteur. All these have deep channels, none of them less than 12 feet, while four of them have depths exceeding 40 feet. The aggregate length of bridging required for their crossing will be 22,350 feet. The water courses where crossed by the road have little current, are well protected from the effect of storms. It is proposed to construct the bridges on piles, which will have to be inclosed by some metallic covering, to protect them from the action of the *teredo navalis*.

The cost of the road is estimated as follows:

Roadway—Graduation, grubbing and clearing,.....	\$562,373
Culvert and bridge masonry, and foundations,.....	165,949
Bridging,.....	948,009
Ballasting when required,.....	116,429

Cost of Roadway,..... 1,792,760

Superstructure—136 miles of main track
3 " " side " "

142 " " at \$10,000— 1,420,000

Fencing—Cattle guards, road signs and crossings,.....	69,500
Equipments—(Engines, cars, &c.,).....	322,800
Depots—Engine and station houses, machine shops, &c.,.....	134,000
Engineering and Superintendence,...	97,300

Total probable cost.....\$3,886,860

Cost per mile, (nearly,)..... 27,600

The estimates of income are as follows:—

1. *Through Travel.* 71,428 through passengers each way, at \$3 (not quite three cents per mile).....\$428,568
2. *Way Travel.* 60,000 passengers each way, (floating population) at \$2,... 240,000
8,000 passengers each way, (resident population,) at \$2,..... 32,000
3. *Way Freight.* 41,903 tons transported $\frac{1}{2}$ distance of the road, at 8 cents per mile,..... 87,867
4. *Through Freight.* 52,500 tons transported the whole length of the road at $2\frac{1}{4}$ c. per mile,..... 164,193
5. Transportation of the United States mail, 139 miles, at \$250 per mile,.. 34,750

Total estimated receipts,.....\$986,878

Deduct expenses 54 per cent.,..... 532,914

Net income,.....\$453,964

Or more than ten per cent. on \$4,500,000.

The Gulf coast is the great resort of the people of Mobile and New Orleans during the hot weather, which will render the amount of *local*, a considerable part of which will be pleasure travel, very large. There must also be a very large amount of *through* travel when the railroad now in progress toward Mobile shall be completed.

In reference to the necessity that exists for the road, and its probable influence upon the prosperity of the cities to be connected, we copy the following from the report:

New Orleans and Mobile are now the only large cities in the whole country having no direct railway communication between them, either completed or in progress. The reason why one has not been constructed before this is, that its place has been in a measure supplied by a good line of steamers, which, however, on account of shallow water and other causes, cannot maintain a regular and punctual communication. The greatly increased business and travel, with that which is to result from the great systems of railroads centering at either city, can no longer be accommodated by the old mode of conveyance, but demand a new one, more in accordance with the spirit of the times.

The line proposed will reduce the time of transit between the two cities for passengers to three or four hours, and for freight to about ten hours. It will open another avenue for the introduction of a large amount of building materials to meet the continually increasing demand for these supplies. It will stimulate the production of many articles of food from the garden, orchard and

dairy, along the line of the road within a few hours reach of either city, that will add greatly to comfort and cheap living. It will render a residence in either of the cities much more desirable, as it will afford safe and delightful retreats in epidemic seasons to their inhabitants, within two hours ride, thus inducing them to remain at home, to engage in permanent occupations, and correct the crying evils of *absenteeism*, and at the same time increase the permanent population and afford a home market for home productions.

It is common where a railroad is built connecting two cities of disproportioned magnitude, for the smaller to fear that the influence will be such as to draw off its trade to the greater. It may change in some particular the previous existing relations, but the advantage without exception, is believed to be *mutual*. The history of railroads in the Northern and Eastern States afford many striking illustrations of this fact. No instance can be pointed out in which a town has suffered in consequence of its connection with any other.

The city of Albany has received a great impulse by the construction of the Hudson River Railroad, by which passengers are taken to New York, a distance of 150 miles, in 4 hours, at a cost of two dollars. The same may be said of Troy, and of the numerous cities on the great line of travel between Albany and Buffalo. All these cities offer every facility for the passage of the trains through them at high speed, and their rapid growth proves the advantage to themselves, of an unrestricted commerce. The city of Providence did not become an important place till its connection with Boston, by the Boston and Providence Railroad. The cities of Salem, and Newburyport, and Portland, have had new life infused into them by their connection with the metropolis of New England. Philadelphia, instead of losing any portion of its trade by her increased facilities of communication with New York, is rapidly increasing it. The effect of improved highways is to benefit every town and every section of the country through which they are built, and the fear which was formerly entertained, and which is still cherished in some portions of the country, that they may exert a contrary tendency, is entirely groundless.

While Mobile has nothing to fear from the construction of any road leading from herself in any direction, she can build none that will conduce more to her prosperity than the Mobile and New Orleans Railroad. It is the only work that will bring her upon the great line of travel of the United States. The *convenient* route of travel is always through the larger towns. Let the Mobile and New Orleans Railroad be built, and she will place herself upon this route. The terminus of this great route is not Mobile, nor New Orleans, nor Texas, but the *Pacific*. Let the construction of this work be postponed for several years, and the trade and commerce of the country will become accustomed to other channels which will leave the city without attractions either to its own people or strangers. The latter will go to more enterprising communities that receive their impulse from the great tide of human life passing daily through them. What will Mobile be unless she places herself *en route* of the great avenues of the country? Her enterprise will vanish. Her trade will decay. Her railroads will become merely local works, without alliance or connection with the great systems of the country. But let a *Western* outlet be opened, and the railroads entering Mobile upon the eastern and northern sides, will bring in daily swarms of travellers and emigrants, moving towards the fertile West. If this western outlet for her railroads be not built, this travel will take the route that South Carolina, Georgia, part of Alabama, and Mississippi are making such vigorous efforts to open, running in an easterly and westerly direction, to the north of Mobile. So convinced am I of the truth of these observations, I believe, as much as the road will benefit New Orleans, there are good reasons why the people of Mobile should feel a much

greater interest in its construction. Build this road and it will give employment to all her other lines, to which the city if making such liberal advances. It will stimulate its domestic trade. It will secure to it the favorable attention of the public, which will lead to the introduction of new elements of prosperity. By the points of contact it will present to the business world, it will become the inviting residence of the business man, whose own interests will be advanced by the promotion of those of the city.

While I have alluded particularly to the influence that railroads connecting neighboring cities, exert upon their prosperity, it is proper to state that the trade which Mobile and New Orleans enjoy, is the natural result of their respective positions, and that by no mode of communication between them can the appropriate commerce of one be drawn off to the other. They are respectively the depots of tributary territories with well defined limits. For the accommodation of the trade now received, by her projected railways, from the interior, Mobile, in her present position, offers greater facilities than New Orleans. These can be greatly improved by deepening the channel to her lower harbor, which is capacious, land-locked, and has a depth of 21 feet water, or as this improvement may, for want of necessary means, require time in execution, access to the harbor may be had by a railway of about 25 miles long, over a level and favorable country. While therefore Mobile must retain the trade she now enjoys, or to which by her position, and her projected railways, she has any claim, she can add largely to it by the proposed road.

Similar views may be taken as to the influence of the proposed road upon the interests of New Orleans, but as they will be more readily admitted from the fact that it is a larger city, it is not deemed necessary to repeat what has been said. It may be safely affirmed, however, that the road is indispensable to New Orleans, if she determines to retain the rank she now holds in the scale of American cities, and to move forward with the energy due to her unmatched position at the mouth of the greatest and most productive valley in the world. It is not to be denied that New Orleans has not made the progress due to this position. The fact is ascribed to her neglect of the construction of Railroads, without which, no matter what may be the natural advantages, or facilities of water communication, no city can preserve its relative standing. Its dilatory progress, unless all the contrivances that modern science has invented, are pressed into its service, will look rather like *retrocession* in the great race for commercial supremacy, than *progress*. Had New Orleans, like New York, the great *Atlantic* seaport, constructed *artificial* works, on the same scale as her natural avenues, it is not too much to say, that she would have eclipsed the former, in the extent of her commerce, both foreign and domestic. That city, by her neglect, has become the great commercial depot of the country. It was well enough for New Orleans to rest upon her *natural* resources, so long as other cities did the same. But while they have been calling to their aid what ever could advance these prosperity, New Orleans has hardly an element of wealth, or progress, that she had not 20 years ago. The result shows what an important part human contrivances play in the career of modern cities.

The settlement of California, and the planting of an American State on the shores of the Pacific, constitutes the great era in the commercial history of this continent. The fabulous wealth of the *Indies*, the very droppings of whose commerce upon its routes in the old world, were sufficient to build up cities of unrivalled splendor, is to have its *pathway* through the United States. The greater enterprise, joined to her vast commercial marine, enabled New York to monopolize this commerce. By means of it, the wealth of that city has increased in five years, more than it would have done in *twenty*, without it. But this commerce is soon to take a new direction. For that portion of it passing over the Isthmus, Tehuantepec is to

take the place of Panama. For the *traveller*, there can be no doubt that a railroad across the continent over the *southern* route must speedily be built. Both New Orleans and Mobile, if they will, may place themselves upon it, and become the ports of departure and arrival of the vast crowd which daily leaves and returns to our shores. All that these cities have to do, to accomplish the results I have described, is to render themselves *accessible* from every portion of the Union, particularly the great cities. This effected, and the traveller instead of leaving New York in the ocean steamers, subjecting himself to the perils of a long sea voyage, and to the unhealthy climate of the low latitude of Panama, will take the railroad to New Orleans or Mobile, when he will only have to make the short run of the tranquil waters of the Gulf, to the Isthmus of Tehuantepec, over which he will be transported in a few hours, and find himself on the salubrious shores of the Pacific. Upon the completion of the Pacific Railroad, he will take the same route to the above cities, and pursue his journey by way of Texas, and El Paso, to the Pacific. Neither New Orleans nor Mobile can hope to place themselves advantageously upon this great route without the construction of the proposed road. This built, and the advantages which it will secure in *prospect*, will, in the impulse it will communicate to all schemes looking to an extension west, be worth more than its entire cost.

I have already alluded to the importance of securing to New Orleans and Mobile, within two hours of either city, commodious and healthy residences. It is well known that a considerable portion of the Gulf of Mexico is skirted by a sandy shore, affording the most eligible and inviting locations. They are the resort of the people in mid summer, and probably no more healthy spots can be found in any part of the country.— Could hourly and cheap access be had to them, the character of the population of New Orleans would immediately change. This road will supply the needed means of communication, and will remove the great obstacle to the establishment of a permanent population, with local interests and local ties. The road will also constitute a most important channel upon which New Orleans can always depend for an abundant supply of the appropriate produce of the surrounding country, the present high prices of which is such a drawback upon its prosperity.

Allow me, in conclusion, to urge the expediency of terminating your road at Pascagoula, with a view of connecting by steamboat with a railroad from New Orleans to Nine Mile Bayou, or Cat Island, as has been suggested to you. Such a policy would involve a compound line, made up partly of railroad and partly of steamboat, which would render two transshipments necessary, and impose such a burden upon the trade expected to be drawn over it, as to defeat in a great measure the object of the construction of a railroad. That this course would be a mistaken policy, can be easily demonstrated by the history of railways in the United States. Take for instance the Wilmington and Weldon railroad. Upon this line the expenses of the water route to Charleston were so heavy as to eat up in a great degree the profits of the road, which now, without the water transit, is doing a remunerative business. Again, the Long Island Railroad is another strong parallel case.— This line, though coinciding with a route over which is an immense passenger traffic, has been entirely broken down on account of the water transportation, through the successful opposition of the New York and New Haven Railroad, which is a *through*, land line, in the same direction, though over a much longer route. No passenger between New York and Boston ever thinks of taking the Long Island Railroad. The Philadelphia, Wilmington and Baltimore Railroad is another instructive example. The water transportation is here only about one mile, but the expenses incurred in consequence of the shifting of freight and passengers are so large, being equivalent to running ten additional miles of road, with a

largely increased outlay for extra rolling stock and its maintenance, and the delays and changes of trains have been so annoying, that the company, as a matter of economy as well as necessity, have commenced the construction of a bridge, estimated to cost, with the road track, \$1,000,000, to avoid the ferriage over the Susquehanna. The Erie Railroad Company may also be cited as a further example, having been obliged to construct a line direct to New York, in addition to their original line terminating at Piermont, about 30 miles above; the latter being now entirely abandoned except for freight.

Experience has fully proved that the public never rest satisfied short of continuous lines of railroad upon all great routes; and where such have been omitted to be made at the outset, public sentiment has invariably forced railroad companies into new construction, at a great increased outlay over what would have been originally required. And I confidently express my belief that should you make a similar mistake, you will be compelled to correct it in a similar manner, both to meet the demands of the public, and protect yourselves from a rival work.

We think the above argument well put. Without the proposed Western connection, New Orleans cannot place herself *en route* of the great line of travel between the extremes of the Union. Both that city and Mobile regard themselves as suitable, and in fact the appropriate ports of embarkation for the California travel and trade when the Isthmus route shall be opened. With railroads from the Northern States to them, travel would take the land route to the Gulf, instead of the long and dangerous sea route by way of the Florida Keys. The California route has added 50,000 to the population of New York, and \$50,000,000 to the value of the property of the city. Mobile and New Orleans can divide this trade with her, if they will. The Mobile and Ohio railroad is one of the necessary instruments to accomplish such a result. Should the Southern route for a railroad, which must be soon constructed to California, be adopted, the above road is indispensable to the prosperity of both of the above cities.

The report of Mr. Troost is an exceedingly lucid, able, and satisfactory one. With the arguments adduced in favor of the project we fully concur. We regard the report as creditable to the engineering reputation of its author, and it shows that he takes a broad and comprehensive view of the whole matter, which should always over-ride local or partisan interests. We have no doubt its perusal will carry conviction wherever it is read, and contribute largely to the speedy commencement of the work.

Ponchartrain Railroad Company.

Statement of receipts and expenditures of the Ponchartrain Railroad for the year ending November 30, 1853.

323,020 passengers, at 25c, each.....	\$68,505 00
Freight, &c.....	51,742 95
	\$110,247 95
Tents and mail transportation.....	4,500 00
	\$114,747 95
Gross expenses for the year.....	59,427 97
Net gain.....	\$55,319 98
Capital.....\$500,000, Dividend.....	50,000 00
Surplus.....	\$5,319 98

P. H. GOODWIN, Secretary.

New Orleans, April 15, 1854.

Hudson River Railroad.

At the election of Directors of the Hudson River Railroad Company, held yesterday, the following gentlemen were elected Directors: Messrs. Edwin D. Morgan, John David Wolfe, Edward Jones, Moses H. Grinnell, Henry Young, Oliver H. Lee of New York city; D. Thomas Vail, of Troy, New York; Josiah W. Wheeler, of Hyde Park, N. Y.; Chester W. Chapin, of Springfield, Mass.; Charles F. Pond, of Hartford, Conn.; William Kelly, of Rhinebeck, N. Y.; Alanson Robinson, of Buffalo, N. Y., and Nelson Robinson, of New York city. At a subsequent meeting of the new Board, Mr. E. D. Morgan was unanimously re-elected President, and Mr. Oliver H. Lee, Vice President.

The change in the direction consists in leaving out the name of Erastus Corning, John Wilkinson, Drake Mills, and N. J. Beach, who were regarded as representing the interests of the New York Central.

Here is a curious combination of the Hudson River, Western of Massachusetts, and Erie railroads against the Central; an offensive and defensive alliance to bring the great autocrat of the State to terms, by isolating it from "the rest of mankind." It is a singular spectacle to see the leading managers in the Western and Erie, Directors in the Hudson River Railroad, a work which has been regarded as a rival to both. It looks as if the Western, Erie and Hudson River were placing themselves in a position to control, by an outside pressure, the policy of the Central.

The New York Press and American Railroad

BALTIMORE, OHIO, AND ERIE RAILROADS.

A portion of the New York Press, have for a long time outraged propriety and common sense by the most indiscriminate and irresponsible interferences in the railroad system of our country. From apparent motives of interest, a prominent journal will puff or attack an enterprise, making the most unscrupulous assumptions, often bearing their own contradiction. In the hands of the popular journalist, the railroad system becomes a bubble, to be inflated or collapsed at pleasure, and the indifference with which the editorial respiratory apparatus is exercised, distinguishes the ignorance or selfishness with which it is controlled.

At one time, a journal of notorious reputation, declares as *unsound* the securities created by western cities for the payment of municipal subscriptions to their railroads. Next, another member of the Metropolitan press, entertains us with a financial statement of the Ohio and Mississippi Company, at which a domestic employee, who had failed to receive his cue in reason, comes out with a flat contradiction. Unhappily both are wrong. A leading southern project next comes up for a "dig," but on a prompt reply from its agents, that the enterprise can go on with or without the aid of a paid press, nothing more is said. Any trick of a stock-jobber, any expedient of a "hard up" corporation, or any attack likely to embarrass a sound one, may be elaborated and applied, *ad nauseum*, by any one who brings the initiation fee as *pro tempore* editor of the "money column" of a part of the daily press.

This state of things has long existed as a disgrace to those who have created and continued it.

It is the more forcibly urged upon our notice now, by a transparent fulmination in a late number of the *Herald*, purporting to show reasons for the ultimate defeat of the Baltimore and Ohio road as a financial enterprise.

The means made use of to establish such a result, is a distorted comparison of the condition of the Baltimore with that of the Erie road.

The argument rests upon so false a basis that we can hardly understand whether the object is to depress Baltimore and Ohio, or to inflate Erie; but as the latter would require at this junction greater power than the Herald can wield, we presume it to be the temporary policy of the Herald to degrade the Baltimore road.

The comparison is offered in the same tone as if it exhibited the ultimate condition of the two roads, but a desire is modestly expressed to "elicit explanations." We will therefore sum up the points manufactured by the Herald, and "explain" the circumstances under which the real data exist.

The business of the two roads, for the year ending September 30th 1853, is compared as follows:

	Erie.	Balt. & Ohio.
Through pass. East,...	27,486.....	516
do do West,...	51,214.....	1,798
Total both ways,.....	78,700.....	2,314
All passengers on the road,.....	1,154,437.....	210,875
Tons of freight.....	631,939.....	540,811
Revenue on through pass.....	\$474,294.....	\$20,000
do from all pass, \$1,630,924.....		\$464,244
Total gross revenue..	\$4,090,666.....	\$3,033,419
" working expenses, 2,259,011.....		1,235,227
Net income.....	2,059,957.....	798,142

This comparison is offered without explanation that the Erie road has been in operation for over three years for its entire length; and for over two years with continuous railroad connections to the principal western cities, while the Baltimore and Ohio roads had been opened through its longest tunnel for but six months of the official year of 1853, and now has no western connections other than those depending upon the uncertain navigation of the Ohio. To make any comparison, independent of such vital considerations, is palpably unjust.

The grades and curves of the Baltimore road, are not as favorable as those of the Erie. But, this "inferiority of structure" has not yet "told fatally upon the work" by the greater expense of operation, as by a system of engines and cars adapted to the physical features of the road, and by the use of bituminous coal fuel, at a low cost, the transportation of one ton or one passenger costs less over these grades than upon most other roads having a more favorable route. A saving of 300 miles between Baltimore and Cincinnati, on the completion of the Parkersburg and Marietta roads, as compared with the distance from New York to Cincinnati, via the Erie road, ought to compensate to a great extent for the full effect of grades and curves.

The comparison of machinery, which our censor parades with a triumphant tone, is the most incorrect and unfair of any. He says:

"On the Baltimore road in 1853 there were 196 locomotives, most of them of the largest class. There were in all 3,484 cars. We understand there are now 227 locomotives on the road, and

others are building. The Erie road in 1853 worked 150 locomotives, and half the number of cars. With this diminished power and cost, in consequence of its better structure, it was enabled to carry five times as many passengers, and fifty per cent. more tonnage, (more than half the tonnage of the Baltimore road being coal, and passing over half its length,) over an increased length of road.

The Baltimore road had 100 engines at the commencement, and 157 engines at the close of the official year ending Sept. 30 1853. Ten other engines owned by the company at the latter period were running upon the "Washington Branch," which is independent of the Baltimore and Ohio road, and not included in the comparison of revenue which has been made by the Herald. Of the 157 engines, over 30 are of a small class, built prior to 1845, and are therefore but little used. All but 10 of the Erie engines have been built since that time, and are of first class capacity. One circumstance which imposes the maintenance of a greater number of engines upon the Baltimore road than would be inferred from its business, is its coal trade, in which the engines are loaded only in one direction. Another unfair part of the comparison is in the suppression of the fact that the Erie road was short of both cars and engines throughout the year, those in use being run beyond their capacity. The average cost of repairs to each engine was \$1,924 for the Erie, and \$1,254 for the Baltimore road. The same explanations apply to comparison of cars as of engines.

The ultimate cost of \$26,000,000, set down for the Baltimore road, will stand against \$40,000,000 just as certain of expenditure (if obtained) at the completion of the Erie.

We warn those interested in railroads against yielding their confidence to journals whose entire course discovers no perceptions of the philosophy of railroads, and whose leading motives are only those of interest. Misrepresentations, favorable or otherwise, will work the greatest injuries to the credit of our works, and to their individual owners. Fallacious hopes may exist in regard to a public enterprise, in cases where the conditions of success are palpable to common perception; but when an influential adviser manufactures data and issues them to the world as an actual test, he is guilty of a public fraud.

In regard to the Baltimore and Ohio road, we believe it will pay interest on its cost. It is the necessary western route of Baltimore to the Ohio valley. When extended on its true line by the Parkersburg and Marietta roads it will bring Cincinnati within 580 miles of Baltimore a less distance than to any other Eastern seaport city.

The road has abundant local and foreign business resources, capable of great development. Its expenditures have gone into its structure. We believe fully that moderate prudence in its management, combined with a liberal appreciation by the people of Baltimore, of its position as a national highway, will establish its ultimate success as a financial enterprise. Its present condition we regard as due to temporary causes needing no aggravation. Its tributary country is yet undeveloped, its connections not consummated, and its own line in a comparatively unfinished condition. All of these deficiencies are becoming sup-

plied, and then it will be for the interest, at least, of its owners to make it pay, against which event we can discover no fatal obstacles.

Hollow Axles.

As independent debaters on the subject of railway economy, we have expressed our preferences for the hollow axles. We have faith that, as its economical importance becomes understood, this form will become generally adopted. The strength of the hollow form with a given amount of metal, is positive and undeniable. The actual tests to which it has been subjected in its application to axles, serve merely to confirm the well established knowledge of its superiority. We believe that hollow axles, warranted equal in strength to solid ones and of 30 per cent. less weight, may be had for less per axle, than for what any forge is now making solid axles. For the information of a correspondent who is a little dubious about price, we think we are right in fixing it, delivered in New York, at $7\frac{1}{2}$ cents per pound, equal to five and three quarter cents per pound for equal strength. We are not aware that a large axle is disadvantageous compared with a small one, leaving out the journal or bearing, which may be as small for a hollow as for a solid axle. On the contrary, the larger the axle, the better the seat for the wheel, and the less the weight also of the latter.

Any saving of weight of the wheels or axles is important, as these rest upon the track without the intervention of springs, and we believe the action of the non-elastic, as compared with the elastic load, to be the most destructive to the rails, and also to itself.

Hollow axles, with solid bearings, either case-hardened or cased with steel, would be stronger, cheaper, lighter, and more durable and safe than any description of axle now in use.

Covington and Lexington Railroad.

This important road is completed to Cynthiaana, a distance of 66 miles from Covington, and only 14 from Paris, from which place to Lexington a railroad is now in operation. The road will be opened to Paris in the course of the coming month. When Paris is reached, a continuous line of railroad will be formed to Louisville.

From Lexington, the Lexington and Danville railroad is far advanced, and will soon extend to the C. and L. railroad, some 37 miles further south. The extension of the above line to Danville will be the signal for a general movement of all the roads interested, for the purpose of constructing the intermediate link to Knoxville, which will soon be in communication with Savannah and Charleston by railroad. We cannot doubt the early construction of this link, which must render the Covington and Lexington road one of the most important ones in the country. This road, we hear from good authority, is already in the receipt of a handsome income from local earnings.

New Jersey Railroad.

The gross receipts of last year were \$810,534.81, expenses \$319,416.82, the ratio of expenses being 40 per cent. against \$603,942.33 receipts, and \$287,682.48 per cent. The surplus earnings carried to profit and loss on January 1st were \$189,220.50 against \$50,369.54 the year previous.

The whole number of passengers carried last year, 2,160,243; tons of merchandise, 48,167; number of miles run by the trains, 329,901. The year preceding the passengers were 1,582,070; freight, 84,656 $\frac{1}{2}$ tons; miles run, 270,489.

Northern Railroad of New Hampshire.

The gross earnings of this road for the year ending March 31, were \$370,529; running expenses, \$232,230; net earnings, \$138,299. To this amount is to be added a balance of last year's surplus, and other items, amounting to \$35,362, and the sum of \$109,337 is to be deducted for extra expenses, which leaves \$64,324 for the net receipts. The contingent fund amounted in March to \$33,520. To fulfil the contract with Messrs. Clark & Spencer, corporation notes to the amount of \$200,000 have been issued, maturing on the 1st of October next, and to meet the payment of the notes, bonds will be issued to the stockholders, payable twenty years hence, with interest at six per cent. semi-annually. The present equipment of rolling stock is inadequate to the wants of the road. Since the opening of the Boston, Concord and Montreal road, an arrangement has been made with that company, and with the Passumpsic Company, by which the business of the Passumpsic road from Wells river upwards is divided between the Montreal and Northern roads—thus causing a diminution of income to the latter—which diminution, however, is more than made up by the growing local business, and by the increase of business from the Vermont Central and Ogdensburg roads. The recent contract between the Northern, Sullivan, Vermont Central and Ogdensburg roads, provided that the business from the two last named roads shall pass over the Northern, which will increase materially the amount of receipts. The number of passengers carried in the cars last year was 106,926; number of tons of merchandise, 182,821.

The total number of shares issued aro 27,684, equivalent to \$2,768,400.

The following gentlemen were chosen Directors, viz: Onslow Sterns, (President,) John A. Burnham, George W. Nesmith, George A. Kettell, Josiah Minot, Joseph W. Clark, and Uriel Crocker. With regard to a dividend it was stated at the meeting that "The company had notes out to the amount of \$200,000, due in October next. It was necessary to look out in advance for their payment. If we pay a dividend now we use up near \$60,000 which may go out to meet these notes. But the corporation have prepared bonds which they offer to stockholders. These are perfectly secured at 6 per cent. interest, payable semi-annually. If the stockholders would come forward and take these bonds, the debt due in October would be provided for, and the dividend now declared would be paid in July."

Bridge over the St. Lawrence at Montreal.

Mr. Robert Stevenson, the consulting Engineer of this company, recommended the construction of a tubular bridge over the St. Lawrence near Montreal, for the Great Trunk Railroad, in preference to a suspension one for the reason:

"That no system of trussing applicable to a platform suspended from chains will prove either durable or efficient, unless it be carried to such an extent as to approach in dimensions a tube fit itself for the passage of railway trains through it. Such bridge may doubtless be successful, and perhaps with propriety, adapted in some situations but I am convinced, that even in such situations, while they will in the first cost fall little short of wrought iron tubes, they will be more expensive to maintain, and far inferior in efficiency and safety."

I cannot hesitate, therefore, to recommend the adoption of a Tubular Bridge, similar in all essential particulars to that of the Britannia over the Menai Straits in this country; and it must be observed that, the essential features being the same, although the length much exceeds that of the work alluded to, none of the formidable difficulties which surround its erection will be involved in the present instance. In the Britannia, the two

larger openings were each 460 feet, whereas in the proposed Victoria there is only one large opening of 330 feet, all the rest being 240. In the construction of the latter, there is also every facility for the erection of scaffolding which will admit of the tubes be constructed in their permanent position, thus avoiding both the precarious and expensive process of floating, and afterwards lifting the tubes to the final level by hydraulic pressure.

The bridge will be about two miles long, and is estimated to cost £1,000,000. Mr. Stevenson strongly urges its construction for the reason that if vigorous steps be not taken to render railway communication with the Eastern coast through Lower Canada uninterrupted, the whole of the produce of Upper Canada will find its way to the Coast through other channels; and the system of lines now comprised in your undertaking will be deprived of that traffic upon which you have very reasonably calculated.

The Tables Turned.

The Mississippi river has heretofore been the only channel through which the increasing wealth of Iowa and Illinois could reach its most profitable destination. Low water and other obstructions too frequently imposed severe and onerous taxation on the shipper, and at some periods of the year it was almost an impossibility for the surplus productions of the Upper Mississippi to reach either a southern or a northern market.

This want of a never failing avenue of commerce has been partially overcome by the completion of Railroad facilities uniting the river with the northern lakes, and a chain of railway to the commercial capitals of the Atlantic. In the navigable season, grain and other productions can be forwarded to Chicago by the Rock Island Road, shipped in propellers to Buffalo, and from thence pass on to Tidewater by the Erie Canal. In the winter this transit can be made with but little less economy by railway the entire route.

We have been led into these remarks from learning that during the past week a large quantity of bulk and barreled meat, lard, etc., was shipped from this city by way of the lakes, and that other shipments will be made this week. We also learn that these shipments were made at the reasonable expense of \$15.00 per ton, which in the present state of navigation is regarded as slightly lower than the river route.

We congratulate the citizens of the Upper Mississippi on this improvement in the facilities of trade with their Eastern friends, the benefits and importance of which will hardly be appreciated until their railway connections and extensions are more perfected; when the increasing population of the interior will also share its benignant rewards.—*Burlington (Iowa) Tel.*

Opening of the Cleveland, Zanesville and Cincinnati Railroad to Millersburgh.

We have so frequently spoken of this road that its prominent advantages are somewhat familiar to most of our readers. It extends from Cincinnati to this point, passing through the counties of Hamilton, Warren, Clinton, Fayette, Pickaway, Fairfield, Perry, Muskingum, Coshocton, Holmes, Wayne, Summit, &c., to Cleveland.

The South end of the road, under the management of its President, F. Corwin, is completed to Circleville, the shire town of Pickaway county; and will be finished to Zanesville early next fall.

The north end, under the wise control of Simon Perkins, is completed to Millersburgh—a distance of 87 miles—and on Saturday last was formally opened to that point by a pleasure trip over its newly laid track. The cars left here at 8 o'clock in the morning, with many citizens of Cleveland aboard. At Hudson, Cuyahoga Falls, Akron and other points, our numbers were augmented, so that when the train arrived at Millersburgh, eighteen cars were crowded with people. There could not have been less than 1,000 abroad.

At the falls and Akron two bands of music, and military companies with a heavy piece of cannon, joined the crowd, to add *clat* and inspiration to the imposing occasion. The whistle and snort of the locomotive, the ponderous tread of the cars, the strains of music, and the loud thunders of the cannon, waked the echoes which have so long reposed amid the hills of Summit, Wayne and Holmes, as the good engine Hercules pioneered its way through their green woods and fertile fields. The people were all out; and at New Portage, Clinton, Bristol, Orville, Edinburgh, Fredericksburgh, Lafayette and Millersburgh, many saw for the first time, the triumphs of steam.

Ohio and Mississippi Railroad.

ELECTION OF DIRECTORS.—The stockholders of the Ohio and Mississippi Railway Company met at their office in this city yesterday, and elected the following Directors for the ensuing year: James C. Hall, Charles Stetson, John Baker, Eden B. Reeder, Charles W. West, Thomas Phillips, Richard W. Keys, Charles D. Coffin, Nathaniel Wright, Jethro Mitchell, George W. Cochran, Henry H. Goodman, John Slevin, Thomas Gaff, Abner T. Ellis, Cyrus M. Allen, Meda W. Shields, Richard A. Clements, John Cobb, H. Trept and John Ross. These gentlemen composed the old Board, and will meet this morning for the election of officers.

This road is now open to Seymour, on the Jeffersonville railroad, 89 miles from Cincinnati, and forming a railroad connection between that city and Louisville, Ky.

Chesapeake and Ohio Canal.

The annual meeting of the stockholders of the Chesapeake and Ohio Canal took place on the 5th inst. in Washington. After the reading of the report of the President for the last year, and some other business, the meeting proceeded to the election of a President and Board of Directors for the ensuing year. Samuel Hambleton, of the Eastern Shore of Maryland, was chosen President, and the following named gentlemen Directors: Norman Bruce, of Alleghany county; William B. Clarke, of Baltimore; A. B. Hanson, of Frederick; James Fitzpatrick, of Alleghany; Robert Wasson, of Washington county; and George H. Smoot, of Alexandria, Va.

It was resolved to move the office of the Canal Company to Cumberland, Md., as soon as practicable. The salary of the President was fixed at \$2,500 per annum.

Sunbury and Erie Railroad.

It will be seen by the proceedings of Councils which took place last night, that the finance Committee were authorized to anticipate the payment to the Sunbury and Erie Railroad Company of five instalments of ten dollars a share, on the second subscription of the city, of a million of dollars to the stock of that company.

This action of Councils is not only eminently proper, but will enable the company to take up their bonds for seven hundred thousand dollars, which were guaranteed by the Catawissa Railroad Company, and, which were issued for the purpose of enabling the Company to progress with the construction of their road from Milton to Williamsport. It is understood, we believe, that the bonds of the city obtained by this action will be appropriated to that purpose.—*Philadelphia News.*

North Western Railroad Letting.

The letting of the work on the North Western Railroad, took place at Butler, on Wednesday last, and, we learn, that the work on the entire length of the road was let to Messrs. Malone, Painter, Gonder and Clark, a company well known as reliable and responsible contractors, who have had much experience in the construction of railroads and Canals, and who, we doubt not, will vigorously press on to completion the job they have undertaken. We understand that the first thirty-five miles, from Blairsville to Freeport, are required to be completed by May 1, 1855, and the entire length of the road by May 1, 1856.

Lowell Locomotives.

"A new locomotive, (the first of twelve of an entirely new pattern, which are now being built,) has just been completed at the 'Lowell Locomotive Shop.' All Railroad companies will be pleased to learn that the combination which this machine possesses has proved perfectly successful.

The trial trip of this engine, in drawing the express train from Lowell to Boston,—consumed only thirty-nine minutes, and was affected with as much apparent ease and safety as the best engines of the road accomplish in fifty minutes,—which is the usual time.

The engine went out of the yard, the property of the Western Vt. R. R. Co.

These engines, embracing as they do every variety of modern improvement, cannot fail to be as profitable to the proprietors as they are complimentary to the taste and artistic skill of the designer and manufacturers,—and if the one here referred to is an indication of what is to follow, Lowell may be ranked in the front line in Locomotive building.

Mr. Stephen F. Gates, for many years connected with the Boston Locomotive Works, was the designer of this beautiful combination, which breathes and moves, and it was built under his immediate supervision.—*Lowell Courier.*

Cairo and Fulton Railroad, Ark.: Election of Officers.

The following gentlemen were elected Directors of this Company, at Little Rock, on the 15th ult., viz: Daniel Ringo, Andrew J. Hunt, Roswell Beebe, of Pulaski county; S. W. McNeely, of Sevier county; Edward Cross, of Hempstead county; H. K. Hardy, of Clark county; Robert Martin, of Dallas county; Green B. Hughes, of Saline county; H. C. Dye, of Independence county; James Robinson, Thomas Hugh, of Jackson county; James Russell, Randolph county; Israel M. Moore, of White county.

The board of directors was organized as follows: Roswell Beebe, President; Daniel Ringo, Vice President; William B. Wait, Treasurer; Basil C. Harley, Secretary; James S. Williams, Chief Engineer.

The gauge of this road has been fixed at 5 feet 6 inches, to correspond with that of the states of Missouri and Texas. The surveys are proceeding rapidly; Mr. Williams hopes soon to be able to give an accurate estimate of the cost of the road completed.

New-London and New-Haven Railroad.

The *New-Haven Palladium* compiles the following statement from the first Annual Report of the Board of Directors of the New-Haven and New-London Railroad:

The receipts of the road during the year have been.

From Passengers.....	\$83,431 30
From Freight.....	7,095 47
From Express.....	1,620 14
From Mails.....	3,021 47
From Rents.....	869 45

Total.....\$96,137 92

The expenses have been, for operating.....	\$57,369 35
For interests on bonds.....	39,462 91
For State taxes.....	1,232 26

Total.....\$96,054 51

Net income, \$83 41. The Company owns property to the amount of \$46,170; adding unpaid stock, collectable, makes \$66,622.

The Chicago and Union Railroad Company.

The following named persons have been elected Directors of the Chicago and Union Railroad Company for the ensuing year: James F. Joy, Henry Ledyard, Allen Robbins, Chas. G. Hammond, I. H. Burch, J. W. Brooks, Gilbert C. Davidson, Mark Skinner, Jno. Van Nortwick.

**New York Central Railroad.
Circular.**

OFFICE OF THE NEW YORK CENTRAL RAILROAD }
COMPANY. Albany, May 31st, 1861. }

To the Stockholders of the N. Y. Central Railroad
Company.

The Directors, in offering to the stockholders an issue of \$3,000,000 of 7 per cent. convertible bonds, submit the following statement:—

The inadequacy of the arrangements of the former companies for the business of the line, especially in the freighting department, was so well understood at the time the consolidation was agreed upon, that the committee appointed by those companies, in April, 1853, to perfect the consolidation, notwithstanding the brief period of their term and the limited nature of their powers, considered it proper to authorize purchases and to initiate proceedings for the purposes of the line, which it may fairly be estimated required in their result an expenditure of at least a million to a million and a half of dollars. This was entirely independent of the amount required for the completion of the first track of the direct line, then constructing by the Rochester and Syracuse Railroad Company, between Syracuse and Rochester, or that needed for laying a second track on that line, and thence to Buffalo. Of the propriety of the measures adopted by the Committee, we have never heard any question.

After the powers of this committee had ceased, and immediately after the organization in form of this company, in July last, an examination was made, under the order of the Board, by the general superintendent and chief engineer and their assistants, as to the general condition of the entire line, as well the road bed, bridges, culverts and other structures, as the depot buildings, shops and rolling stock. On receiving the reports of those examinations, it was manifest to the Board that it was necessary, without delay, to make large repairs and improvements in order to place the road in the situation which the importance of the route it occupied and the great and increasing business of the country evidently demanded.

In addition to the necessity admitted on all sides before the consolidation, of at once constructing a second track on the direct line from Syracuse to Buffalo, it was found that in many cases, owing to the limited character and impaired condition of the works and buildings on the road, which had been erected many years ago, with reference to a business which had far outgrown the anticipations of its warmest friends, and in others, to the want of the requisite accommodations at places which had recently grown into increased importance, and to other causes arising from the actual as well as the prospective increase of the business of the line, it would be necessary at once, at many points, and especially at the termini of the road, to purchase additional grounds for freight and passenger depots, particularly the former; to erect new, or substantially to improve existing depot buildings, shops and other structures, and to procure a large addition to the motive power and rolling stock of the road.

These expenditures, it will be recollected, were not occasioned by consolidation; they would have been equally necessary had consolidation not taken place; and in that event, if they had not been undertaken by the old companies, a part at least of the business fairly belonging to the line would soon have found other channels for its transportation.

The directors, believing it to be of vital importance to the best interests of the road, commenced without hesitation, the improvements referred to, under the full conviction that in so doing they were but carrying out the spirit of the consolidation movement, which contemplated a greatly increased business on the line, with necessarily enlarged facilities for its transaction. Particular attention was directed at once to improving the freight arrangements. For this purpose, in addition to large purchases of real estate for depots and grounds, six hundred and sixty freight cars have been added to the company's stock during

the year ending the first of May instant, and thirty-one locomotive engines, the most of which were for that department. The result in no small degree of these efforts thus far may be seen in the increased business of the road, a statement of which, distinguishing between receipts for passengers and for freight, from the 1st of August last, (when this company actually took charge of the line) to the first of May instant, a period of nine months, compared with the corresponding months of the preceding year, is hereto appended marked No. 1.

The increase of the freighting business it will be seen from the statement has been very large, and that of the passenger business also, notwithstanding a considerable reduction of fare under the consolidation act and other arrangements. The aggregate business of the line for the year, estimating for May, June, and July, will, it is believed, exceed \$5,500,000.

Notwithstanding the efforts of the company already referred to, the arrangements for the freighting business, not only along the line but especially at its termini, will, it is believed, be quite inadequate for the future; and further facilities must be afforded for its transaction by the purchase of additional stock, and other requisite arrangements or the business must in part at least pass into other channels.

The annexed statement, marked No. 3, contains an abstract of the estimates of the chief engineer for the completion of the construction of the road (from 1st May, 1853,) except rolling stock, including the second track on the direct line from Syracuse to Buffalo. Most of the real estate referred to in the estimate has already been purchased.

The statement of the general superintendent, marked No. 4, shows the amount paid for additions to the rolling stock since the first of May last, chargeable to construction account, and the amount still needed in that department.

The construction of the second track on the direct line between Syracuse and Buffalo is proceeding very satisfactorily. The titles to the real estate have nearly all been procured, a considerable portion of the grading has been done, a large part of the iron has been received, and it is intended to bring the principal part of the line into use during the present year.

The new passenger depots at Rochester and Buffalo, (the latter for the route by the way of the Falls and Lockport,) the erection of which were commenced before the consolidation took place, were completed a few months ago. They were much needed, and their arrangements are of the most satisfactory character. Two large freight-houses, and one engine house which will contain eighteen engines, have been erected during the past year at Albany. Other buildings needed for the Company's business are now erecting, or are about to be erected at different points, and it is the intention of the Directors to proceed in the completion of the improvements referred to, with all the energy and despatch that a judicious economy will warrant, in order to make the line what they believe the business of the country through which it runs, its past prosperity and its present prospects demand—the best constructed and best appointed road of its length in the United States.

By the fifth article of the consolidation agreement, this company assumed debts of six of the old companies, to the aggregate amount of \$1,884,823 62, subject to the deduction of \$74,652 23, the estimated value of the sinking funds in the hands of the Comptroller, created for the payment of certain issues of State stock, forming part of the indebtedness. More than \$440,000 of this amount has already been paid, and including the amount due between this and the first of August next, somewhat over \$600,000 of this indebtedness will have been temporarily provided for. As this amount, together with that yet to become due, is properly chargeable to the construction account of the company, it is intended in due

time to make some proper provision for again funding it. No further considerable amount of the debt becomes due till the first of October, 1856. By the consolidation agreement, \$120,000 of the construction account of the Rochester and Syracuse Railroad Company for the first track of the direct line between Syracuse and Rochester, incurred previously to the first day of May, 1853, was assumed by this company. The further sum of \$123,060 85 has been expended in completing this track.

Statement No. 5 annexed, is a summary of the items disbars not chargeable to the ordinary expense account of the road, and also of the funds received on the capital stock of several of the companies, parties to the consolidation agreement, and which it was thereby provided should be paid to this company.

It will be seen from these statements, that it had become necessary for the company to resort to an issue of its bonds to raise the requisite funds for the completion of the improvements already referred to. At a meeting of the directors, held on the 28th day of April last, it was so accordingly resolved, under the authority vested in the board by the general railroad law of the State issued the bonds of the company for this purpose to the amount of three millions (\$3,000,000) of dollars, to be offered to the stockholders.

The bonds will be of the denomination of one thousand (\$1,000) and of five hundred (\$500) dollars, and will bear date the fifteenth day of June, next (1854,) and be made payable at the end of ten years, with interest at the rate of seven per cent per annum, payable semi-annually, on the fifteenth day of June and December in each year, on presentation of the usual interest warrants to be annexed, and both principal and interest to be payable in the city of New York.

The proportion the loan bears to the stock account being one-eighth, without reference to fractions, it is now offered accordingly to those who are stockholders in the Company at the closing of the books this day, which will entitle the holder of eighty shares of stock to a bond of one thousand dollars, of forty shares to a bond for five hundred dollars, and in that proportion; and the holder of a fraction of twenty shares or over, may, if desired, take an additional bond for five hundred dollars. Every holder of less than fifty shares may also subscribe for a bond of five hundred dollars; and if the amount thus taken, should in consequence of this privilege, exceed \$3,000,000, the excess will be applied to funding anew the indebtedness paid for the old companies, assumed under the consolidation agreement as before stated.

Payment for the bonds will be required in instalments, as follows: Twenty-five per cent. on the fifteenth day of June next and twenty-five per cent. on the fifteenth day of July next; or any party preferring it may average the first two instalments, and pay the same on the first day of July next. The remaining fifty per cent. will be required on the fifteenth of September next. Interest will be allowed on the instalments from the time of their receipt by the Company, at the rate of seven per cent. per annum, until the fifteenth day of December next, and the first interest warrant will be made for that amount. Payment of the instalments will at any time be received in advance on the whole or any part of the bonds any party may be entitled to.

Stockholders who omit making the payments required on or before the first day of July next, will be considered as having declined to take their proportion of the bonds.

(Signed by the Directors.)

We do not question the expediency of the proposed loan. Its necessity, however, naturally suggests inferences not very flattering to the managers of the old Companies, as the chief actors in the consolidation.

The necessity for the new loan arises, to use the language of the Directors, "from the condition in

which they found portions of the line, and the necessity for large repairs in almost every department," and "to the impaired condition of the work and buildings on the road." So it appears, that instead of first class roads, as was supposed, the consolidated line was made up of old rickety concerns, in "impaired condition, and requiring large repairs in almost every department." We had always regarded and often quoted the roads composing this line as models of superior construction and management. It now appears that their managers applied, in the payment of enormous dividends, money that properly belonged to maintenance of way and rolling stock, with the double object of making the most out of the roads of which they had charge, and for the purpose of inflating their market value with a view to their sale, allowing the roads to run down so far as to require large additions to their capital account, to put them in working order.

A leading object of consolidation was stated to be the reduction of the expense of operating the whole line. For the year 1852, the aggregate receipts of several roads were \$3,613,604; expenses \$1,388,585.97, or 38½ per cent. of the former.—For 9 months, since the consolidation, the total receipts have been \$4,166,585; expenses \$2,512,492, or 60½ per cent. of the former, an increase of 50 per cent., with vastly greater receipts. Had the roads been properly kept up, the per centage of receipts would have been less instead of greater. We have no reason to believe they would not have been less, had the previous condition of the roads been as well maintained as it has been under the new organization.

It turns out that the Central line has not been so productive nor well managed as was supposed. This fact impugns, to a certain extent, the competency and integrity of its managers. We see no way to escape from this disagreeable dilemma.—They did a smart thing in extracting from the road a bonus of some \$10,000,000. It may yet turn out that more was lost than gained by the transaction. The apparent gain has been at the sacrifice of the reputation of being the best managed and most profitable line of railroad in the United States, of popularity, and very likely of profit. What is wrong in principle seldom works well in practice, and we believe there is now no one that does not condemn the principles upon which the consolidation was based. It has already given birth to a spirit of speculation, which must be productive of results most pernicious to the railroad system of the country. It gave to parties responsible to no corrective, the right to impose at will a tax upon the business community, of three quarters of a million a year, to pay interest on fictitious capital and loans, that otherwise would not have been called for. Already we hear of propositions for increased rates of fare upon the road, to meet the enormously increased demands upon the Company's treasury.

Such are some of the results already developed by the consolidation of the Central line. Others will not be wanting as time goes on. The *chalice* may yet be commended to the lips of those who prepared it.

Notwithstanding, the loan is undoubtedly called for. The basis for it is ample, and we hope to see it promptly taken.

The following is a comparative statement of Re-

ceipts from passengers and freight for nine months, commencing August 1st, 1852 and 1853; the receipts in 1852 being derived from the returns of the old companies.

	Passenger.	Freight.	Total.
August, 1853.....	\$349,125 76	\$151,286 18	\$500,410 94
" " 1852.....	299,610 80	79,665 19	379,275 99
September, 1853.....	371,382 06	217,532 91	588,914 97
" " 1852.....	840,916 97	97,708 00	938,624 97
October, 1853.....	329,741 54	231,651 75	561,393 29
" " 1852.....	300,659 39	115,891 78	416,551 17
November, 1853.....	243,819 53	115,969 68	359,789 21
" " 1852.....	209,775 25	152,114 10	361,889 35
December, 1853.....	201,651 78	229,774 33	431,426 11
" " 1852.....	160,657 89	229,774 33	390,432 22
January, 1853.....	161,338 87	167,456 28	328,795 15
" " 1852.....	126,767 31	185,699 79	312,467 10
February, 1853.....	145,030 02	164,618 73	309,648 75
" " 1852.....	126,469 01	156,344 46	282,813 47
March, 1853.....	206,044 62	224,024 73	430,069 35
" " 1852.....	163,189 01	166,322 69	329,511 70
April, 1853.....	276,566 21	250,164 47	526,730 68
" " 1852.....	236,193 58	177,213 46	413,407 04
Total increase, 9 months.....			\$848,619 74

Total receipts..... \$4,128,627 74
Add for arrears of mail service lately adjusted with the department, not before included..... 37,957 94
\$4,166,585 68

(No. 2.)

GENERAL SUPERINTENDENT'S OFFICE,
ALBANY, MAY 24, 1854.

General expenses, exclusive of construction account:

1853. August and September,	\$897,693 91
October,	222,955 41
November,	250,532 06
December,	284,636 50
1854. January,	267,827 35
February,	283,724 92
March,	296,039 56
April,	269,615 63
May (estimated).....	\$2,772,492 34
	240,000 00
	\$2,512,494 34

(No. 3.)

According to estimates of the Chief Engineer, the sums required for construction are,
For land, land damages, depot grounds, etc.

Buildings of various kinds.....	\$975,815 25
Graduation (including second track from Syracuse to Buffalo) bridging, laying track, &c., &c.,	635,650 00
Iron, chairs, spikes, &c.,	1,635,890 55
	1,568,030 00
	\$4,815,385 80

(No. 4.)

The Company now own 161 locomotives, 156 passenger cars, 55 emigrant cars, 59 baggage cars, and 1501 freight cars. The cost of purchases since May, 1853, is..... \$713,831.74
The additions to be made will cost.... 588,250.00

\$1,302,081.74

(No. 5.)

Paid on construction account by new Company up to April 30, 1854.....	\$1,076,297.04
Paid for rolling stock,	713,381.74
Paid on account of assumed funded debt,	608,546.41
Paid Rochester and Syracuse Co., ..	120,000.00
Estimated construction for May, ..	250,000.00
" amount due for iron,	500,000.00

\$3,268,676.19

The receipts from instalments on stock and other sources have been.....	\$3,030,363.01
The proposed loan is.....	3,000,000.00

\$6,030,363.10

The present and prospective calls upon the treasury are.....	6,387,467.54
--	--------------

Deficit..... \$357,104.53

Kentucky Locomotive Works.

A large establishment for the manufacture of locomotives has recently been put in operation in Louisville, Kentucky, by Messrs. Olmsted, Tenney and Peck. The object of the proprietors is to make it a first class shop, for the purpose of supplying the roads of Kentucky and of the adjoining States. The location is an admirable one, and we hear that no pains or cost has been spared in the construction and stocking of spacious and convenient buildings. As materials of the best quality can be had at Louisville at fair rates, and as a shop there is protected from Eastern competition by a very heavy tax in the cost of transportation, we see no reason why a well got up establishment, which we understand the above to be, should not command a large and lucrative business.

Great Western Railroad.

The annual meeting of the stockholders of the Great Western Railroad Company was held at Hamilton on the 5th inst. The following gentlemen were elected Directors for the ensuing year: R. W. Harris, Wm. Longsdon, Col. Gourlay, E. Corning, J. M. Forbes, R. Judson, H. McKinstry, Wm. Dickson, J. B. Smith, J. W. Brooks and C. J. Brydges.

Milwaukee and Mississippi Railroad.

The following statement shows the earnings of the Milwaukee and Mississippi Railroad Company for five months:

	1853.	1854.
January....	\$10,801 25	\$23,224 29
February....	8,930 86	26,192 33
March.....	8,143 35	20,773 93
April.....	8,914 38	18,321 42
May.....	13,967 90	42,700 00
Total....	\$50,787 74	\$130,212 02

Ohio and Indiana Railroad.

The Ohio and Indiana Railroad has been opened from Crestline, the terminus of the Ohio and Pennsylvania Railroad, to Delphos, on the Miami Canal, between which points trains run daily. At Delphos the road connects with first-class packet boats to Fort Wayne, Defiance, Peru, Lafayette and St. Mary's. The balance of the road is in rapid progress.

Pennsylvania Railroad.

At a meeting of the stockholders of the Pennsylvania Railroad Company, held in Philadelphia, a committee reported unanimously against the purchase of the main line upon the terms fixed by the act of the Legislature.

Buffalo and Brantford Railroad.

The Rochester papers announce that the Hon. James Wadsworth, President of the Buffalo and Brantford Railroad, who has recently returned from England, where he has been on business connected with the road, has been eminently successful in the objects of his voyage—the negotiation of the bonds of the Company and the purchase of iron for the remainder of the road—and that its completion to Goderich will be prosecuted with all possible dispatch.

American Railroad Journal.

Saturday, June 17, 1854.

Car Ventilation.

As the season advances travelers by railroad suffer almost inexpressibly from dust and heat.—Those who have never experienced it can hardly realize the sensations of thirst, half suffocation and blindness, which are occasioned by a long day's travel in unventilated cars. If you close your window, you parch; if you open it for air, your eyes are filled with heated cinders and smoke, while your clothes are covered, and your nose and throat are choked with the dust you respire.

It is scarcely worth while to conjecture which of these several inflections are most detrimental to health. That any one of them, long continued or frequently endured, is far from being conducive to the good condition of the respiratory, or visual organs, cannot, and will not be denied. Besides this, the question of comfort in traveling, is very greatly dependant upon the exclusion of objectionable matter from the cars, and the amount of pleasure travel is no doubt much restricted by the annoyances above mentioned.

For these reasons the particular attention of railway Managers should be given to the subject of proper ventilation. That many plans have been tried with unfavorable success, we know, but we believe the obstacles which have hitherto been unsuccessfully encountered can be overcome, and we are glad to see an increased interest in that direction manifested by scientific men. We gave last week a description of an invention by Mr. LANCASTER, of which we think well, though we are no sufficiently versed in the science or philosophy of air-currents, etc. involved, to express a decided opinion upon its practicability. We have, however, no hesitation in saying that it seems to us by far, the best calculated to answer the purpose intended, of any thing we have yet seen proposed. And, on this account we commend it to the attention of railway companies for experiment. We know Mr. LANCASTER to be a man of rare scientific attainments, and more than ordinary mechanical ingenuity, which, united with a good practical experience, eminently fit him for success in this line of invention. It is now his object, as will be seen by the advertisement on the second page of the cover, to test the qualities of his plan by putting it in practical operation.

On the principle of its being the duty of Railroad Companies to give every facility in their power for a fair trial of each plan proposed which offers a reasonable chance of success, we hope to see this one fairly tried before the lapse of many weeks. We also hope to be able to present a description of another plan in the *Journal* of next week.

Let us do every thing in our power to make the

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	88
Androscoggin and Kennebec.. "	55	824,863	1,043,540	2,036,140	177,003	80,053	none	80
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	98
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	85
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	.....	12
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	6
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	92
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,330,000	206,190	2,044,536	434,599	114,098	6	90
Boston and Maine..... "	83	4,076,974	150,000	4,111,315	803,024	418,358	8	104
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6	82
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	100
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	57
Eastern	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	80
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	97
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	90
New Bedford and Taunton.. "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	57
Old Colony..... "	45	1,964,070	295,038	2,239,534	374,897	122,866	none	98
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	15
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	61
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	96
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	70
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven... "	72	2,350,000	800,000	3,150,000	639,529	294,289	10	120
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	93
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	56
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	68
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	64
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	48
Long Island	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	102
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	15
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	80
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	480,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	36	890,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	78
Philad., Wilmington and Balt.	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	74

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Total cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna.. "	57	.....	.....	.....	413,673	152,536	....	....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.... "	22	685,000	.....	1,100,000	122,861	74,112	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.... "	32	180,000	120,000	416,532	89,776	.....	12	....
Wilmington and Raleigh.... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	934,424	456,468	.....	7½	....
Macon and Western..... "	101	1,018,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,781	.....	....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia.. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga.. "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	76½
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	90
Cleveland and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta.... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky.... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi.... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania.... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley.. "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois.... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis.... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Terre Haute and Indianapolis "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	126
Michigan Southern and Ind. N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	119½
Michigan Central..... "	232	.....	3,977,563	8,618,505	1,145,598	582,816	8	104½
Pacific..... Mo.	38	.....	non	In progress	Recently opened.	.....	.....	.....

railway, the safest, healthiest, and most pleasant, as it is now the most rapid mode of travel. The great lines of railway radiating from New York have done much toward the introduction of improvements in the equipment and operation of such enterprises. They have incurred much expense and subjected themselves to great inconveniences so doing, and we believe they are still ready to contribute their influence toward the introduction of such plans as promise a real advance in the mode of operating roads, or additions to the comforts of passengers. All will agree that the man who succeeds in a plan relieving the travelling community of the sad discomforts arising from imperfect ventilation, will be hailed as a public benefactor; while the men who lend their powerful aid in demonstrating, or providing the facilities for the demonstration of its practicability, will be considered in a light scarcely less favorable.

Stock and Money Market.

There has been a continued depression in the stock market since our last, and prices have touched a lower figure than has been seen for the last four years. There is not so much a feeling of distrust, as a complete indifference to railroad securities of all kinds, and an indisposition to make loans on account of them. Should the present feeling continue, the market may go still lower.—Money is in active demand, and the steady drain of specie keeps the public mind in a feverish state. There has not been a stringency of equal duration and severity, since the memorable one which followed the expansions of 1836-7.

The following are the earnings of railroads for the month of May, as far as received:

	1854.	1853.
Hudson River.....	\$123,271	\$93,704
Cleveland and Toledo.....	55,500	27,000
Chicago and Rock Island, ..	109,279	new.
Milwaukee and Mississippi, ..	42,000	13,967
Ohio and Pennsylvania,	81,238	47,870
Michigan Central,	200,020	185,202
Michigan Southern,	211,684	148,325
Cleveland and Pittsburgh, ..	51,283	35,368
Wilmington and Manchester, ..	25,903	new.
Hudson River,	123,271	93,709
Boston, Concord & Montreal, ..	20,748	14,513
Pontiac,	7,117	4,409
Pennsylvania Railroad,	297,137	195,072
Baltimore and Ohio do.....	386,514	204,950
New York Central do.....	511,888	362,997

Memphis and Ohio Road Under Contract.

The Memphis and Ohio Road has been put under contract from Memphis to the crossing of the Mobile and Ohio road—85 miles. The contractors are Messrs Harris, Black & Co., of Boston, a firm of great energy, experience and unquestionable ability to carry through what they have undertaken. The terms of the contract are, that the road shall be finished, equipped, and put into operation as follows:

First 30 miles by 1st of July, 1855.

Next 20 miles by 1st of October, 1855.

Next 35 miles by 1st of May, 1856.

It will be seen that the whole of 85 miles is to be finished and in operation in less than two years, while 50 miles are to be in readiness to bring the next cotton crop after the one now growing—that is, in one year after the first of next October.—*Louisville Courier.*

The Grand Excursion to the Mississippi.

In our next we shall give a full account of the great excursion which has just come off to the Mississippi.

The Buffalo and New York City Railroad.
TO THE EDITOR OF THE RAILROAD JOURNAL.

SIR—

The enlightened interest which you take in the prosperity of our great internal communications, induces me to address you this communication. — It is suggested by the perusal of the report of the Committee, lately appointed by the creditors of the Buffalo and New York City Railroad to investigate its affairs. The Committee exonerate the Directors and officers of the Company entirely, from any thing like bad faith, and this makes it the more easy to discuss the subject; for whatever I shall say will not be attributed to personal feeling or partizan zeal. In fact you will see that my remarks are entirely of a legal tendency, and are such as I suppose would suggest themselves to any professional person reading this report, and thus led to consider the technical questions growing out of the character of what are called *Railroad securities*. Millions and hundreds of millions are invested in railroad bonds. These bonds are held every where, here and abroad—have been created in every State. It is a national interest. There can be no object, therefore, in impairing their credit. There is every inducement to uphold them. The best way to do that is in time, while the general prosperity of the country is great—trade lucrative—travel of all kinds general, *now* to consider the difficulties, if there be any, that present themselves, and thus, as far as possible, guard against them. In the first place, to understand the subject, what is the *Buffalo and New York City Railroad*?

This question will be best answered by a few words of historical reminiscence as to the internal communications of our State. The first great idea of developing the resources of New York, was to complete the water communication from the ocean to the Lakes. So a point was selected on the Hudson where navigation ceased, and the Canal was made to Buffalo.

For this we have mainly to thank Morris and Clinton, two of the race of able and far-seeing statesmen of whom New York once could boast. Time rolled on, and along the line of the canal, and in the fertile country which it opened, great towns grew up. Then came the invention of the Rail, and naturally, necessarily, the first railroad in the State followed the tow path of the canal, and took advantage of the population that had grown up along its level banks. Then were successively formed the several links of the chain from Albany to Buffalo that is now known as the Central road, finally completed to New York by the bold and original conception of the Hudson River line. When all this was done, or while it was being done, it appeared, however, that the communication by rail, instead of taking a direct course from New York to the Lakes, described a huge right angle, of which Albany was the apex, and entirely overlooked the whole country known as the Southern Tier of counties. To this was due the creation of the New York and Erie Railroad. That vast work has been attended by various fortunes. Its early career was certainly marked by remarkable blunders, some of which are still attested by the long lines of piles which the traveler's eye now contemplates with wonder in the meadows of Chemung. But, of all the blunders committed by the original directors of the road,

certainly the choice of the two termini was the greatest. Instead of starting from New York, they selected Piermont, thirty miles distant, as the point of departure, and, instead of coming out on the Lakes at Buffalo, they chose Dunkirk as their resting-place. Their former error was corrected, and New York is now as it should be, the terminus of the road. The other blunder still remains unaltered, and thus we have two great lines of railroad from New York to the Lakes—the one winding hugely out of the way, the other ending at a point without harbor or a population. To this policy or impolicy of the Erie Railroad was owing the creation of the Buffalo and New York City Railroad—starting from Buffalo and running 91 miles, to strike the Erie railroad at Hornellsville, 123 miles from Dunkirk and 332 miles from New York, and so to make a direct communication between New York and Buffalo, by the way of the Erie road. This work begun in 1845—was completed in 1852. Running through one of the greatest and most powerful States in the Union, connecting directly with the city of New York at one end and at the other with Buffalo, the great port of Lake Erie, its securities have been readily taken by the most sagacious of our capitalists, and upwards of two millions of them are now held for domestic and foreign account.

It is to the affairs of this road that I now solicit attention.

The capital of this road was nominally \$1,500,000. But of this there has been paid in only \$798,000 but little more than half.

It soon became necessary to raise money. This has been effected thus:

Two mortgages were executed on two halves of the road, together making one first mortgage on the road, for.....\$1,200,000

These sums were less than two millions to make a road nearly 100 miles long. More money was wanted. So a second mortgage was executed on the whole road for.....\$500,000

And a third for.....\$1,075,000

With a proviso however that only....\$575,000 should be issued till the 2d. mortgage

should be taken up. Since then, income bonds have been issued and a large floating debt run up, till the total cost of the road reaches.....\$3,552,035

Of which is capital.....\$798,400

Debt funded and floating.....2,753,635

This debt is now represented by five classes of creditors—First mortgage—Second mortgage—Third mortgage, Income bonds and Judgment creditors, (those who have obtained judgment on their advances.) Now the fundamental error in this operation is the disparity of the capital stock as compared with the debt. If the road were *all owned* by the stockholders and there were *no* debt, there could be no danger of a sacrifice of the property. If the debt were *small* there would be a *large* capital interested in preventing a sacrifice of the road. But here are have five dollars of debt for every one of capital. In case of difficulty, this state of things is just as fatal to a railroad, as it would be to an individual. This is plain enough, but how has it arisen? In the first place from the absurd miscalculation that is always made in regard to the cost of a public work.

In the pamphlet published by the company

when the first bonds and mortgage were issued, it was stated that the whole cost of the road would be one million and a half "fully to complete and equip the work."

This was the *estimate*. The actual cost is *three millions and a half*, and in fact this does not appear excessive for a road 91 miles long, and well made, well fenced, and fully equipped. Such is the experience that makes the calculations of our Engineers a bye word and a laughing stock. Look again as to the classification of the creditors. There are five classes of them. First, second, third mortgages, income bondholders and judgment creditors. Here again in case of difficulty the most serious complication presents itself. If there was but one class of creditors they would be all equally interested in protecting the property. But here, unless there is a remarkable spirit of forbearance and patience, there will be a general scramble; the ingenuity of lawyers will be sharpened by the avidity of creditors running a race of priority, and in such a state of things it does not require a prophet to foretell that the interests of the stockholders must be, and those of the road may be, sacrificed.

See what has already taken place. The first mortgages are mortgages of both real and personal estate and purport to convey the road and its equipments, locomotives, cars &c. But here, a serious question presents itself. Our laws in this State require a mortgage of *real* estate to be *recorded* in the county clerk's office—of *personal* property to be *filed* in the *town clerk's* office. Now locomotives and cars are *personal* property. The mortgage in question was only recorded as a mortgage of real estate, not filed as a mortgage of chattels. A sharp creditor gets judgment, detects the oversight levies on all the personal property and forces the company to execute a chattel mortgage on the rolling stock for his special and prior security, thus cutting away (if his law be good,) a very serious part of the security of the first mortgage creditors.

Again another creditor gets judgment, levies on the Rolling Stock subject to the mortgage, and the whole rolling stock is sold to a judgment creditor, and bought in for \$15,000—this time it is done really for the benefit of the Road, but if the law above stated is correct, the Company has been deprived of all possibility of running its Road, and its whole stock of engines and cars have been sold to pay a debt of \$15,000. What a state of things is this?

It will be observed that all this results merely from a want of attention to proper legal formalities. I am not saying that the proceedings of the creditors against the Rolling Stock are well taken, but it is plain that questions have been left open which should not have been.

Other questions present themselves as to the general character of mortgages of this kind. They are mortgages in trust. The *Cestuique* trusts, the bondholders cannot proceed except through the mortgagees. What rules are to govern the trustees as to taking proceedings? Are they to act for the benefit of a single mortgagee? Or are they to wait the decision of a majority in interest, or are they to be governed by their own discretion as to what the true interests of the bondholders require.

We all know that the law of trusts has been a

fruitful source of litigation in this State, since the passage of the Revised Statutes. Still such is the power of habit and general opinion that we every day see persons who would jump out of a second story window, rather than take any second mortgage on any private property—cheerfully take third mortgage on a road of which they really know little, given to a trustee of whom they know less, and over whom they have no influence or control. Such is the general confidence in our prosperity and progress, and as long as that prosperity and progress lasts there is no difficulty. But let that prosperity and progress be checked, diminish the revenue of Railroads, call in lawyers to test the validity of these mortgages, and the regularity of proceedings and you have a very different state of things. Then what Railroads will be best off? Evidently those whose debts are the smallest in proportion to their capital—those whose debts are in the least number of different classes, and finally those which have most faithfully observed the legal requirements in regard to property of this kind.

LEX.

For the American Railroad Journal.
Covington and Ohio Railroad.

This road was chartered by the Legislature of Virginia during its session of 1852-3. There were at that time appropriated \$1,000,000 for its construction; \$500,000 to the Western division and an equal sum to the Eastern Division. The work being on State account was placed under the management of the Board of Public Works. The question of route was for several months a barrier to the prosecution of the Eastern division, and was advocated with much spirit by the friends of the *Greenbrier* route on the one side, and the *Monroe* route on the other.

So great were the advantages set forth by the friends of the two routes, the directors of the company thought proper to appoint another engineer not partial to either route, to make additional surveys and report thereon. It was not until the middle of January 1854, that a thorough survey of the two routes was sufficiently advanced for any correct idea of the comparative merits of the two routes.

The result of the surveys was the adoption of the *Greenbrier* route in consequence of its low grades, and ability to be worked at the same cost when the business should need 125,000 through passengers and tons of freight, and to carry 15 per cent. more of both than the *Monroe* route when the business of either should approach the limit of their capacity.

The total length of the road from Covington to the mouth of the Big Sandy on the Ohio river is 225 miles. The maximum grade ascending west is 59 feet per mile. The maximum grade descending west is 30 per mile. The maximum grade of 59 feet only extends over 29.4 miles of the whole road. The amount of tunnelling is about 19,000 feet; the longest being about one mile. The estimated cost of the graduation and superstructure of the whole road is \$10,000,000, or \$40,000 per mile.

At the last session of the Legislature a further appropriation was asked for by the friends of the improvement, but the bill was defeated by its opponents on the north and south sides of James River. The question of grade contributed more to its defeat than any other. The railroads on the south side of James River being all of the 5 feet gauge,

it was desired by the friends of these improvements that the Covington and Ohio roads should be the same, but as the faith and honor of the state was deemed to be pledged to meet the Kentucky extension at the mouth of Big Sandy river, with a gauge of 4, 8½, the directors of the Covington and Ohio railroad adopted the same gauge. The roads connecting with the Covington and Ohio road at Sandy river, are the Maysville and Big Sandy, and the Lexington and Big Sandy; which roads connect with the main lines to the western cities. The Covington and Ohio road also connects with the Virginian Central railroad, which passes to Richmond with a gauge of 4-8½, where it connects with the proposed Richmond and York River railroad. A connection is also proposed with the Virginia and Tennessee road, which has a gauge of 5 feet and connects with other roads of the same gauge which pass to Norfolk.

Had the friends of the Cov. O. R. R. acquiesced in the 5 feet gauge, it would still have been doubtful about the passage of the bill, as the north side of James river would have voted against it. I am not prepared to enter into the merits of the two gauges. The 5 feet gauge would terminate at Norfolk, and the 4-8½ at Eltham. The friends of the 5 feet gauge claim that the distance of 80 miles gained by the 4-8½ gauge is more than counterbalanced by the fear trade leaving Staunton for Baltimore.

Any one can judge for themselves of the strength of this argument when I state the fact that from Staunton to Baltimore is 218 miles, and from Staunton to Richmond only 120 miles. When we consider the advantage that the Richmond, has over the Baltimore, flour, it is hardly to be supposed that wheat will seek a market that is 98 miles more distant. At Eltham, 38 miles from Richmond, and in sight of the capes of Virginia, the largest class ships can lie at anchor with safety, showing that ships of the greatest burthen can load at Virginia ports.

The prosecution of the Western division of the road between Big Sandy and Kanawha rivers has been pushed on with much rapidity since the contractors have got fairly to work, but the road will necessarily have to suspend operations for the want of means within three or four months, unless there should be an extra session of the Legislature to vote an appropriation to it.

A large meeting of the citizens of Kanawha County was recently held, at which resolutions were passed, inviting the co-operations of the counties throughout the state in appointing delegates to a Railroad Convention, to be held at the White Sulphur Springs on the first Monday in August next, to devise means for the vigorous prosecution of the Covington and Ohio railroad, and a branch to the mouth of Kanawha river, and also one to connect with the Virginia and Tennessee railroad; also calling upon the Legislature of Virginia to meet as early as practicable and vote means for the further prosecution of the work.

The Covington and Ohio railroad passes through a country rich in agricultural productions, and abounding in coal, salt, and iron ore. The vast amount of minerals alone would be sufficient to furnish freight for a double track railway. The lowness of its grades, directness of its course, being 200 miles nearer to the capes of Virginia than

any other Western road, would constitute it beyond a doubt the main thoroughfare between the Western states and the Atlantic. Its passing by the Virginia Springs is another inducement to very large passenger travel.

"RICHMOND."

Sault Ste. Marie Canal.

We regret to see and hear so many complaints with regard to the management and progress of this important work. They are of a nature calculated to seriously embarrass the company engaged in the construction of the canal, in their operations, and, if well founded, should be at once looked into by stockholders, and the necessary remedies applied. When the complaints referred to first began to appear in the local press, we were loth to credit them, but we have since been placed in possession of well authenticated facts going to prove their validity, and making it imperative that the stockholders investigate the affairs of the company, and vindicate its management, or cause such changes in its policy and mode of operations, as will insure the strictest compliance with the terms of their contract.

In common with public generally, we had, from the first, the fullest confidence in the capacity and ability of the Directors and managers of the company, than whom none more eminent in the conduct of similar enterprises are to be found in the country, to carry forward their work in a manner creditable to themselves and mutually profitable to the State of Michigan and the stockholders. In order to do this, however, it was necessary that the best talent in this country should have been secured in the superintendence of the engineering and financial departments of the work. The well known character of the principal officers led the public to suppose that such would have been the case, and we have little doubt that the stockholders are now confident that such is the fact. But were it so, it seems to us hardly probable the company would now find itself involved in suits at law with private individuals for large damages for breaches of contract, or embroiled with the State of Michigan, and through it with the General Government, in regard to the location of its lands, and trespasses upon lands not subject to location. Neither would its work be so far behind hand, as to almost preclude the possibility of having it completed within the specified time. The responsible agent of the company having the supreme control of its affairs on the ground of the works, should be a man of eminent ability, ripe experience, sound judgement, and a sufficient knowledge of the world, to steer clear of these and various other minor difficulties involving the honor and credit of the company and the interests of the whole commercial community. We trust the stockholders and Directors will look into this matter and set public opinion right as to the progress of their work.

Since writing the foregoing, which was prepared for the Journal last week, but crowded out, the *Lake Superior Journal* has come to hand, from which we extract the following article. We are glad to observe the promptness with which Mr. Brooks and his associates have commenced the reform, apparently so much needed, and trust they will carry it to every branch of the management.

Change in the Canal Supervision.—J. W. Brooks, Esq., Vice President of the S. M. F. S.

Canal Co., has been in town several days and appears to have relieved Mr. HARVEY considerably from his onerous duties as Canal Agent, and H. D. WARD Esq., a gentleman of great experience in such works has taken the supervision of the Lock-work and excavations. It would appear from his movements, that the former Agent, Mr. HARVEY, has received the berth of "running agent," which is a very appropriate post for one who has already run through an expenditure sufficient to have built the Canal, under judicious management. Under the present direction, the work is likely to be carried forward in a more systematic and energetic manner, but it is very doubtful whether even the well known energy of Mr. Brooks' can, within the time, make up for the general mismanagement on this work heretofore, and complete the Canal in the required time.

The difficulty lies far back in the commencement of this important work, in placing it in charge of a person without a particle of experience or familiarity with such a work, who, as a matter of course, had to cut and try, and, in this very course, conduct all matters in a penny-wise and pound foolish manner. A whole year has been spent in this way, and now, if the work can be finished at all within the time, in order to make up for past disorder and mismanagement, it will require four times the amount of expenditure that it would, provided it had been properly undertaken.

What renders the company still more blameable, is the fact, that during this whole time none of these great foreign capitalists, who undertook to build the Canal, came near to pay the least attention to the progress of the work. We presume they all had more important projects to look after and this was too small a matter to require attention, and that if they could get the work built in a cheap manner, or in any manner, and get all the most valuable lands of this State, they would be satisfied with this abuse of the best contract ever given in this or any other State.

Journal of Railroad Law.

THE ORGANIZATION OF RAILROAD COMPANIES.

The late decision of Judge Willard of Albany, sitting as Referee, in respect to trustee suits brought against subscribers, by the *Albany and Susquehanna Railroad Company*, to recover instalments due upon their stock, is a highly valuable document, although it may not be a final adjudication of the question in controversy. The following is an abstract of Judge Willard's report.

The defendants refuse to pay their instalments, for various reasons.

(1) The defence calls in question the organization of the plaintiff's as a corporation, under the Railroad act of 1850.

If this objection on the part of the defendants be sustained, it must put an end to the present actions.

The third section of the act (L. of 1850, p. 212) provides that a copy of any articles of association filed and recorded in pursuance of the act or of the record thereof, with a copy of the affidavit of three Directors as required by the second section endorsed thereon, or annexed thereto, and certified to be a copy by the Secretary of this State, or his deputy, shall be presumptive evidence of the incorporation of such company, and of the facts therein stated.

The production by the plaintiffs counsel of the record of the articles of association, and of the affidavit of the three directors, afforded presumptive proof of the regular organization of the plaintiffs as a corporation, and entitled them to judgment on the first issue. The burthen was then cast upon the defendants to disprove the case thus established by the plaintiffs. Prior to the Revised Statutes, it had been held by the Supreme Court, in several cases, that where a Corporation sues either on a contract, or to recover real property, they must on the trial, under the general issue, show that they are a Corporation. (*Jackson vs.*

Plumber, 8 John, R. 378; *Bill vs. Fourth Great Western Turnpike*, 114 John R. 416.) The convenience resulting from this rule, led to the adoption of the third section of the act of the proceedings concerning Corporations, (2 R. S., 458,) whereby it is enacted that in suits brought by a corporation, created by or under any statute of this state, it shall not be necessary to prove on the trial of the cause, the existence of such Corporation, unless the defendant shall have plead in abatement, or in bar that the plaintiffs are not a corporation. And the general railroad act of 1850, (p. 212, §3) by making the record of the articles of association, and of the affidavit of three Directors annexed thereto, showing a compliance with the statute, evidence of the incorporation, has obviated to a still greater extent, the inconvenience of the common law rule.

The objections to the organization of the plaintiffs, as presented in the course of the defendants argument, were, 1st, that the requisite sum was not subscribed for each mile of said road; 2d, that ten per cent thereof was not paid in cash to the Directors prior to the organization; 3d, that Van Husen, Yardley and Taylor were not legal subscribers; 4th, that payment was received by the Directors in checks, drafts, notes, &c., in violation of law.

On the part of the plaintiffs it was insisted that the defendants, having entered into contracts with the company, are estopped to question the regularity of the organization, or to impeach the verity of the articles of association, and the affidavit thereto annexed. And 2d, that in point of fact, the Directors did comply with every requirement of the Statute, both with regard to the amount subscribed and the manner of payment.

On the face of the articles of association, it appears that there were 1402 shares subscribed, which exceeded by 2 shares the number required for organization. Unless it can be shown that an amount exceeding 2 shares is improperly placed on the articles, they must be treated as evidence of a valid organization.

The judge then proceeded to examine the position of Messrs. Van Husen, Yardley and Taylor, who had subscribed to the stock in question, not in person, but by an attorney whom they duly empowered to make the subscription in question. They undertook to repudiate the act of their attorney, by showing that they signed their powers upon conditions which had not been fulfilled. But this objection was held to be inadmissible. Good faith demanded that they should acquiesce in what they had unqualifiedly (so far as their powers of attorney were concerned) authorized to be done in their behalf.

In regard to the first payment upon the stock of a railroad company, it is required by law that the ten per cent. on the capital should be paid, not necessarily at the time of subscription, but before the articles of association are filed with the Secretary of State; and the Directors, in receiving payment, can substitute nothing for cash, and may, if they choose, demand specie. The Directors may, however, on their own responsibility, receive the bank checks of responsible subscribers. If the check is dishonored, the effect is the same as if the subscription had not been made. If the check is paid, the effect is the same as if the money instead of the check had been paid.

In the cases under examination the checks were duly paid, and the money of the subscribers obtained as soon as it was wanted, to suit at the time of the organization of the Company.

But it was objected by defendants that for a portion of the subscriptions to the stock of the Company, the Directors received a draft on Bos-

ton, which was finally paid, and also a couple of notes, which were abundantly good. These, however, were not received by the Treasurer of the railroad company. One of the Directors carried them to the Commercial Bank, and requested the Cashier to receive on deposit for the Association \$14,110, and at the same time handed to him divers certificates of deposit, checks and bank bills, which, with the before-mentioned notes and drafts, amounted to that sum. After counting the money and examining the securities, the Cashier received them as cash, and entered to the credit of the plaintiffs, in the bank-book kept by Mr. Pruyn, as such Treasurer, the said sum of \$14,110.

The Statute requires that ten per cent. shall be paid in, in good faith and in cash. But the transaction above described was equivalent to a payment to the Treasurer of \$14,110 in specie. The funds were received by the Bank as cash. There is no reason to believe that the Company were liable to the Bank on any of the securities. The legal effect of the transaction is, as if the Cashier had handed \$14,110 to the Treasurer, and the Treasurer had immediately restored it as a deposit. This is an ordinary banking transaction.

The requirement of the Statute, in regard to the first payment of instalments, has been in this case complied with by means of the transaction above described.

(2) But, in the next place, under this head, the Judge was of opinion that the defendants, having contracted with the plaintiffs, as a corporation, are estopped to call in question the regularity of their organization, under an answer, simply denying the allegations in the complaint. The contract of subscription, in which they became parties, clearly recognizes the plaintiffs as a Corporation. At most the mone of answering adopted in this case, could only require the plaintiffs to produce the exemplification of the articles of association, and of the affidavit annexed, with evidence that the same were duly filed and recorded. That is made presumptive proof of all the facts contained in it, and thus affords the requisite proof of every fact which the defendants dispute. The provisions of the Revised Statutes, (2 R. S. 458, § 3) dispensing with the necessity of proving on the part of the plaintiff, the existence of a Corporation, unless the defendant shall have denied its existence by plea, do not interfere with the doctrine of estoppel in cases of this kind. The Statute has sufficient scope, if it enables the defendant by a formal plea denying the existence of the corporation, to require from the plaintiffs the production of their articles of association, or duly authenticated copies. The cases in this State, tend to show that the party who contracts with a Corporation as such, recognizes its existence, and is not afterwards permitted to dispute it. See *Dutchess county Manufacturing Co., vs. Davis*, 14 J. R. 345. *The Oswego and Syracuse Plankroad Co. against Rust*, 5 Howard Sp. P. R., 390. *McFarland vs. The Triton Ins. Co.*, 4 Den., 392. *Brower vs. Appleby*, 1 Sandf. Sup. C. R. 108. *Thorp vs. Woodhull*, 1 Sandf. Co. R. 418. *Palmer vs. Lawrence*, 3 Sandf. Sup. C. R. 162, 170. But it does not seem to be very important to examine this question more at large.

In general, an irregular or defective organization of a Corporation can only be questioned by the government, by a proceeding in the nature of a *quo warranto*. (See *McFarland vs. The Triton Ins. Co.*, 4 Denio, 392.)

II. The second defence disputes the plaintiffs' right to recover, on the ground that the plaintiffs' agents, at the time of the subscription, agreed that the road could, and would be built for four and a half millions of dollars, and would be abandoned, and the subscriptions relinquished, and the money refunded if it could not be built for

that sum, whereas it was let for above six millions. And, again, that it would not be let unless a million was subscribed along the line of the road, in the country, and half a million in the city of Albany, whereas it was let before that amount was subscribed, either in the country or city.

The case was argued as if the representations operated to defraud defendants.

Fraud may consist in the *assertion of a falsehood*, or the *suppression of the truth*. In this case no suppression of truth is alleged. The *assertions* of Mr. Ford are complained of as untrue with respect to the matters set up in the second defence.

In view of the rescinding of contracts, misrepresentations must be material, and must have actually misled the party to whom they were addressed.

For if the misrepresentation was of a trifling or immaterial thing, or if the other party did not trust to it, or was not misled by it; or if it was vague and inconclusive in its own nature; or if it was upon a matter of opinion or fact, equally open to the inquiries of both parties, and in regard to which neither could be presumed to trust the other, in these, and the like cases, there is no ground for the interference of the Court. (Story's Eq. §191: Atwood vs. Small, 6 Clark and Finell, 232, 233.)

In cases of this kind, whether the party misrepresenting a material fact knew it to be false, or made the assertion without knowing whether it were true or false, is wholly immaterial; for the affirmation of what one does not know or believe to be true, is equally in morals and law as unjustifiable as the affirmation of what is known to be positively false. (Ainslee vs. Medlycott, 9 Ves. 22.)

It is on the principle of fraud that when an incorporation is effected by the names of fictitious subscribers, a real subscriber can, on that ground, resist a recovery on his stock subscription. The essence, says the Chancellor of stock subscriptions, is that there should be perfect equality among the subscribers as to the nature and extent of their respective liabilities for the several sums subscribed by them respectively. (Stewart vs. Hamilton College, 2 Denio, 419.)

The assertions of Mr. Ford, by whom the subscriptions were obtained, seem to have been *matters of opinion* merely, and those opinions seem to have been honestly entertained.

But the second defence, as a pleading, is not in fact, based on *fraud*, but on breach of contract. The motives of Mr. Ford are, in this view, immaterial.

Was Mr. Ford authorized to make such contracts with subscribers as the answer assumes, and did he make them?

No such authority has been shown, nor does any principle of law clothe an agent for obtaining subscriptions to stock with the incidental power of making a collateral agreement, the breach of which will defeat the subscription. Unless authority to make such collateral agreement is shown, it will be unavailing to defeat the subscription. Moreover; the Judge was of opinion, from the evidence, that the witnesses were mistaken in supposing that Mr. Ford had made any such collateral agreement as alleged.

But was the evidence as to these alleged collateral agreements having been objected to, admissible at all, with a view to defeat the subscriptions for railroad stock?

A subscription for stock is a written contract, and must be treated as such.

The common law, independently of the Statute of frauds, excludes parol evidence to vary or contradict a written instrument. The written instrument must be understood as containing the true agreement between the parties, and as furnishing

better evidence than any which can be supplied by parol. The reason assigned by Lord Coke against admitting parol evidence to contradict the terms of a deed is very general, and applies to the case of a written agreement, though writing may not have been absolutely necessary. "It would be inconvenient," he says, "that matters in writing, made on consideration, and which finally import the certain truth of the agreement of the parties should be controlled by an amendment to be proved by the uncertain testimony of slipper memory."—(1 Phil. Ev. 561.) The rule operates to exclude all prior and contemporaneous stipulations or conversations. These are all merged in the written contract as soon as it is executed. (See Cow. & H. Notes, 1466; Adams vs. Wilson, 12 Metc. 138; 6 Metcalf, 353.) Parol evidence is inadmissible to show that a contract absolute in its terms, was upon any condition (Id. Eggleston vs. Knickerbocker, 6 Barb. 458; Houston vs. Shendler 11, Barb. 36 Dart. On Venders 450, 451, note 2.) In cases not within the statute of frauds when no consideration is stated in a written agreement, the actual consideration may be shown. (Barnes vs. Perine, 15 Barb. 250.) This is not an exception to the general rule, but in conformity to it. These principles have been applied in repeated instances to stock subscriptions and other agreements made with Railroad companies. (The Fairfield Co. Turnpike Co., vs. Thorp, 13, Conn. 173. The Northern Railroad vs. Miller 10, Barb. 260. The Western Railroad vs. Babcock 6, Metcalf 346, 353. Kennebec and Portland Railroad Co., vs. Waters. 36 Maine Railroad 269.)

According to these principles, the facts proved under the second defence set up in the answer being parol evidence to vary a written contract were inadmissible, and should have been rejected.

III. The third defence set up in the answer is the alleged false and fraudulent assertion of Mr. Ford that Mr. Corning had subscribed twenty five thousand dollars, Wm. V. Many twenty thousand dollars, and John N. Wilder ten thousand dollars, whereas they had not so subscribed those amounts, or any amount whatever, at the time such assertion was made; whereby the defendants, confiding in these statements, were deceived, &c.

This branch of the defence does not seek to vary the written contracts, it seeks to *invalidate* it on the ground of its having been fraudulently obtained.

If in February 1852, Mr. Ford, under authority from the plaintiffs, made the statements attributed to him in the third defence, and the defendants became subscribers, upon the faith of those statements, the defence is made out. The Company, however, is not chargeable with the representations of Mr. Ford, unless he had authority to make them.

The first question is, whether a special agent appointed for the particular purpose of obtaining stock subscriptions has authority to bind his principals by a false assertion; and the second question is one of fact, whether the representations were made or not.

(1) It is not pretended that the Corporation gave to Mr. Ford any *express* authority to make the statements in question. We are then led to inquire whether the law will *imply* an authority in a special agent as broad and comprehensive as that which is supposed to have been exercised. In analogy to other cases of special agencies, it would seem that the employer is not liable, unless his authority be expressly pursued. It is the business of the party dealing with him to examine his authority. The representation of collateral facts was no part of the general duty of an agent intrusted with the business of obtaining stock subscriptions. (See the general subject considered, Paley on Agency, by Dunlop, 202 *et seq.* and notes; and see Jeffrey vs. Bigelow, 13 Wend. *et seq.*) The Company therefore were not bound by any representations made by Mr. Ford of the nature of those stated in the defence.

But the law under which the plaintiffs were

incorporated was a public law, and the articles of association, when filed and recorded, are a public record. The defendants were, therefore, chargeable with notice of the nature and extent of Mr. Ford's agency. See Dutchess Cotton Man. Co. vs. Davis, 14 J. A. 245. Opinion of Judge Thompson.

The Judge here went into an elaborate examination of the testimony in the case, and came to the conclusion that the hypothesis of the third defence was founded entirely upon mistake, and that the large subscriptions of Messrs. Corning and Wilder were not, in fact, spoken of until *after* they had been made.

In examining this part of the case, the Judge forcibly argued as follows:

"It is impossible that Mr. Ford should have foreseen in February, that Mr. Corning and Mr. Wilder would, in June following, become subscribers for the precise amount of stock which they then took. If without such foreknowledge he made the assertion in February imputed to him, the coincidence between the assertion and the subsequent subscriptions of those gentlemen cannot be referred to any doctrine of chances with which we are acquainted. The possibility that he should have guessed right with respect to Mr. Corning's future subscription, was a thousand to one against him; and that he should have guessed right, not only with regard to Mr. Corning's, but with respect to the subscription of Mr. Wilder also, an entire stranger to him, was a possibility inconceivably more remote. It is no answer, that he made the assertion at random, and that the subsequent happening of the events was the result of good luck. This supposition does not solve the difficulty, but merely shifts it from one hypothesis to the other."

If defendant's witnesses have confounded what was said in the September following, all the difficulties in the testimony are reconciled.

In examining the general statements of Mr. Ford, not within the pleadings, and made, as it was alleged, to delude the public, the Judge observed, that it is too early to say whether the contemplated advantages of the road will be realized, and if not so, the best laid schemes often fail.

This case is not like the bubbles which were formed in the reign of George the 2d, when subscribers were allowed to recover back their payments of stock, and of course would have been enabled to resist a recovery at law, had they been sued on their subscriptions. Thus, in Colt vs. Woolston, (2 P. Wms. 134,) the defendant procured a patent for extracting oil out of English radishes, and assigned it in trust for the contributors to the project, which he divided into shares, valuing every share at twenty pounds, in order to raise a hundred thousand pounds. The project was to be called the "Land Security and Oil Patent," and was represented by the defendant to be a most advantageous project, without any hazard, there being land security given for the benefit of the contributors. The project failed, and the contributors filed their bill in Chancery to recover back their money and obtained that relief.—Though the parties, it seems, had a remedy at law, they also had a right to go into a court of equity on the ground of this fraud.

It was this, or some kindred scheme, which Swift, in his voyage to Laputa, satirizes under the name of the Philosopher of Lagado, who was engaged in a project of extracting men's brains from cucumbers, which were to be put in vials hermetically sealed, and let out to warm the air in raw and inclement weather. (9 vol. Swift's works, p. 200.) But neither the stern morality of the courts, or the caustic ridicule of Swift, has been sufficient wholly to repress the rash spirit of speculation, for we find, a century later, another case equally fraudulent in its character, to which th

like remedy was applied. (See Green vs. Barrett, 1 Sim. 45.)

The Judge, in conclusion, decided, that all the defendants were liable to pay up their subscriptions.

Twin Creek Railroad.

This road, 21 miles in length, was organized under a charter granted in 1851, to construct a road from Carlisle, on the Cincinnati, Hamilton and Dayton road, via Germantown, to the Junction of the Greenville and Miami, and the Dayton and Western roads. The first Board of Directors was elected in April, 1853. Subsequently the line was located, making the distance 21 miles and 30 feet.

The following are the officers for 1854:—President, Wm. Gunckel; Secretary, Henry S. Gunckel; Treasurer, John Stump; Chief Engineer, G. Y. Wellington. Board of Directors:—Geo. Carlisle, Cincinnati; Herman Gebhart, Dayton; Wm. Gunckel, L. F. Schenck, Geo. Schaeffer, Henry S. Gunckel, Germantown, and Geo. Reid, Pyrmont.

On the 19th of July, 1853, the Board contracted with Messrs. A. DeGraff and J. O. Shoup of this city, to furnish the iron and build the road complete, fencing it in, for \$426,000, payable as follows:

In Cash,.....	\$71,000
In Real Estate,.....	39,050
In Stock at par,.....	100,000
In 7 per cent. conv. bonds,.....	215,950

In January last, a supplementary contract was made, by which the Board added \$35,000 in bonds to the amount originally agreed upon and the contractors bound themselves to complete the road from Carlisle to Germantown, four miles, by the first of August next, and to the Junction by the first of January following.

The means of the company are as follows:

Stock subscribed,.....	\$119,750
Stock to contractors,.....	100,000
Bonds to contractors,.....	250,950
	\$470,700

The depot buildings, water stations and right of way, are to be provided for; but the cost in addition to the ground already secured, will be small. The running machinery and cars are to be furnished by the Greenville and Miami company on reasonable terms.—*Railroad Record.*

Kentucky Union Railway Company.

The Commissioners appointed under the charter of the company—which authorises the construction of a railway from a point at or near Newport or Covington, on the Ohio river, by the nearest practicable route, to a point at or near the Cumberland Gap—met in Lexington on Thursday, May 4th. There were present from Madison county, Daniel Breck, Addison White, Thomas Turner, Jr., and Henry T. Allison; from Bourbon county, John Cunningham, from Lancaster county, Levi Jackson and W. H. Randall; from Knox county, Geo. M. Adams; from Kenton county, John W. Stevenson; from Campbell county, Thomas L. Jones; from Owsley county, Luther Brawner, M. C. Hughes, and Junius Hacker; from Clay county, Dougherty White; and from Cincinnati, Ohio, Jas. Hall, Larz Anderson, Wm. Y. Gholson; and Rufus King.

The Hon. Daniel Breck, of Madison county, was appointed Chairman, and Rufus King, of Cincinnati, Ohio, and W. R. Randall, of Laurel county, Ky., were appointed Secretaries.

No commissioners for Fayette being named in the act, the following gentlemen of that county were invited to take part in the proceedings of the meeting: M. C. Johnson, F. K. Hunt, J. B. Tilford, R. A. Buckner, R. Pindell, B. B. Taylor, E. C. Wickliffe, Dr. J. C. Darby, Dr. W. S. Chipley, John Norton, and John McMurtry.

Commissioners were appointed to open books for the subscription of stock in the several counties represented and in Cincinnati, on the third Monday of May; and as soon as five thousand shares are

subscribed, and the President notified thereof, he shall call a meeting of the commissioners at Richmond, Madison county.

During the progress of the meeting, J. C. Hull, of Louisville, and W. R. Benton, of Estill, were invited to participate in the deliberations.—*Frankfort Commonwealth.*

Cleveland and Pittsburgh Railroad.

It was expected by those familiar with the growing business of the Cleveland and Pittsburgh railroad, that the receipts for May, 1854, would show something of an increase over those of May, 1853 but we presume none save the actual managers of this admirably conducted road, expected the increase to be as great as the figures demonstrate. The following is official:

The Earnings of the C. & P. R. R. for	
May 1854, were,	\$51,283 10
May, 1853,	35,364 44

Increase.....\$15,918 66

We have been permitted to make further examination, by which a most gratifying result is shown inasmuch as the greatest increase, by far, is in the item of freight, as will be seen by the figures below, which we get from the books:

Earnings for May, 1854, for passengers	\$22,127 98
Earnings for May, 1853, for passengers	18,731 82

Increase on passengers.....\$8,396 16

Earnings for May, 1854, for freight &c.\$29,155 12

Earnings for May, 1853, for freight, &c. 16,632 62

Increase on freight.....\$12,522 50

These figures show that the increase of earnings for May of this year over May of last year, is a fraction above 45 per cent. It will be remembered too, that during May, of '53 the Cincinnati and Pittsburgh passengers passed through Cleveland, but since that time, the opening of the Pennsylvania and Ohio road to Crestline has diverted that travel. Notwithstanding all this, the business of the road has increased in every department. It is well known that passenger business is fickle, easily diverted, and constantly changing. Freight, however, when it finds its current, runs steadily, and its increasing flow demonstrates unmistakably the growing resources of the country, through which the road runs.

The Clinton Line Railroad.

Many years ago Governor Clinton, of New York, proposed the construction of a Canal from New York westward on or near the dividing ridge between the waters of the great rivers and Lake Erie. Subsequently his son surveyed the line, and hence the name of the road in Ohio, known as the "Clinton Line" and "Clinton Extensions." The name is intended as a compliment to the pioneer in great internal improvements, and it has been proposed that this name should be extended to the whole of the great line extending directly west from New York city, now in rapid progress of construction towards this place, and thence uniting with the Fort Wayne and Platte Valley Air Line. We have before us a map of this line which shows its connections with Boston, New York and Philadelphia; it is published by the Clinton Line Railroad, A. N. Day, President, and W. B. Brinsmade, Chief Engineer. The links of this chain leading from New York, are as follows:

- 1st. The New Jersey Central, finished to Easton.
- 2d. The Cattawissa Railroad.
- 3d. The Sunbury and Erie Railroad.
- 4th. The Venango Railroad.
- 5th. The Clinton Line and Clinton Line Extension.
- 6th. The Tiffin and Fort Wayne Railroad.
- 7th. The Fort Wayne, Lacon and Platte Valley Railroad.

These seven links show a straight and natural line of road from New York to Council Bluffs, which must be more than 100 miles shorter than any road now in progress or already constructed. All the eastern sections of this line are in progress

but the two western links are but recently organized and just commencing.

Prospects of the Great Trunk Railroad.

To the Stockholders of the Grand Trunk Railway Company of Canada.

The London Board of Directors have the pleasure of acquainting the Shareholders that the total amount already received on account of the Share and Debenture Capital of the Company (A series) is £1,525,250, of which £486,801 is in advance on account of future calls. The arrears amount to £36,280.

The line from Montreal to Portland, which was partially opened last year in a very imperfect state and with great deficiency of engine power and plant, will be finished in July next, when there will be ample locomotive and carriage stock for the accommodation of the daily increasing traffic that presents itself. The Junction from Richmond to Quebec, 100 miles in length, will be opened in August. By means of this line, the communication between Montreal, Quebec, and Portland, the three most important cities in the district, comprising 392 miles of railway, will be completed.

In accordance with the terms of the Prospectus and of the Deed of amalgamation, the holders of the A series of shares have the option, on the first of July next, of taking two-thirds, in shares and bonds, of the reversed or B series. Failing the exercise of such option, these shares and bonds devolve to Messrs. Peto, Brassey, Betts, and Jackson in payment of the works as they progress. If any shareholder desire to take the second subscription, they must intimate their intention to that effect on or before the first of July next.

In the event of this option not being generally accepted by the shareholders, the Directors have deemed it desirable to enter into the following arrangements with the Contractors.

That the works shall be actively proceeded with from St. Thomas, 40 miles below Quebec, (to join the Quebec and Richmond line,) and between Montreal, Kingston, Toronto, Guelph, and Stratford, so that the line shall be opened from Montreal to Prescott, and between Toronto and Stratford, a distance of 210 miles, in the autumn of the next year; and the other sections, giving a total length of 857 miles, in October 1856.

Messrs. Peto, Brassey, Betts, and Jackson, in consideration of additional time being allowed for the other works comprised in their contracts, undertake that the shares and Company's bonds of the B series shall not be issued by them—the former before the 1st of January, 1857, the latter before the 1st of January, 1856. The shareholders will thus perceive that no further issue of the Company's bonds will take place for eighteen months, or of additional shares for two years and a half; by which time the traffic on those portions of the Railway to be opened in 1854 and 1855 will be fairly developed.

The Province debentures of the B series will be made available under the authority of the London agents of the Government of Canada, for the purposes of the works. The works to be postponed under this arrangement comprehend 245 miles, and an outlay of about £2,000,000.

The Directors are happy to announce that they have effected a satisfactory arrangement with the Representatives in England, of the Great Western Railway Company of Canada, by which both companies agree to suspend those portions of their respective lines that excited mutual jealousy.

It has been resolved by the board, that the next call on the A series of shares and debentures shall be payable on Wednesday, the 7th June, 1854, and they propose that the three subsequent calls shall be made respectively in October, and in February and in June, 1855.

Two pounds ten shillings will be the amount of each call on the shares, and £10 on each class of debentures of £100.

A full report on the position and prospects of the

line is expected from the Canadian Board of Directors at an early date, and immediately on its receipt copies will be duly forwarded to the shareholders.

By order of the Board.

WILLIAM CHAPMAN, Secretary.

2 Leadenhall street
London, May 6, 1854.

Baltimore and Ohio Railroad.

The Baltimore and Ohio Railroad is looking better. The receipts for May were as follows:

	Main stem.	Wash. Br.	Totals.
For passengers	\$49,802.37	\$29,397.40	\$79,199.77
For freight,	318,172.49	9,703.34	\$26,875.84

\$366,974.86 \$39,100.74 \$406,075.60

The following statement of the receipts on the main stem, for the five months ending with May past, compared with the corresponding 5 months of the previous year:

	Main stem, 1854.	Main stem, 1853.
January	\$254,277 10	\$101,819 49
February	279,856 87	99,017 27
March	356,880 45	516,267 87
April	351,379 81	200,219 69
May	366,974 86	204,950 01

\$1,609,869 09 \$822,273 73

The increase since January has been nearly 100 per cent., a gain, we believe, which has no parallel in this country with a road of first class magnitude.

Mad River and Lake Erie Railroad.

The following is a comparative statement of the receipts and expenses of the Mad River, and Lake Erie Railroad for the ensuing years ending May 31, 1853 '54:

	1853.	1854
Receipts	\$540,618 18	\$684,388 08
Expenses	274,883 48	365,010 48
Net earnings	\$265,729 70	\$319,377 60
Increase of net earnings		53,647 90

Illinois Central Railroad.

"Messrs. W. P. Burrall, President, D. A. Neal, Vice President, and B. B. Mason, Engineer of the Illinois Central Railroad, from Cairo, whither they went by the line of the road, passing over the Chicago Branch, from this point. The work of grading to Urbana, 125 miles, is completed, and the iron is going down rapidly. From Cairo to Bloomington, on the main line, the grading is mostly done. There has been a slight delay at Salt Creek, where there is a heavy embankment, and on the low lands between the Cachee River and Cairo. Otherwise the grading is out of the way of the track-layers. Iron, during the present high stage of water, is easily transported up the Big and Little Muddy Rivers, and to Decatur by the Great Western Road, so that the track is being laid both ways. The work at Cairo is going on well, and has already progressed so far as to afford protection against any flood.

SHANAHAN & LOEBER,

181 William-st,
(1st floor-Up Stairs.)
NEW-YORK.

MANUFACTURERS OF

THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
Chains, Scales, Levelling Rods, &c. 1y10

Sewall & Crehore

CIVIL ENGINEERS,
ST. PAUL, MINNESOTA.

JOSEPH S. SEWALL.

CHAR. FRED. CREHORE.

N. York and N. Haven R. R. NOTICE OF SUMMER ARRANGEMENTS,



Commencing Monday, May 9, 1854.



TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A. M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A. M.—Commutation from New Haven.
9.10 A. M.—Special for Port Chester.	6.15 A. M.—Accommodation from New Haven.
11.30 A. M.—Accommodation for New Haven.	6.15 A. M.—Accommodation from New Haven.
3.00 P. M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	9.35 A. M.—Express from New Haven, Stopping at Bridgeport, Norwalk and Stamford.
4.00 P. M.—Accommodation for New Haven.	1.07 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
5.00 P. M.—Express for Boston, stopping at N. Haven.	4.00 P. M.—Special, from Port Chester.
5.35 P. M.—Commutation for N. Haven.	4.00 P. M.—Accommodation from New Haven.
6.30 P. M.—Special for Port Chester.	9.30 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Sup't.
New Haven, May, 1854.

New York and Erie R. R.



PASSENGER TRAINS

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.
Dunkirk Express, at 7 a. m. for Dunkirk.
MAIL, at 8¼ a. m. for Dunkirk and Buffalo, and intermediate stations.
WAY EXPRESS, at 12¼ p. m. for Dunkirk.
Rockland Passengers, at 3.30 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.
NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.
Emigrant at 6 p. m.
On Sundays only one Express Train—at 6 p. m.
These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, &c.
D. C. McCALLUM, General Sup't.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,
287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to
EDW. BECH & KUNHARDT, 62 Beaver St.,
Or, A. TOWAR, Agent Pokepsie Iron Works,
231f Pokepsie, N. Y.

Notice to Contractors.

PROPOSALS FOR THE ENTIRE CONSTRUCTION and equipment, or the graduation, bridging and masonry, separately, either in whole or in part, of the Mississippi and Tennessee Railroad, (extending from Memphis to Grenada, Mississippi, about 97 miles,) will be received at the office of the Company, in Memphis, till the 20th of July next. Proposals for the entire construction and equipment, and otherwise as favorable, will have preference. Profiles and estimates of the first 60 miles may be seen on application at the Engineer's Office in Memphis. Bidders must furnish satisfactory evidence of their ability to complete the work.

MINOR MERIWETHER,

Chief Engineer.

May 4th, 1854.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17 ff

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—special red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

Ogdensburgh, N. Y., April, 1853.

G. PARISH,
15,3m*

SEYMOUR, MORTON & CO. GENERAL R. R. AGENCY, Office, Metropolitan Bank Building. No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.
MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.
MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.
LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

MONTREAL & NEW YORK AND

Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6.30 a.m. and 5 p.m., arrive at 8 a.m. and 7.30 p.m.
Leave Plattsburgh for Montreal 7.30 a.m. and 4 p.m., arrive at 10 a.m. and 6.50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate stations.

Trains connect at Moers Junction with Northern (Ogdensburgh) Railroad for Ogdensburgh and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequalled for comfort and dispatch, and attended with less fatigue and delay than any other. It possesses moreover the advantage of a short Forage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.

For particulars see Freight and Passenger Tariff
BAGGAGE checked through.

H. W. NELSON, Superintendent.

Old Railroad Iron For Sale.

ABOUT 250 TONS, mostly whole bars, flat iron of superior quality. Deliverable at Portsmouth Va. as fast as it can be hauled. Immediate offers are invited, addressed to

L. O. B. BRANCH, President R. & G. R. R.

Releigh N. Carolina,

None but the accepted offer will be applied to.
3c.22

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio), issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburg, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions,
ILLINOIS CENTRAL RAILROAD,
Vandalia, Ill.

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot gauge, 22 tons weight, 16 + 20 inch cylinders, and 5½ and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.
Dec. 24.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Lyon's Tables of Cubic Contents, Etc.

These valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1 gives correct mean heights of cross sections with either two or three cuttings taken. Table 2 finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise.—Price \$1.50.
21.1f

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN, Chief Eng.
Huntingdon, May 6, 1854.

EXTENSION OF TIME.

THE period for receiving proposals for the Superstructure of Bridges and Trestle work on the Huntingdon and Broad Top Railroad, has been extended, by order of the Board of Directors, to Saturday evening, June 24th.

S. W. MIFFLIN Chief Eng.
Huntingdon, Pa., June 7, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of Years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1818 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N.Y. 191f

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York,

19 1f

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality by THOMAS HUNT,

No. 63 Fulton Street,
New York.
1y10*

N. A. Boynton's VENTILATING HEATER.

PATENTED, 1853.



BRICK.

FOUR SIZES FOR BRICK WORK.

FIVE SIZES PORTABLE.



PORTABLE.

An entirely new Article, possessing advantages worthy the attention of those in want of a Powerful and Economical Heater.

SIMPLE in construction, compact in form, and easily managed and cleaned.

Is entirely of CAST IRON; has but two joints, and those so arranged, as to prevent the escape of Gases and Smoke.

The FIRE POT is lined, the RADIATING SURFACE located above the fire, and equally exposed on all sides to the action of the cold air.

Can be set in LOW CELLARS, and, by the attachment of a SELF-CLEARING RADIATOR is especially fitted for the use of Bituminous Coal.

Of the above pattern we have four sizes, to be enclosed in brick-work, and five sizes of portables, adapted to all classes of buildings, and can be furnished at a less price than any other heaters of equal capacity in present use.

Manufactured and for Sale, Wholesale and Retail, By

CHILSON, RICHARDSON & CO.

374 Broadway, New York,

Also 101 and 103 Blackstone-St. Boston.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to
September, 1850.

THOS. CHAMBERS,
President.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 25.]

SATURDAY, JUNE 24, 1854.

[WHOLE NO. 919, VOL. XXVII.]

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Railroad to the Pacific.....	384
Delaware Lackawana and Western Railroad.....	386
English Railroads and the War.....	388
Railroads in Connecticut.....	389
Latrobe and Knight's Rule for the Equation of Grades.....	390
Journal of Railroad Law.....	390
Stock and Money Market.....	392
Cleveland and Toledo Railroad.....	393
Utica and Binghamton Railroad.....	393
Manassas Gap Railroad.....	393
Uses of Railroads.....	394
Atlantic and Pacific Railroad Company.....	394
Erie Canal.....	396
Trial of a New Engine.....	396
Alabama and Florida Railroad.....	397
North Western Va. Railroad.....	397
Strike on the Erie Railroad.....	397
Coal Railroad to New York.....	398
Railroad Depreciation in the Northern Climate.....	398
Rock Island Railroad Excursion.....	398

American Railroad Journal.

Saturday, June 24, 1854.

Railroad to the Pacific.

We have read the speeches that have thus far been made in Congress upon the subject of the Pacific Railroad. We regret to say they furnish very little encouragement of the speedy commencement of this great work. While there is a general sentiment in its favor, no proper idea seems to be formed of its magnitude, or of the necessary steps to provide the means for construction. The speeches upon the subject are no better than vague generalities, and would be as appropriate to a Fourth of July celebration as the matter in hand.

The bill now under discussion in the House of Representatives will show how little the subject is understood, and how inadequate are the means proposed for the work. It provides for the payment by Government of a sum not exceeding \$600 per mile for the average of mail matter, and for grant of alternate sections of land, "to the width of 15 miles on each side of such road from the terminus thereof on the Mississippi river, to the 106th degree of longitude west from Greenwich,

and from thence westerly to the eastern line of the State of California, alternate sections to the width of 25 miles on each side of that road; and from thence, through the said State of California, to the western terminus of such road, alternate sections, to the width of 15 miles on each side," upon the Southern route; and for the Northern alternate sections to the width of 20 miles on either side of the line.

Upon all routes, with the exception of the Northern, all the lands available by the bill would not build 200 miles of road. We regret to see Mr. McDougal deluding himself and the nation, by reporting and sustaining a plan utterly incompetent to secure its objects. Every moment wasted upon it is so much lost. To rely upon lands for this work is to postpone its construction for ever. A brief examination of the abundant authority as to the value of the land traversed by any line proposed, will establish our assertion beyond controversy.

We believe Mr. McDougal as little appreciates the difficulties in the way of the construction. That our readers may see what his views are, we copy in full that portion of his recent speech in support of his bill, relative to "practicability of the road."

I have been told by gentlemen on this floor that they would support the measure if they believed it practicable, but they doubted the practicability of constructing a road to the Pacific. I wish to say that the practicability of the enterprise is not doubted by any one personally conversant with the difficulties to be overcome. I have crossed the continent myself; I have crossed the Central region from the waters of the Atlantic to those of the Pacific, on different lines and on foot, and examined the country with reference to its practicability for railroad purposes. Several routes have been surveyed with complete success; and I make no departure from truth in stating that there are several feasible routes for a railroad to the Pacific; and more than this, that there is more than one route offering greater facilities than was offered for any extensive line that has been yet constructed either in this country or Europe. Nearly the whole route would lie along level plains and tablelands, already graded by the hand of Nature. No mountains need be encountered; but few considerable streams need be crossed; there is no obstacle but the unpeopled wilderness. The enterprise looms up into threatening proportions, because it lies in the distance. Embrace it; closely consider it; and it loses all its Herculean features. Within the past year between two and three thou-

sand miles of railroad have been constructed in the United States, requiring as much capital as is required for this entire work. When Indiana and Illinois have completed their railroads now in progress, they will each have a thousand miles more road than is required for this entire line, besides having hewn through the solid rock a way uniting the northern lakes with the great Father of waters. If the energy and enterprise of two poor, almost bankrupt, Western States have been sufficient to secure the accomplishment of such results, it seems to me to be a coward spirit that would startle at the project of a road two thousand miles in length; a road in which the enterprise and interests of the whole republic are concerned; one which is not only to bind the confederacy together, but which is to bear the treasures of many nations along its track. It is a work that can, and must, and will be done. The only question is, when and where shall it be commenced?—when and how shall the initiative be taken? I ask of this committee, I ask of this Congress, that we take the initiative here, now, without any unnecessary delay.

Mr. McDougal is not an engineer, and his opinion as to the practicability of the work is of little value. He might see no obstacles where an engineer would see unsurmountable ones. No surveys have made as he states. We presume that not a foot of any of the lines have been gone over with a level, excepting short portions of the Southern routes, at the southern slopes of the Sierra Nevada. The surveys of these have demonstrated the impracticability of what were supposed to be excellent passes. (See Lieut. Williamson's Report.) We all have read the glowing accounts of Walker's Pass, by Fremont and Benton. The former claims to be a man of scientific attainments, and to speak authoritatively, when he speaks at all. According to him, Walker's Pass was marked out by nature for the route of a railroad. Its inclinations were so gentle in either direction as to be hardly perceptible to the eye. Nor did he well know when the summit was passed. We do not question the sincerity of his opinion. But what do surveys show? Why, an impracticable route, with a grade of 300 feet to the mile; according to Lieut. Williamson's report to the Secretary of War. We give his own words:

"I will commence by saying that Walker's Pass is out of the question. To reach this we ascend Kern River (properly the Potum-ko-la) for some fifty miles, where a branch comes in from the East. This we ascend, in a wide and gently as-

ending valley, for some 12 miles, when we leave it, cross the divide and enter the plain or basin beyond. The difficulties are: 1st, ascending Kern River; 2d, ascending to the summit from the valley of the branch; 3d, descending to the basin.

1st. On Kern River high mountains come down abruptly on each side, forming a canon of five or six miles in length, impassable for mules, and probably for footmen, since there is no Indian trail through it—and these mountains cannot be turned. Hence, to go by Kern River, an immense deal of cutting, blasting, &c., would have to be done.—Rock, granite. The river falls in the fifty miles—fifty feet to the mile on an average.

2d. The ascent to the summit for five miles is over 300 feet to the mile, and rugged rocky mountains on each side, cut up by precipitous ravines, prevent a winding course to gain distance.

3d. The descent from the summit to the basin is 8 miles, and over 250 feet to the mile. The altitude of Walker's Pass is over 4,500 above the sea. The basin is 2,500 feet above the valley.

Such is Walker's Pass to the eye of a *voyageur*, and such is it shown to be by instrumental surveys. If a man of Mr. Fremont's attainments is so liable to be deceived, what reliance can be placed upon the opinions of persons whose objects are not the exploration of a route for a railroad, and who have neither theoretical nor practical skill in such matters?

Mr. McDougal says there are several feasible routes for the road. This is begging the question entirely. To say that "there are several routes for the proposed road, offering greater facilities than is offered by any extensive line in this country or in Europe," is an assertion too absurd for any reasonable men to make, and we regret to see it uttered by the Chairman of the *Special Committee* upon the subject of the proposed road. The idea of the magnitude of the work will control the amount of means to be provided for it. Wrong conclusions necessarily result from erroneous premises. Such is the case already with Mr. McDougal's scheme. By undervaluing the obstacles to be encountered, his means are entirely inadequate to the ends proposed, and failure will be the inevitable result.

Mr. McDougal says that the route for the road is already graded by nature. We often hear such remarks; but any *tyro* in engineering knows the absurdity of all such statements. He says there "are no mountains to be encountered." This is certainly news. We should like to know how either the Rocky Mountains or Sierra Nevada ranges are to be avoided. Surveys thus far show no practicable passage through the latter in the direction of San Francisco. Nearly the entire range is known to be utterly *impracticable*. We should like to know upon what route the Rocky mountain range is practicable. Certainly not the South Pass or Mr. Benton's. The Albuquerque may be. The evidence thus far is *against* the practicability of the *El Paso* route. This route crosses a summit of 5,000 feet before reaching the Del Norte, and a higher one after passing the river.—It is the most barren of all of wood and water, two *prime* conditions in the construction and operation of a railroad. Will Mr. McDougal please indicate the route that will cross *no mountains*. If such route exists, it is one of which the public have no knowledge.

Mr. McDougal disposes of the whole subject by saying that, "there are no obstacles in the way but an unpeopled wilderness." He should have said an uninhabitable wilderness. We are yet to

learn how a railroad is to be built and maintained through a desert of 1500 miles in extent. We certainly are not wise enough to answer the question, nor do we believe there is an engineer in the United States who feels himself competent to do so. How are large bodies of men to work in the center of a wilderness, over which mule trains cannot carry sufficient water for their own necessities?—Here is a question to be solved. It may be said that *Artesian* wells may be constructed. But how are these to be built? Archimedes could move the world, could he only find a *fulcrum* for his lever. It will be nearly as difficult to get a fulcrum by which to raise the Pacific railroad. We do not see how it is to be done, upon some of the routes at least. We believe we express the opinion of the best informed persons, when we say, that the construction of a railroad across the *Continent* is a more difficult problem than has yet taxed the skill of the engineering profession. No man who values his reputation, without the most careful examination of data which are yet to be developed, and which require years, would speak authoritatively upon the practicability of *any* route or plan of construction.

We assure Mr. McDougal that by means of his bill, the project will make no other headway than that gained by leaving one less impracticable plan to be tested and exploded. It too often happens that the *right* path is the one last hit upon. His scheme will never build the road, and what is more, will never enlist the public sentiment in its support. To frame a competent one, all its provisions must be regular deductions from unquestioned premises. A railroad can be built and operated only under certain conditions. The more important of these are: a gentle inclination of the earth's surface, a line sufficiently direct to allow the passage of the train; wood and water, and the ability of the route to sustain a sufficient population on the line for the maintenance of the road. The presence of these conditions being determined upon several routes, the next question is, which is the *most* favorable. A very important matter is the comparative convenience of the several routes proposed. No company or body of men are going to commence the construction of a railroad to the Pacific till all these questions are disposed of. No Company could commence the construction of a railroad of 100 miles in the *States* upon the terms proposed by Mr. McDougal, without losing credit and forfeiting public confidence in the soundness of their judgments. How much less will they undertake the construction of one of 2,000 miles, under conditions which are entirely unknown, and for which precedents furnish no guides.

If Mr. McDougal would direct the movements preliminary to the construction of a railroad to the Pacific, he must follow the lights set by similar enterprises. In the first place, he must know what is to be done. As he is not an engineer, though a sensible, practical man, his proper course will be to move the appointment of a *Commission*, to be composed of a number of the profession of the best reputation, to report upon the whole subject. Any body of men undertaking this work must be governed by the lights of the past. The feasibility of any plan must be subjected to the test of experience. Let this Commission report upon the evidence which exists, and what is ne-

cessary to a well digested plan of construction, and we shall then know exactly the next step proper to be taken. The *cost* of the work being ascertained, it will then be seen whether the means proposed are adequate to their end. Instead of \$600 per mile for carriage of mail, Mr. McDougal will, we have no doubt, find himself compelled to move five times that sum. Such a proposition may startle the propriety of Congress a little. But the sooner this is done, the sooner the shock will be got over, and the sooner will that body be prepared to act. We are satisfied that it is still far from being up to the exigency of the case. As well might a person hope to storm the rock of Gibraltar with a cannon loaded with *green peas*, as to construct a railroad to the Pacific by any plan yet proposed.

Report of the Directors of the Delaware Lackawanna and Western Railroad.

In presenting their first printed Report, the Board of Managers of the Delaware, Lackawanna and Western Railroad Company consider it due not only to the Stockholders, in view of their large pecuniary interest, but also to the public, on account of the magnitude of the enterprise, to refer briefly to its past history, as well as to give a statement of its present condition and future prospects.

On the location of the New York and Erie Railroad through the Susquehanna valley, the project was first started of reaching the rich mineral deposits of the Lackawanna and Wyoming valleys, constituting "the great Northern Coal Basin" of Pennsylvania, by a locomotive railroad extending from Scranton north-westerly, through Ligget's Gap to Great Bend. Soon afterwards, the more formidable scheme was entered upon, of finding an outlet, south-easterly through the Cobb's and Delaware water gaps, in the direction of New York.

The charter for the Ligget's Gap Railroad, embracing that portion of the Company's present line extending from the Lackawanna Coal Basin, at Scranton, to its junction with the New York and Erie road, at Great Bend, had been obtained; and the Company was organized, (the capital having been mainly subscribed by a few of the present Stockholders,) in the winter of 1850.

The construction of the road was commenced the following spring, under the immediate supervision of Col. George W. Scranton, who, for that purpose, was appointed General Agent of the Company,* and on October 20th, 1851, it was so far completed as to be open for traffic.

To provide the additional means requisite to finish and equip the road, and for opening and improving the coal lands, &c., further subscriptions to the capital stock were received, and the \$900,000 of the mortgage bonds authorized by the charter, were issued; all of which were taken by the original subscribers.

By an act of the Legislature, passed April, 1851, the corporate name of the Company was changed to "The Lackawanna and Western Railroad Company."

The charter of the Delaware and Cobb's Gap Railroad Company, for a railroad from Scranton, through Cobb's Gap, to the Delaware river, bears date April, 1849, and the Company was organized in December, 1850.

By an act, approved March 10th, 1853, the two Companies were consolidated under the name of

*It is due to Col. Scranton, and also to his associates, proprietors of the extensive Iron Works at Scranton, under the late special partnership firm of Scrantons and Platt, (now the Lackawanna Iron and Coal Company,) to acknowledge the large indebtedness of this Company to those gentlemen for the very efficient and valuable aid rendered by them in the organization and prosecution of this enterprise up to the commencement of the fiscal year, now just closed.

"The Delaware, Lackawanna and Western Railroad Company," and measures were immediately adopted to construct the road from Scranton to the Delaware river; the necessary surveys having been previously made by E. McNeill, Esq., Chief Engineer of the Company. Books were opened for subscriptions to increase the capital stock, which at the date of the consolidation amounted to \$1,441,000, and such was the confidence felt in the success of the enterprise, not only by the original stockholders, but by other capitalists, that the whole sum required, \$1,500,000, was taken in a few days.

As a matter of convenience in keeping accounts, the entire line of the road was divided into two sections—the northern and southern divisions; the former extending from Scranton to Great Bend, a distance of 60 miles; and the latter, extending south-easterly to the point of junction with the New Jersey Railroads on the Delaware river, five miles below the Water Gap, 61 miles in length.

NORTHERN DIVISION.

With a view to derive an income from the works at the earliest possible day, some small sections of this division were passed by temporary structures; the most important of which, were the switch over Tunkhannock Mountain, and the trestles across Factoryville and Humphrey's Hollows. The switch will be abandoned for a direct route through the tunnel, in April, and the embankments across the hollows are in a satisfactory state of progress. By the former improvement two miles in distance, and a large amount in transportation expenses will be saved; and by the completion of the latter, increased stability and security to the Company's operations will be attained.

To avoid the danger of an interruption to the business of the road from damage to the smaller trestles by fire, or other causes, the Board of Managers have resolved to have them all filled by embankments before the completion of the southern division; when the line, in point of solidity and capacity for traffic, will compare favorably with any other single track road in the State.

The total cost of the Northern division, up to December 31st, 1853, including engineering, land for depots, right of way, grading bridging, superstructure, station houses, machine and car shops, car houses, contingent and office expenses, &c. &c., and the amount expended towards the construction of the Tunnel, is \$2,162,048 75.

SOUTHERN DIVISION.

This section of the road extends from Scranton through Cobb's Gap and the Delaware Water Gap to a point on the Delaware river 5 miles below the Water Gap, a distance of 61 miles, where it connects with the Warren Rail Road of New Jersey.

Anticipating a very large business on this division of their road, the Board of Managers resolved to grade, bridge, and do the masonry for a double track, all in the most substantial and permanent manner; consequently, no trestles or other temporary structures are to be erected. In order to secure a satisfactory grade, and to avoid high and long bridges, it was deemed expedient to pass two small sections by tunnels.

In reference to the very favorable line and grades secured, it is due to our indefatigable Chief Engineer, to state, that he devoted many months of almost incessant labor in obtaining crest-line and other preliminary surveys of the whole region, before adopting the present route; which the Board of Managers are satisfied is the best, if not the only practicable one, for a road of heavy traffic, from the Lackawanna and Wyoming valleys, to tide-water, in the direction of New York.

This division was put under contract in June last, the work was immediately commenced, and is now under good progress. The iron rails and chair have been contracted for on favorable terms.

It was the intention of the Board of Managers at first, to have this division ready for operation

within the present year, but several causes have concurred to postpone its completion. It may now be safely assumed that the entire line will be in operation on or before the first day of June, 1855.

The amount expended towards the construction of this division, up to the close of 1853, was \$180,066 06.

It will be seen from the foregoing, that the total amount expended in the construction and equipment of the whole Road, is as follows:

Northern Division,.....	\$2,162,048 75
General Expenditure, for Equipment &c.	395,724 64
Southern Division,.....	180,066 06
	\$2,737,839 45

For the grades, capacity, &c. of this Division see the annexed report of the Chief Engineer.

CONNECTING LINES.

EASTERN AND SOUTH-EASTERN.—The direct route to New York from the south-eastern terminus of the southern division will be by the Warren R. R. 18 miles to New Hampton Summit, and thence by the Central Railroad of N. J. via Elizabethport; or via Elizabethtown and New Jersey R. R. to Jersey City.

Favorable contracts for doing the business of this Company have been entered into with these two Companies (the Warren and Central); the latter Company having agreed to lay an extra rail conforming to the gauge of this road. It is further provided that a second 6 ft. track shall be laid whenever the freight from this Company shall amount to 400,000 tons per annum.

As the Warren Railroad crosses the Morris Canal at a favorable point for the trans-shipment of coal, it is expected that a considerable portion of coal business during the summer season will be done through this channel.

The Board also entertain hopes of supplying the Morris and Essex R. R. Company with coal for the eastern market, and to meet the large demand for the manufacture of iron, and for other purposes upon the line of that road.

It is further anticipated that the Trenton and Belvidere R. R. Co. will extend their road from Belvidere to the south-eastern terminus of our road, a distance of four miles, and thus open a direct communication between Northern New York, the Lakes and Canada, and Trenton, Philadelphia, and the South. The addition of a single rail to the point of its junction with the Feeder of the Delaware and Raritan Canal, will open another great avenue by a descending grade to tide-water; whence coal, lumber, &c., may be shipped by the large propellers and barges of that Company to the eastern markets.

Still another, and very important connection is anticipated from the continuation of the Philadelphia, Easton and Water Gap R. R. from Easton to the Water Gap, the privilege of doing which, with a 6 ft. gauge, was granted to that Company at the last session of the Pennsylvania Legislature. This would open a 6 ft. gauge road from Philadelphia, by the most direct route, and easier grades, to every section of Western New York and the Northern Lakes. Its great importance to Philadelphia, and the south generally, will doubtless secure for it an early completion.

In addition to the foregoing, the Hudson and Delaware R. R. extending from Newburg to the Water Gap has been located, and the section between Chester and Newburg has been constructed as a branch of the Erie road. The construction of the Providence, Hartford and Fishkill R. R., now in progress, renders this connection of vast importance; and it is a reasonable supposition, that it will be made at no distant period.

WESTERN AND SOUTH-WESTERN CONNECTIONS.—Referring to the accompanying report of the Chief Engineer, in which these are noticed at length, or to the report of the Lackawanna and Bloomsburg R. R. Company, recently published, the irresistible inference to be drawn therefrom, is that the Sunbury and Erie, the Alleghany valley,

and the Lackawanna and Bloomsburg R. R. connecting with this road at Scranton, will secure to New York her nearest and best channel of communication with the West and South-west, and to this road, the many positive advantages claimed for it; among which may be named as worthy of especial attention, the great facilities which its construction will furnish the Company for extending indefinitely their coal business, and for its safe and economical management.

NORTHERN AND NORTH-WESTERN CONNECTIONS.—At Great Bend, 186 miles from New York by this route, the Delaware, Lackawanna and Western R. R., connects with the New York and Erie, over which, by a perpetual contract, its freight and coal trains, and passengers are conveyed on favorable terms, both East and West.

At Binghamton, 14 miles West of Great Bend, the first tributary to this road—the Syracuse and Binghamton R. R.*—branches off, constituting a link in the most direct route from Philadelphia and New York, to Syracuse, Oswego, and the Canadas, and this must soon become an important channel for the distribution of coal and iron. The character and importance of this connection may be best learned by reference to the interesting report just published by the Directors of that Company, from which liberal extracts are appended.† (See page 45.)

The Albany and Susquehanna, and the Utica and Binghamton Railroads, also diverging from the Erie at this point (the former now in the course of construction), cannot fail to contribute largely to the traffic of this company, forming additional outlets for coal, &c.

Large quantities of the Company's coal are at present trans-shipped at Binghamton, upon the boats of the Chenango Canal, and thence forwarded to Utica and other points on the eastern section of the Erie Canal. The rich iron ore beds of Clinton, which furnish supplies for the iron works at Scranton, and the gypsum and limestone from other places on the Chenango Canal, afford valuable back freight for both the boats and the Company's cars.

Proceeding westerly 22 miles on the Erie road to Owego, the next connection in order and importance, (if not the first in the latter respect), is the Cayuga and Susquehanna R. R. extending 34 miles northward from that place to Ithaca, at the head of the Cayuga Lake, at which point is the present principal coal depot of the Company, from whence its coals are trans-shipped into boats and distributed by the various New York canals and the Lakes. Large quantities of salt, flour, and other supplies required in the Lackawanna valley, are here offered as return freight by the Company's coal and other freight trains. A canal from the outlet of this lake to Great Sodus Bay on Lake Ontario, is in progress, and its projectors and friends are now sanguine of its completion at an early day. The capacity of this canal will be such, when finished, that the propellers and sailing vessels from the larger lakes can land their cargoes at Ithaca, and receive in return, coal destined for Canada and the North-west, direct from the cars of the Company.

Diverging from Cayuga and Susquehanna R. R. at Pugsley's Station, 8 miles south-easterly from Ithaca, the Auburn and Little Sodus Bay R. R. commences, and passing through Auburn and the rich fertile country intervening, terminates at Little Sodus on Lake Ontario, thus forming another important communication with Canada and the West. The grading of this road is nearly completed, and its Managers hope to have it open for business early in the spring of 1855.

Continuing on the N. Y. and Erie R. R. we meet successively the Elmira, Canandaigua, and Niagara Falls R. R. diverging at Elmira; at Corning, the Buffalo, Corning and N. Y. R. R.; and at

*This road is now graded ready for the superstructure, and the Company expect to have it open for business early in the ensuing fall.

† The iron rails for this road have been purchased, and are to be immediately laid.

Hornellsville, the Buffalo and New York City R. R.; at Olean, the Erie and New York City and other projected routes, and all converging from the west and north-west to Great Bend and New York.

All these connecting lines being of the broad or 6 ft gauge, form an uninterrupted communication from New York to their several termini.

It will be seen from the foregoing statements and by reference to the accompanying map, that the Delaware, Lackawanna and Western Railroad forms a great trunk line from the Delaware river, near the Water Gap, to the Susquehanna river at Great Bend, with diverging branches.

Leaving out of view the fact, that this road will be a great channel for the transportation of coal, its importance as a general freight and passenger road should not be overlooked. From the statements and reports herein contained, it will be seen that the grades and distances are extremely favorable for freight. Passengers will have an opportunity of visiting that great natural curiosity, the DELAWARE WATER GAP, from which point the road ascends the "POCONO," by easy grades; across the high table lands of which it passes for about twenty miles,—and from which point the view is of extraordinary extent and beauty. Further on, the Wyoming and Lackawanna Valleys possess great attractions for visitors,—and the route generally, it is believed will be a favorite one, for pleasure travel.

All of which is respectfully submitted.

GEORGE D. PHELPS, *President.*

MANAGERS:—Drake Mills, John J. Phelps, William E. Dodge, George Bulkley, John I. Blair, George W. Scanton, Roswell Sprague, Thomas Tileston, Moses Taylor, John Bradley,
New York. Jan. 2d, 1854.

English Railroads and the War.

We invite the attention of the railroad interest of this country to the following article from Herapath's Railway Journal. The history of the Railroad movement in England may be profitably studied by our own people, as similar tendency are at work in this country, that have produced such disastrous results across the water. We can avoid similar sacrifices, if we will be forewarned in season.

A sum of about 300 millions has been expended on railways in this country.

The present war has caused a depression in the marketable value of this capital, of about 20 per cent., representing a sum of 60 millions.

The 300 millions of capital consist of unprivileged share, preferential share, and loan capital. The unprivileged stocks have sunk the most, but preference shares and loans have also been enormously depreciated in market value through the war. On the whole, we estimate that 20 per cent exhibits the average amount of depreciation in the value of railway property created by our fall out with Russia—equal to the enormous sum of 60 millions sterling.

Is this justified? The expense of the war to the nation will, in all probability, be not more than half the amount of the loss to railways by the imagined losses it will create. Surely the figure of 30 millions is sufficient as the cost of the war. How then is it, that the war should operate to depreciate the selling value of railway property to the extent of double the whole cost of the war? If the several railway Companies paid the entire expense of it out of their own pockets, and had nothing in return for it, they would lose only half the amount of the depreciation of their property arising from the bugbear of the war. But the fact is, the war has, up to this moment, very little affected injuriously railway property, and there is no reason to expect greater injury in times to come. Our traffic tables of this year show large weekly additions to the traffic returns of each and every railway, in place of losses. In spite of war and notwithstanding the commercial depression that prevails, the traffics proceed in the upward

course they have pursued for many years past, and it is now beyond question that the railway dividend results of the current half year will show an improvement on those of the corresponding period of last year. The traffic of the expired portion of this half year is full 12 per cent. in excess of that of the corresponding period of last year. The increased value of money on loan, the increased price of materials and labor, are all additional claimants in the revenues of railway Companies, yet the surplus receipts of the period of the half-year that has already expired—more than half of it—are so large that no doubt can remain as to the satisfactory accounts for the current half year the Companies will be enabled to present. The additional traffic will more than cover the additional working expenses and preferential charges. When the war shall have come to an end, and money, materials, and labor found their usual level, the condition of the Companies (remaining possessed of no increased extent of line) must be greatly advanced, since the traffic will with some fluctuation continue its upward movement. We speak confidently of the progress of the traffic, because the long experience of the past has proved that the traffic of railways is steadily progressive even under the most adverse circumstances. One ordinary year succeeds another ordinary year, and the traffic of a railway in the second year advances on the traffic of the former year by about 10 per cent. Then, perhaps, comes a year of extraordinary national prosperity, and in this year the same railway advances 13 or 14 per cent. on the preceding years receipts; a year of depression follows, but still the railway traffic is higher than in the best prosperous year—and so railways have proceeded year after year during the long series of years many of them have been established. The Great Exhibition of 1851 produced a large additional traffic on the railways, but the same railways in 1853 took a still larger traffic. The oldest trunk line in the kingdom experiences to this day an enlargement of its traffic. This is a well ascertained fact. The minute investigations into the account of most of the old railway Companies that a few years ago took upon themselves so many new and inferior railways made or purchased at great expense, served to exhibit this fact. It was found that the dividends of railway Companies were reduced from 10 per cent. to 5, 4, 3, and in some cases to nothing, not from the falling away of the traffic of the old lines, nor from those lines earning a less amount of profit in respect to the capital expenditure on them, but from the Companies having made a host of new and unproductive lines, and having entered into a number of burthensome engagements. In every case the traffic profits of the same line have largely increased year after year, arising from the gradual but large increase of traffic. The Lancaster and Carlisle line is an instance. We might also mention the Taff Vale, as well as the results of the inquiries some time ago made, as we have said, into the affairs of a number of old Companies, complicated by new engagements and works: but the case of the Lancaster and Carlisle is quite sufficient for our purpose. It is capable of easy reference, and the facts are beyond dispute. The Lancaster and Carlisle line is a straight piece of trunk without branch, and the Company without a guarantee. In 1847, 7 years ago, it commenced paying dividends of 4 per cent.; in course of years rose up to 5 and 6 per cent.; and now it has reached full 8 per cent.; and 10 per cent. is expected to be the ultimate dividend. The increase in dividend has risen solely from the natural increase of a very ordinary stream of traffic. We may further remark in reference to this company, that its shares are now, in these depressed and almost panic stricken times, selling at from 70 to 75 per cent. premium, the £50 shares selling for £85 to £87 each. All the old Companies, whose dividend are so much diluted—Parliament having been a principal cause and agent of the mischief—by their numerous and complicated engagements in 1845-6—these, the great majority of railway companies have now found their lowest level as to dividend. Their new

lines are made, their onerous engagements are in full force against them. Their revenue profits are bearing the full weight of the oppressive burdens in years gone by recklessly cast on them. If the traffic were to cease increasing, or if the companies were about to enter on new undertakings, we could not hope for higher dividends; but it is perfectly safe to foretell that the traffic will materially increase—for 20 years it has steadily and largely increased and since January of this year up to the present moment it has increased to the extent of 12 per cent.—and we know that Parliament, railway Directors, and railway Shareholders are now all pursuing the policy of keeping the companies down to their present dimensions. Parliament has pledged itself to extend reasonable protection to railway companies, to discountenance competing projects, and in every application for a new line to take such a general review of the whole question as will effectually prevent the creation of such numerous, mad, and injurious schemes as those of 1845-6. Speculating solicitors, who got up railway projects to be brought off, and in nine cases out of ten obtained acts which rendered their worthless goods saleable at high prices, have no longer a *locus standi* and Parliament for their friend. We have good reason for believing that railway Directors generally intend to be satisfied with the present extent of property committed to their charge, and the feelings of the great body of railway Shareholders on the subject of farther extensions are well known. The Shareholders have sternly set their faces against extensions, and being a large portion of the public, they are slow to change. Woe to the board of railway directors who, in ignorance of this feeling amongst Shareholders, attempt to launch out on the old plan of extending here, there, and everywhere. In two recent cases, two separate boards of direction stumbled over this extension block and received injuries fatal to their existence.

Few Directors are, in the present day, extension men, and of these few perhaps there is now not one who would be so bold as to act on his opinion, and project lines as in 1845. At this moment there is not a safer nor a rarer speculation for a professional agitator to enter upon than to oppose Directors who put forth new schemes. He is sure to have the support of the Shareholders, and gain a victory. Should the great body of railway Proprietors, the railway Directors, and Parliament, continue for only five years in the opinion they now entertain against extensions, the railway dividends by the end of that time will approximate to their original standard of large remuneration, when 8 and 10 per cent. dividends and 80 and 100 per cent. premiums on shares were common. The war may continue to rage for years and may inflict a heavy cost on the nation, yet railway traffic will progress and railway dividends improve, if railway Proprietors alone be true to their own interests, for even Directors and Parliament—were they so inclined—are powerless to inflict much injury on railway property, provided railway Proprietors are determined to protect it. The future additional traffic not being charged with additional preference claims—the inevitable consequence of extensions—about 60 per cent. of such additional traffic will fall as net profit on the unprivileged share capitals of the Companies; and it is important to bear in mind that these unprivileged share capitals are fixed, and amount on the average to only about half of the whole capital spent.—*Herapath's London Railway Journal.*

Michigan Southern Railroad.

At a meeting of the stockholders of the Michigan Southern and Northern Indiana Railroad, held in Adrian, Mich., on the 12th instant, the following named gentlemen were chosen Directors for the ensuing year: John B. Jervis, Edwin C. Litchfield, Wm. Savage, John Stryker, Hugh White, Chas. Butler, James Archibald, Elisha C. Litchfield and John S. Barry.

ABSTRACT FROM THE ANNUAL RETURNS, SHOWING THE LEADING STATISTICS OF THE RAILROADS IN CONNECTICUT.

NAME OF ROAD.	Length of Double Track.	Capital.	Capital paid in.	Cost of Road.	Cost of Road per mile.	Gross Earnings.	Expenses of Working Road.	Net Earnings.	Dividends.	Debt.	Surplus.	Miles Run by Passenger Trains.	Miles Run by other Trains.	Total number of miles run.
Norwich and Worcester.....	59	2,825,000	2,122,200	2,596,488	44,009	321,046	169,824	113,038	84,418	709,337	67,223	131,778	146,159	277,939
New York, Providence and Boston.....	50	1,508,000	1,508,500	2,158,000	43,200	283,919	127,031	166,887	90,480	348,700	16,407	100,000	*151,968	*231,963
New London, Willimantic and Palmer.....	66	1,700,000	659,004	1,524,829	22,635	128,716	68,071	60,645	1,008,560	670,091	.....	60,096	41,316	101,412
New Haven and New London.....	50	1,500,000	734,248	1,375,912	27,518	96,138	66,643	82	.....	1,419,198	.....	26,170	812,949	88,000
Hartford, Providence and Fishkill.....	49.6	4,000,000	1,388,615	3,008,214	*30,462	98,941	40,251	.....	.....	500,000	.....	56,783	38,555	95,338
New Haven, Hartford and Springfield.....	62	2,350,000	2,350,000	3,470,000	54,365	639,529	304,180	294,266	352,500	797,000	.....	52,783	86,665	139,448
New Haven and North Hampton.....	55	922,500	922,500	1,400,000	25,454	133,280	61,452	26,680	36,900	500,000	.....	412,042	90,284	502,326
New Haven and New York.....	61.5	3,000,000	3,000,000	5,131,948	83,445	961,278	*579,209	258,184	.....	2,151,948	26,676	48,048	70,840	118,890
Naugatuck.....	58	1,500,000	1,000,000	1,530,907	26,380	246,687	88,090	121,591	74,080	478,694	13,274	108,748	157,154	265,903
Naugatuck and Danbury.....	74	2,000,000	2,000,000	2,407,754	32,536	324,990	201,059	15,909	.....	488,998	18,274	23,586	14,447	38,033
Danbury and New York.....	23.8	400,000	278,843	389,788	*18,660	48,880	28,157	17,415	14,736	85,300	10,917	.....	.....	.....
Southbridge and Blackstone.....	7.4	800,000	800,000	248,433	33,500	.....	.....	.....	.....	.....	.....	.....	.....	.....
Southbridge and Blackstone Branch.....	83	3,000,000	239,427	120,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Middletown Branch.....	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Allyn's Point.....	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	717.3	26,605,000	16,902,897	25,441,733	36,937	3,283,354	1,723,867	1,004,052	633,114	8,637,822	147,771	1,342,645	749,398	2,092,045
In Connecticut.....	644.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
In operation.....	653	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
In process of construction.....	136	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Average.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Extremes.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NAME OF ROAD.	Length of Double Track.	Capital.	Capital paid in.	Cost of Road.	Cost of Road per mile.	Gross Earnings.	Expenses of Working Road.	Net Earnings.	Dividends.	Debt.	Surplus.	Miles Run by Passenger Trains.	Miles Run by other Trains.	Total number of miles run.
Norwich and Worcester.....	210.626	5,953,511	90,250	0.15	0.12	0.61	1.15	138,069	105,813	210,722	.....	65,889	.....	.....
New York, Providence and Boston.....	218.722	8,202,100	47,160	0.19	0.22	*0.72	1.23	None Killed.	.....	.....	.....	.....	.....	.....
New London, Willimantic and Palmer.....	130.746	1,950,000	35,650	0.13	0.05	0.67	1.26	None Killed.	.....	.....	.....	.....	.....	.....
New Haven and New London.....	164.767	4,137,600	*10,000	0.18	0.07	0.60	1.08	98,000	.....	.....	.....	.....	.....	.....
Hartford, Providence and Fishkill.....	144.078	1,933,010	42,356	0.13	*0.12	0.70	0.72	None Killed or Injured.	.....	.....	.....	.....	.....	.....
New Haven, Hartford and Springfield.....	510.330	14,245,092	160,000	0.18	0.15	0.97	2.04	62,158	85,056	164,757	.....	40,342	.....	.....
New Haven and North Hampton.....	34.782	3,582,603	*55,275	0.08	0.11	0.64	1.39	95,748	94,787	.....	.....	59,780	.....	.....
New Haven and New York.....	1,148.437	40,248,208	70,000	0.20	0.18	1.04	1.91	100,465	229,687	.....	.....	82,408	.....	.....
Naugatuck.....	180.026	4,725,625	79,759	0.15	0.18	0.74	2.07	29,720	47,256	.....	.....	12,012	.....	.....
Naugatuck and Danbury.....	*312.583	*8,900,000	*57,480	0.17	0.15	0.75	0.22	None Killed.	.....	.....	.....	.....	.....	.....
Danbury and New York.....	78.895	802,286	12,811	0.15	0.08	0.80	1.30	None Killed or Injured.	.....	.....	.....	.....	.....	.....
Southbridge and Blackstone.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Southbridge and Blackstone Branch.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Middletown Branch.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Allyn's Point.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	3,202.490	94,640,082	670,741	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
In Connecticut.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
In operation.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
In process of construction.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Average.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Extremes.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Unknown, or partly estimated.

No. of passengers carried in Cars in Massachusetts, in 1853, 12,161,564; killed in all, 64, or one in 190,020. No of miles run by Trains, 5,760,741; one killed in 90,011 miles run.

Number of persons carried in Cars in New York, in 1853, was 8,174,863; killed in all, 137 persons, or one in 59,700. Number of miles run by Trains, 10,822,770; one killed in 79,010 miles run.

Latrobe and Knight's Rule for the Equation of Grades.

The formula adopted, for the equation of grades to level planes, by B. H. Latrobe and Jonathan Knights, Esqrs., engineers of the Baltimore and Ohio Railroad, is as follows:

$$\frac{R+F}{52.8} = \text{equivalent level in miles.}$$

R and F being respectively the rise and fall of the road in feet.

We have been asked to give a demonstration of this formula, and of the data upon which it is established.

In doing so, we shall reiterate our former statements, to the effect that the problem of the equation of grades depends not only upon their disposition and direction with reference to heavy traffic, but also upon the capacity of motive power.

The formula of Messrs. Latrobe and Knights is empirical in its nature, and is adopted only for general purposes of comparison. The results which it discloses, and which are sought only to show the relative cost of power as compared with a level, may be essentially modified by the conditions of the traffic, the disposition of grades, and of the power employed to surmount them.

The practical application of this formula involves certain assumptions. One is that the engines shall be loaded to their capacity when on a level, and another that the tonnage shall be equal in both directions. It assumes also that the friction of each ton drawn is 10 lbs., equal to one-half of the gravity of one ton on a grade of 52.8 feet, per mile. The gravity of one ton on a grade of 52.8 feet per mile being 20 lbs., and the whole resistance 30 lbs., it follows that three engines would be required on such a grade to do the work of one of equal power on a level. But on descending such a grade, it is assumed that one engine going with its train and two going empty, would cost no more than one engine exerting its full power on a level. Consequently the disadvantage of such a grade is measured by the cost of keeping three engines going one-half of the time, and the cost of one engine for the other half, equal to the average cost of maintaining two engines all the time. By this result a rise of 52.8 feet in any distance, imposes an additional expense equal to the operation of one mile of level.—Hence the formula,

$$\frac{R+F}{52.8} = 1 \text{ mile additional length above that of a level plane.}$$

To show how the results derived from this formula would be modified by conditions of traffic other than those assumed, the case of the Reading road may be cited. This road has a descent of 606 feet from Mount Carbon to tide water; which, if divided by 52.8, would give $11\frac{1}{2}$ miles as additional length beyond the actual length of the road. It would be inferred from this result that this road labored under a disadvantage, by reason of its inclination, equal to the cost of operating $11\frac{1}{2}$ additional miles of road. But, on the contrary, inasmuch as the ascending trains of empty cars are of but one-third the average weight of the descending loaded trains, this inclination is of no disadvantage at all, as the saving in fuel due to the descent more than repays the additional consumption in ascending with empty cars. Were the direction of the tonnage changed, the ascent

of 606 feet would operate very seriously against the capacity of the road probably by as much as 25 additional miles of level.

We have, in previous discussions, gone over the conditions upon which the effects of grades are to be estimated, and need hardly repeat that the disposition of grades, and the adaptation of power for their ascent, have the most intimate relation to their economical results.

We wish in this connection to acknowledge the kindness of Florentin Pelletier, Esq., engineer in charge of the Northern (New York) Railroad, for obtaining for us from the working profiles of his road, the following authentic and business-like statement of its physical features. Mr. Pelletier's favor was received several weeks since, but accidentally became mislaid. We should be glad to receive and to place on record as concise and complete exhibits of the physical characteristics of other of our great roads.

TABLE OF GRADES—OGDENSBURGH RAILROAD.

From Ogdensburg east 46.38 miles.

Ascending Grades.

Grade per mile,	Feet.	Feet.	Miles.	Rise, feet.
26.4.....	55,790	10,566	278.95	
21.12.....	1,000	0.189	4.00	
19.....	400	0.075	1.44	
15.84.....	666	0.126	2.00	
13.2.....	8,700	1.647	21.75	
12.67.....	600	0.113	1.44	
10.56.....	5,600	1.060	11.20	
7.92.....	9,500	1.800	14.25	
5.28.....	8,500	1.610	8.50	
4.85.....	3,800	0.719	3.50	
2.64.....	4,000	0.759	2.00	
	98,556	18.664	349.03	

Descending Grades.

Grades per mile,	Feet.	Feet.	Miles.	Fall, feet.
26.4.....	36,000	6.818	180.00	
21.12.....	3,772	.714	15.09	
19.....	3,900	.738	14.00	
13.2.....	2,975	.563	7.44	
10.56.....	3,000	.568	6.00	
5.28.....	5,000	.946	5.00	
1.37.....	4,000	.757	1.00	
	58,647	11.104	228.53	

16.609 miles level.

11.104 " descending grade, average 20.55 feet per mile.

18.664 miles ascending grade, average 18.70 feet per mile.

The next 34.016 miles to summit, going east.

Ascending Grades.

Grade per mile.	Feet.	Miles.	Rise, feet.
26.4.....	143,105	.....	716.52
23.76.....	8,444	.....	38.00
22.7.....	4,400	.....	18.92
22.17.....	2,881	.....	10.00
21.12.....	2,500	.....	10.00
16.90.....	2,200	.....	7.04
15.84.....	300	.....	.90
13.20.....	800	.....	2.00
5.28.....	2,100	.....	2.10
	166,230	34.128	804.48

Descending Grades.

Grade per mile.	Feet.	Miles.	Fall, feet.
8.13.....	3,900	.....	6.01
4.75.....	3,800	.....	2.97
	7,200	1.363	8.98

1.169 miles level.

31.482 " ascending average 25.55 feet p. mile.

1.363 " descending " 6.58 "

The last 37,082 miles from summit to Rouse's Point.

Ascending Grades.

Grade per mile.	Feet.	Miles.	Rise, feet.
26.4.....	11,300	.....	56.5
13.2.....	800	.....	2.0
11.61.....	400	.....	.88
2.11.....	4,500	.....	1.8
	17,000	3.219	61.18

Descending Grade.

Grade per mile.	Feet.	Miles.	Fall, feet.
39.6.....	140,700	.....	105.525
31.68.....	1,500	.....	9.
30.78.....	600	.....	3.5
26.4.....	4,300	.....	21.5
24.81.....	400	.....	1.88
21.12.....	4,200	.....	16.8
15.84.....	1,666	.....	5.
13.2.....	2,400	.....	6.
10.56.....	2,375	.....	4.75
5.81.....	2,000	.....	2.2
4.75.....	2,000	.....	1.8

162,141 30.708 1127.68

3.155 miles level.

3.219 " ascending, average 20.25 feet p. mile.
30.708 " descending, average 36.72 "**RESUME OF GRADES.**

	Feet.	Miles.	Rise, feet.
First 46.38	16,610	18.664	11.184
Next 34.016	1,169	31.482	1.363
Last 37.082	3,155	3.219	30.708
	117,478	20.934	53.365

53.365 miles ascending grade, with a total rise of 1214.69 feet, equal 22.76 feet per mile,
43.255 miles descending grade, with a total fall of 1365.19 feet, equal 31.56 feet per mile.

Grade at Ogdensburg, 238.5 feet above tide.

" " Summit, 1154.5 "

" " Rouse's Point, 88.0 "

Rise from Ogdensburg, to Summit, 80.4 miles, 916 feet.

Fall from Summit to Rouse's Point, 37.08 miles, 1066.55 feet.

Total descent in feet, going east, 1365.19.

Average for 117.48 miles, 11.62 feet per mile.

Total ascent in feet, going east, 1214.69.

Average for 117.48 miles, 10.33 feet per mile of road.

FLORENTIN PELLETIER,

Engineer in Charge.

The table of Curves we must reserve for the present for want of room.

Journal of Railroad Law.

WHEN MAY FORWARDING MERCHANTS BRING ACTIONS IN BEHALF OF THE OWNERS OF GOODS DELIVERED TO THEM?

The law upon this subject will appear in the following late decision of the Supreme Court of Pennsylvania, in a suit between *Atkins & Co.*, forwarders of Philadelphia, and the *Baltimore Steamboat Co.*:

Knox, J.—The plaintiffs below, *Atkins & Co.*, delivered to the *Baltimore Steamboat Company* certain goods, which they promised to deliver in good order to the *Cumberland Railroad Company* at Baltimore, to forward to Messrs. *McKaig & Agnew*, Cumberland, who were agents of *Atkins & Co.*

The goods were damaged whilst in the custody of the steamboat company, by their negligence, as established by the verdict of the jury.

This action of assumpsit is brought by *Atkins & Co.*, for the use of the legal owners of the goods, to recover the damages sustained; and whether their action can be sustained, as brought, is the only point properly raised by the record before us. To determine this question, we must first inquire into the manner in which *Atkins & Co.* became possessed of the goods, and the extent of their interest in them.

The equitable plaintiffs in the action, *J. Beal* and *P. McAnther & Co.*, are merchants of Cincinnati, and purchased the goods in question in

the city of New York. The vendors of the goods delivered them to the New Jersey Transportation Company, to be forwarded by that company to Philadelphia and from thence to Cincinnati, the place of their destination, by O'Connor's Five Day Line, which is represented in Philadelphia by Atkins & Co., the plaintiffs below.

When the goods arrived in Philadelphia, Atkins & Co. received them from the New Jersey Transportation Company, paying to that company their charges, and placed them in the hands of the defendants, without repayment, upon their agreement to deliver the goods in good order to the Baltimore Railroad Company, for the purpose of forwarding to Cincinnati, there to be delivered to the agents of Atkins & Co.

By receiving the goods in Philadelphia, and paying the freight from New York, Atkins & Co. certainly obtained an interest in them, subject, of course, to the general property of the owner, but good as against any other person, and even superior to the general owner upon the question of possession until re-payment.

If the defendants had complied with their contract, and delivered the goods to the Baltimore Railroad Company, they would again have been restored to the actual custody of the plaintiffs, through their agents at Cumberland, and by them forwarded to Pittsburgh, where, according to the evidence, upon delivery on board of a steamboat, charges of every description would have been paid to the plaintiffs; but from Philadelphia to Pittsburgh, they must be considered in the light of the principal carriers using the defendant's company, and the Baltimore and Ohio Railroad Company as the means of transporting the goods from Philadelphia to Cumberland.

At the time of the injury the interest of the plaintiffs, Atkins & Co., in the property, was, first, to the extent of the advances made by them to the New Jersey Transportation Company; second, the right to receive the goods at Cumberland, and transport the same to Cincinnati, or at least to Pittsburgh, and to retain the possession until all charges were paid. This interest gave to Atkins & Co. a special or qualified property in the subject matter of their agreement with the Baltimore Steamboat Company, and, according to all the authorities, both in England and in this country, the action of *assumpsit* may be maintained in the name of one having such special property.

In general, a mere servant or agent with whom a contract is expressed to be made, on behalf of another, and who has no direct beneficial interest in the transaction, cannot support an action thereon. But when an agent has any beneficial interest in the performance of the contract, as for commission, or a special property in the subject matter of the agreement, he may support an action in his own name upon the contract, as in the case of a factor, or broker, or a warehouseman, or carrier, or a policy broker whose name is on the policy, or the captain of a ship for freight. *Grow vs. Dubois*, (1st T. R. 112;); *Atkins vs. Amber*, (2 N. O. 193;); *Grant vs. Gauld*; *George vs. Clagget*, (7 T. R. 359;); *Johnson vs. Hudson*, (11 East 180;); *Saddler vs. Leigh*, (4 Comp. 195; *Park on Ins.* 403;); *Shields vs. Davis*, (*Thornton* 65;); *Brown vs. Hodgson*, (4 Lawton 189). There is nothing in the case of *Green vs. Clark*, (5 Denio 497, and again reported in 13 Bar. 57), to control the principles above stated. The agreement there was, to deliver the property to the consignee, and no freight was to be paid by the consignor until the contract had been executed by a delivery of the property as directed. Consequently, there was neither property nor interest in the plaintiffs who were merely acting as agents for the owners, and appeared as such upon the face of the contract.

The question as to the extent of the recovery, was not raised in the court below, and if it had been, the defendants would not have profited by it. The whole damages were properly recoverable in this action, particularly as the owners of the general property were parties to the record and are precluded from further claim.

Judgment affirmed.

CONSTRUCTION OF THE CONTRACT BETWEEN A STOCK COMPANY AND ITS SUBSCRIBERS.

This subject has lately engaged the attention of our Superior Court in the case of *Manice against the Hudson River Railroad Co.*

This was an action brought to recover the interest on the defendant's subscription to seventy-five shares of the capital stock of the company, from the 15th November, 1849, to the 15th November, 1851.

By the terms of subscription it was agreed that application should be made to the Legislature to authorize a limited number of shares of stock "to be applied to the payment of interest," on the instalments paid in by the subscribers on the stock, until income should be realized on the road, the first payment of interest to be made on the 15th of November, 1847, and semi-annually thereafter, at the rate of seven per cent. The Legislature accordingly passed such an act, on the application of the company, authorizing the issue of as many additional shares, not exceeding ten per cent. of the original stock, as might be necessary to enable the company to provide for and pay interest on the instalments paid in for the construction of the road, until it should be completed, and be put in operation. The company subsequently issued stock to the amount of four per cent. of its capital, and from the proceeds thereof paid the plaintiff the interest due on his instalments up to the 20th of November, 1849. They afterwards offered to pay, and did pay to all except to the plaintiff, the interest subsequently accruing, in stock. The plaintiff refused to receive stock, and now brings this action to recover the interest in money. The case was argued on a demurrer, and a judgment rendered for the plaintiff for \$1,497 50, the amount claimed in the complaint, and the defendants appealed.

It was contended upon the argument, that the case turned entirely upon the proper construction to be given to the contract between the plaintiff and the company, contained in the subscription paper. This provided that the interest should be paid until income should be realized from the road; and it was contended that under this agreement interest was to be paid only until income should be realized from any portion of the road, not until it should be realized from the whole road. Several other points were raised in the pleadings and arguments, but the opinion of the court turned mainly upon this point. The opinion was rendered by Judge Duer. He said that even if the question turned entirely upon the construction of the agreement, the plaintiff would probably be entitled to recover. But the act of the Legislature applied for by the defendants themselves, removed all doubt. This act, which constituted a part of the contract, provided that the company were to issue as many shares, not exceeding ten, as might be necessary to enable them to provide for and pay interest on the instalments paid in for the construction of the road, until it should be completed and put in operation. This act was passed at the request of the defendants themselves, and was accepted by them, and they would be bound by it as a part of their agreement. The plaintiff therefore, was entitled to interest.

The judgment was affirmed, with leave to the defendant to make an application at special term to the judge before whom the case was originally heard, for a moderation of the judgment, which was, by mistake, far too large an amount.

STREET-GRADING—PRIVITY OF CONTRACT.

McDowan against The Hudson River Railroad Company.—This is an action to recover damages of the defendants for not arching over Seventieth street. The defendants made an agreement with the corporation to arch over the street where the railroad of the defendants crossed it. The plaintiff subsequently made a contract with the corporation for the grading of the street. This contract he performed until he came to Seventieth street, when he stopped, leaving the Hudson River Railroad Company to bridge over Seventieth street in accordance with their agreement with the cor-

poration. This they neglected to do, and the plaintiff now brings this action to recover damages for this neglect. Held by the court, Campbell, J., that there being no privity of contract between the plaintiff and the defendant, the plaintiff could not avail himself of the contract between the defendant and the corporation.

The defendant had never contracted with plaintiff to build a bridge over Seventieth street. These parties were strangers to each other.

The plaintiff should have fulfilled his contract with the corporation so far as practicable, and if they did not furnish the requisite facilities for completing the work, in pursuance of the contract, they would be compelled to make due reparation.

MUNICIPAL SUBSCRIPTIONS.

The Supreme Court of Missouri has sanctioned the County Court subscriptions to the Pacific Railroad.

The tax laid upon the people for carrying on this work will not now be subjected to the "law's delay."

A CLAIM FOR RAILROAD DAMAGES BY A SERVANT WHOSE FARE HAD BEEN PAID BY HIS EMPLOYER.

Such a case has lately been tried in the Superior Court before Judge Slosson.

Thomas McQuade against The Erie Railroad Company.—Plaintiff, on 25th February, 1853, was in the smoking car of a train going from New York to Dunkirk, which car was drawn off the track by a car used as a baggage car which was in front of it. Plaintiff was thrown out of a side window. One of his legs was broken, and he was otherwise seriously injured. The hooks which attached the baggage and the smoking cars to the passenger cars gave way and the other cars passed on in safety. Plaintiff alleged that the injury was caused by the agents of the company taking the baggage car (which was imperfect) from the train and substituting a freight car, into which the baggage was put; that the freight car was unfit for the work, and consequently ran off the track, drawing with it the car in which plaintiff was. He brings suit for damages, laid at \$10,000. The case was tried a few weeks ago, when the jury could not agree.

Plaintiff is a young man. He was engaged at the time as a newsboy, delivering papers on the route, and usually remained while in the train in the smoking room, folding papers, &c. He says that he paid his passage, and the company were bound safely to transport him.

In defense, it was said that plaintiff had not paid his passage, and had not, in consequence, any right in the train; and, also, that there was no negligence. In reply it was said he was in the employ of William Seally, a regular newsman, who had contracted with the company for passage, &c.

The jury rendered a verdict for \$3,000 in favor of plaintiff.

Syracuse and Binghamton Railroad.

The following gentlemen were re-elected Directors of the Binghamton Railroad for the coming year: B. C. Littlejohn, H. Murry, Oswego; H. White, T. B. Fitch, C. T. Longstreet, J. R. Lawrence, Syracuse; R. Dunlap, Jamesville; Jedediah Bowber, Israel Boyce, Henry Stephens, Augustus Carley, Cortland; D. S. Dickinson, Hazard Lewis, Binghamton. The following officers were also elected: President, Henry Stevens; Vice President, Daniel S. Dickenson; Secretary, Clinton F. Paige; Treasurer, T. B. Fitch; Engineer and Superintendent, H. B. Gilbert. Eight miles of track are laid, and the whole will be completed in September. Through the Lackawanna and Western railroad, it will be brought into immediate connection with the Pennsylvania coal fields, and

will at once enter upon the important work of supplying central New-York with the indispensable article of fuel.

American Railroad Journal.

Saturday, June 24, 1854.

Share and Money Market.

The stock market during the past week has touched a lower figure than has been reached for the last five years. On Tuesday Erie sold at 60; Central 95; Michigan Central at 95, and Reading at 74½. These prices show a falling off from 20 to 35 per cent. from the highest prices that have been obtained. Other stocks have suffered in a nearly equal degree. The average fall in all the railroad stocks that are usually upon the market will probably equal 15 per cent. from ordinary prices. In some instances bonds well secured have suffered an almost equal decline.

There is no reason why the stocks instance should undergo an excessive decline from any discovered change in their *inherent* value. The fall is due to the peculiar state of the *times*: to an unusual demand for money in nearly every department of industry, and to the disturbing influences of an European war. There is no doubt that the calls for our railroads have exceeded the means of the country applicable to such works. The case has been aggravated by the almost entire cessation of investment on foreign account. Foreign capital has aided very largely in the construction of our railroads, leaving the domestic means of the country to engage in other enterprises. The supplies of the former having ceased the whole burden has been thrown upon the shoulders of our own people. The deficient supply of money of course brings down prices, and to this fact is mainly to be attributed the present depression.

While the revenues of English railroads show a decided increase of receipts over the past year the market value of their stocks and securities shows a decline of 20 per cent.. This decline is due to the effects of the present European war. As the railway investment in Great Britain is fully equal to £300,000,000, the loss consequent upon the war in the depreciation of railroad property alone is equal to £60,000,000 on \$300,000,000, or twice the whole estimated cost of the war. Of course the *actual*, is not so great as the *apparent* loss, except on the part of the parties who are compelled to *sell*. The influence of the war upon the value of securities in Great Britain have been felt to a considerable extent by the railroads of the United States. As far as our country belongs to the great commercial confederacy which embraces all civilized nations, so far is it affected by the disturbed or disordered condition of any of its members. In the manner stated the United States are as much a party to the war now raging in Europe as are those actually engaged in hostilities. An *European* war necessarily involves all Christendom in its results.

Notwithstanding the depreciated value of railroad property, the earnings of these works are greatly in excess of any former period, and of their increased cost. The following statement of earnings, being all that have been received to date, with the exception of one or two new lines,

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for 60d	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,588,100	2,973,700	5,973,700	254,743	113,520	none	83
Androscoggin and Kennebec.. "	55	824,863	1,043,540	2,036,140	177,003	80,053	none	30
Kennebec and Portland..... "	72	1,078,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	95
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	.....	.....	328,782	163,075	5	40
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,518	8	104½
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	124
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	6
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	92½
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	90
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100½
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6½	81½
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	97
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,863	1,802,244	258,220	102,098	4	67
Eastern..... "	68	2,850,000	1,192,975	3,120,391	620,810	310,875	6	80
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	97½
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	90
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	57
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,897	122,866	none	98½
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	15½
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	61
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	96
Stonington..... R. I.	60	.....	467,700	.....	240,572	110,892	.....	70
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	95
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	120
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	85
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.. "	55	750,500	650,000	1,380,610	.....	Recently opened.	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	56
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	.....	Recently opened.	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	.....	Recently opened.	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Canayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	61½
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	59
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	44½
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	95½
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	13
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	.....	Recently opened.	none	.....
Rensselaer and Saratoga..... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington..... "	60	850,000	400,000	1,250,000	.....	Recently opened.	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	.....	Recently opened.	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	.....	Recently opened.	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,492	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	.....	Recently opened.	.....	125
Harrisburgh and Lancaster... "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	74½
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	74½

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equip't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,948,827	617,625	....	97
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,108	22,254,388	2,038,420	798,193	7	58
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna.. "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.. "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	508,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.... "	32	180,000	120,000	416,532	89,776	.....	12	....
Wilmington and Raleigh.... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga. "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	68
Frankfort and Lexington.... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	76½
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	88
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta.... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky.... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley.. "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois.... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis.. "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Terre Haute and Indianapolis "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	123
Michigan Southern and Ind. N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	116½
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	97
Pacific..... Mo.	38	.....	non	In progres	Recently opened.	.....	.....	.....

will show the comparative earnings for the month of May.

	1854.	1853.
Hudson River Railroad	\$123,271	\$93,704
Cleveland and Toledo.....	55,500	27,000
Chicago and Rock Island....	100,270	new.
Milwaukee and Mississippi..	42,000	13,967
Ohio and Pennsylvania.....	81,238	47,870
Michigan Central.....	200,020	135,202
Michigan Southern.....	211,684	148,325
Cleveland and Pittsburgh....	51,283	35,368
Pennsylvania Railroad.....	297,137	195,072
Baltimore and Ohio do.....	366,514	204,950
New York Central do.....	511,888	362,997
New York and Erie.....	489,809	\$350,142
New York and New Haven....	71,906	62,674
Louisville and Frankfort....	20,408	16,706

Total.....\$2,631,937 \$1,693,977
1,693,977

Increase at 55 per cent..\$937,961

Such figures as these ought certainly to maintain public confidence in the value of our railroads.

The continued stringency in the money market operates very heavy upon new works. There is no doubt that it will be much more difficult for railroad companies to negotiate for the future than formerly. They will have to depend now upon domestic means, rather than foreign loans.

Cleveland and Toledo Railroad.

The Cleveland and Toledo Railroad Company are now operating both their lines on the Lake Shore, for through business.

The business thus far for 1854, without the advantage most of the time of both tracks, shows the following result:

	1854.	1853.
January.....	\$40,582	\$ 6,228
February.....	45,662	27,448
March.....	70,782	44,855
April.....	73,082	35,238
May.....	55,278	26,617

Total.....\$284,896 \$151,384

The work is operated, we understand, for considerably less than 50 per cent.. The share dividend to be earned at present is on \$2,600,000.

Utica and Binghamton Railroad.

The Directors of the Utica and Binghamton Railroad have decided in favor of the line called the canal route, via Bouckville and Hamilton, a length of 72 92-100 miles. The estimated cost of this is \$822,354 35, or an average per mile of \$27,573 23, which includes the complete furnishing of the road and stations. There were two other routes designed, one via Waterville and Hamilton, 45 6-10 miles long, at an estimated cost of \$970,258 52, averaging per mile \$29,780 59; and the other, via Waterville, leaving off Hamilton, 40 95-100 miles, called the swamp route, at an estimated cost of \$888,098 72, averaging per mile \$30,073 45. The excess of expenditure via Waterville and Hamilton over the canal route selected, was \$147,964 17, and the excess of the swamp route was \$65,744 37.

Manassas Gap Railroad.

The independent line from Alexandria to Gainesville, thirty-four miles, and the Loudoun branch to Purcellville, twenty-seven miles, are under contract. Purcellville is 16 miles from Harper's Ferry, and forty-eight from Alexandria, so that the last-named point may by this route be brought within ninety-six miles of Winchester—eighteen nearer than Baltimore. The Loudoun and Hampshire Road, however, will effect a further reduction of fifteen miles, or twenty-one were the Snicker's Gap line selected. In profile and alignment, both roads will be far superior to the Baltimore and Ohio road east of the Ferry, with its eighty-six foot grade and curves of four hundred feet radius.—Winchester Virginian.

Uses of Railroads.

In no part of the world do railroads have so peculiar an adaptation to the country as in America. This fact arises from the extent, productiveness and strongly marked local features of the many geographical districts which exist with us under one nationality. To that intercourse which develops the wealth of a country, our natural obstacles interpose but comparatively slight resistance,—our artificial boundaries *none*. East of the Rocky mountains there is but little impracticable ground, and still less that is unproductive. Nowhere, therefore, could railroads confer more substantial or more general benefits.

Railroads stimulate production in remote districts, by equalizing the *prices* of products over large areas. By their certainty and celerity they give production the benefit of the condition of the market, making the acquisition of wealth systematic and not accidental. The Ohio farmer, acting upon the report of the New York cattle market for *to day*, may *next week* see his own sales reported by the same hand. In proportion to the certainty of sale can the owner command banking facilities at home, and thus extend his operations without submitting to financial sacrifice.

On the other hand while a district of country is inadequate for the support of a railroad none should be built, as its own support becomes an unproductive *tax* instead of a profitable premium. It is only the extremities of our system however which require a temporary injunction of this nature. The benefits of railroads are almost inversely as their *cost*, a plain fact which should prevent over-construction. Paddy's mistaken faith that *two* stoves, of an economical pattern, would save *all* of his fuel, is alike to that which imposes the support of *two* roads upon the legitimate business of *one*.

Railroads, on commanding routes, are almost always successful if well managed. North and South roads, traversing many degrees of latitude, pay from the variety of *natural products* which they develop. East and West roads pay, if any thing, yet better, by the variety of *social pursuits* which they accommodate. The distinctions between *commerce, manufactures and agriculture*, are more clearly defined than between *wheat and sugar, or pork and cotton*. In other words diversity of natural products employs fewer railroads than a diversity of social pursuits.

How few of the stereotyped arguments so often urged in England, and copied here, are remembered in the presence of our own magnificent and peculiar system of railroads! The "conveyance of the public troops," "the despatch of official documents," and even the more rational claim to the accommodation of metropolitan occupation with suburban residence, are all *incidental* but not the *principal* advantages of American railroads. We make our railroads, not only a *convenience* but a *necessity*. By their aid we people states, make the wilderness bloom with fertility, the mine tremble in the contest for its hidden stores, and the workshop vocal with the harmony of labor. We create commerce, form society, and control events by the help of railroads.

While railroads create *wealth*, it is no reproach to the enterprise of our times that it has enlisted chiefly in its acquisition. Our country is *new*,

and at no time can we realize the truth so strongly as when we are occupied in opening our resources. *Settlement*, although the *first*, is not the only element of national existence.

Wealth is the legitimate object of present effort. A country like ours can never be civilized, refined, and far advanced in the application of the great practical principles of social good, without *capital*. For a time our wealth must increase, as it now does, faster than our numbers. While we renounce selfishness, and the base pursuit of gain for ignoble purposes—for the gratification of idle luxury, tyrannical ambition and corroding pride, we should accord the honor justly merited by those who employ the noble attributes of reason and humanity in great efforts of social and national elevation. With the just and ultimate issue of their exertions all our aspirations of mental, moral and physical greatness are identified.

Machinery Commission Agencies.

We have before alluded to the importance, both to manufacturers and consumers, of having commission agencies or depots established at various central points throughout the country from which pieces of machinery and all kinds of lighter equipment may be easily distributed and where orders for any thing wanting to supply deficiencies in the full and proper equipment of a road may be filled at once.

Experience proves that they are the means of saving much time and expense to the managers of roads and their companies and time too which is exceedingly valuable to the public. For a man cannot see properly to the management of a road unless he be on the ground. Frequent journeys to large cities or the distant manufactories of machinery and other stock, by the managing man must necessarily be detrimental to the interests of his company, provided his services are of any value when at home. The business which he would transact during his absence might be accomplished by other parties, better perhaps, than his presence at home could be dispensed with, and no other parties could probably do it so efficiently as those agents who make it their exclusive business to attend to such commissions.

We are therefore glad to see such agencies increasing and prospering. It is evidence that their services were both needed and desired. Their warehouses become a sort of fair or show-room and select such as please them best. They are also an excellent medium for introducing people to various manufacturers of the same article and diffusing a knowledge of the qualities and properties of new articles of use.

This movement railway furnishing agencies, we believe commenced in New York where it has flourished to a good extent and now it is rapidly extending to Western Cities. Here we have Messrs. BRIDGES & BRO. CHARLES T. GILBERT and CLARK & JESUP, names all familiar o railway men; and at the West, E. R. T. ARMSTRONG in Chicago and JAMES W. HOOKER of Buffalo.

These latter are perhaps the best points of distribution in the west for such articles as are required by railway companies, but we think Cincinnati and Cleveland would well support others. In Philadelphia Mr. O. A. NORRIS is also in the same business; and in Boston Mr. CHARLES STOD-

DER has for a long time catered to the wants and interests of both railway Companies and manufacturers of machinery in New England. We hope to see these brokers encouraged, as we believe they occasion the saving of much time, and expense to all parties concerned.

Atlantic and Pacific Railroad.—"Extraordinary Developments."

A Mr. Corns. Glen Peebles is out in an *expose* of the proceedings of the Atlantic and Pacific Railroad. The substance of his charges are as follows:—

"THE ATLANTIC AND PACIFIC RAILROAD COMPANY" never had any legal existence. The charter conferred the duty of opening the books to eighteen Commissioners, the majority of whom never attended, at any time, when the stock was subscribed for. The subscriptions were therefore illegal. This irregularity, however, does not affect the charter—it being competent at any time hereafter, to open subscription books, and effect a legal organization under it.

Under this existence of facts, no man who has subscribed for stock is under any legal obligation to pay, there being no Company.

Even had the Commissioners been present at the opening of the books, it is evident that nineteen-twentieths of the subscriptions were manifestly in bad faith; because, upon examining the books, it will be found that such a proportion have not paid the assessments, and are totally irresponsible. Seventy-four millions seven hundred and seventy-five thousand dollars (\$74,775,000) of the stock being taken by twelve men, the aggregate of whose property, real and personal, will not exceed one million. There are of \$500,000 and over, and less than a million, sixteen; and of over \$100,000, and less than \$500,000, twenty-nine; and eighty-nine \$100,000 subscriptions.

On \$25,000,000, \$25,000 is all that has been absolutely paid on assessments of one-tenth of one per cent. Had the subscriptions been in good faith, \$100,000 should have been paid on that assessment. On the second call of a quarter of one cent., due 20th May, there should have been produced \$250,000, but it is believed that not \$10,000 has been paid—showing a much greater falling off. Thus, in the aggregate, not to exceed \$40,000 has been paid in. In this amount is not included an amount of \$10,000, for which Mr. Walker obtained a receipt from the Secretary, as the consideration of a pretended sale of "a right of way across Sonora and Chihuahua," which he might procure from Santa Anna. He was allowed that amount by the Executive Committee, and he transferred, without any warrant of any kind, and after the parties should have known that the conclusion of the Gadsden Treaty rendered such pretended right simply ridiculous.

The stockholders of a million and over are as follows:—

R. J. Walker	\$10,000,000
Anson Jones	1,000,000
Samuel Waggener	2,000,000
Jeptha Fowkes	5,100,000
S. G. Langdon	1,000,000
Thos. Jefferson Green	7,000,000
M. — Hunt	5,000,000
Robt. Rose	1,000,000
S. E. Church	1,000,000
Selah Chamberlain	1,000,000
Stewart Newell	1,000,000
L. S. Chatfield	39,675,000

\$74,775,000

The subscribers to the stock, in sums of less than \$1,000,000, are the same in kind though less in degree.

In the above subscriptions there is more humbug and less money than can be found on any subscription paper on the face of the earth.—Walker's Texas Central Railroad excepted. The

real and personal estate to uphold nearly \$75,000,000 of this stock, will not amount to 11,000,000.

There are not probably, says Mr. Peebles, exceeding \$1,000,000 of *bona fide* subscriptions on the stock book, nor to exceed two millions of money standing behind the \$100,000,000 subscribed, and even the few who subscribed in good faith, are turned over to the tender mercies of Walker, King and Fowlkes, by a self-created trust.

In organizing the Company, it was sought to give it an odor of nationality, and to that end Southern men were brought in, and unfortunately amongst them the Honorable Robert J. Walker; the former California collector, T. Butler King; and the broken banker, Jephtha Fowlkes. These men, by extraordinary activity and hypocritical subserviency, got themselves placed on the executive Committee, which was composed of six members. To show the nefarious uses made of the trust thus reposed in them, a few of the resolutions of that famous Committee are here transcribed.

November 5th, 1853.—Mr. Walker submitted a resolution that all stockholders holding over \$300,000 of the stock of the Company be "respectfully" requested to transfer the excess beyond that amount to the Company, and stated that unless such a resolution was adopted he would retire from the Company. That resolution was amended by inserting \$500,000 instead. And, as amended, was adopted. Let us see how far Mr. Walker regarded his resolution and pious declaration.

November 25th.—On motion of Mr. Walker, a Committee consisting of Walker, Woodhull and Bridge, was appointed, with power to accept or reject any proposition for transferring to this Company any grants of land or other privileges or rights to build any part of the Atlantic and Pacific Railroad in California, Arkansas, or Mexican Territory.

December 15th.—Four members of the Committee, to wit, Walker, Fowlkes, Woodhull and Bridge, being present, Walker proposed and offered to the Atlantic and Pacific Railroad Company, "all my interest, present or contingent, in any railroad charter or lands conceded therewith that may be obtained by me from the government of Mexico, in the State of Chihuahua, or Sonora, assigning only, without warranty of any kind, my interest, present or prospective, as above stated, on the following terms:—

1st. The payment to me of \$10,000, cash.

2d. The return to me of \$500,000 of full paid stock of the Central Railroad of Texas, in case I shall have paid the same for said grant and charter, and not otherwise; or the assignment to me, at the option of the Company, of \$500,000 of full paid stock of the Atlantic and Pacific Railroad Company, to be exercised, and carried into execution, on or before the 15th January, 1855."

Whereupon, it was "Resolved, That the preceding offer of R. J. Walker be accepted."

"Resolved, That the Treasurer of the Company be directed to give R. J. Walker credit, on the books of the Company, for the said sum of \$10,000."

Walker took a copy of these resolutions to Mr. Leland, the Secretary, (there being no Treasurer,) and demanded a receipt of payment of the first assessment on his \$10,000,000 of stock, and, with the aid of Woodhull and Bridge, finally obtained such a receipt.

It would be nonsense to suppose that Walker ever had such a charter from the Government of Mexico, or ever expected any such. He knew that at that very moment the Gadsden Treaty had foreclosed any attempt to obtain such a grant. It was a sheer contrivance to retain his \$10,000,000 of stock, without paying any assessments on it, and showing his receipt to defraud and seduce others into paying, notwithstanding his harlot virtue when he offered his \$300,000 resolution.

December 16th.—Present, Walker, King, Fowlkes, and Woodhull.

"Resolved, That Robert J. Walker, T. Butler King, and Jephtha Fowlkes, or a majority of them, be, and they are hereby authorized, to submit to the Governor of the State of Texas a proposition, on such terms as they may deem best for constructing, equipping and operating the Mississippi and Pacific Railroad, as authorized by the act providing for the construction of said road, passed by the Legislature of the State of Texas, and approved the 21st December, 1853; and that they be also authorized to contract with the Governor of said State for building, equipping and operating said railroad, on such terms as they may deem best pursuant to the provisions of said act; and that the said Walker, King and Fowlkes, or a majority of them, be further authorized to perform all the acts, and give all the guarantees required by said law; that they, or a majority of them, be also authorized to associate with them in said proposals, contracts, and guarantees, such persons as they may select; and that they, or a majority of them, be authorized to organize the Company, under said law, for the building, equipping, and operating said road, and electing the Directors thereof."

"Resolved, That all the rights, privileges, benefits and advantages, grants and donations, accrued or accruing under the act of the State of Texas, entitled an act to provide for the construction of the Mississippi and Pacific Railroad; and the contracts to be made for the building, equipping, and operating the same, shall inure to, and be held for the benefit of the stockholders of the Atlantic and Pacific Railroad, as designated, and to be designated by the Executive Committee of said Company, including all rights already secured by contracts with other persons, companies or associations, as authorized, or to be authorized by said Committee, or already ratified or confirmed by them."

"Resolved, That Robert J. Walker, T. Butler King and Jephtha Fowlkes, or a majority of them, be, and they are hereby authorized to make such arrangements as they, or a majority of them, may deem best for the purpose of securing to this Company the charter of the New Orleans and Texas Railroad Company, and such other charters, granted by the said State of Texas, as they, or a majority of them, may deem best for the interests of this Company; and if they deem necessary for organizing the same, that they, or majority of them, be, and they are hereby constituted the general agents of the Atlantic and Pacific Railroad Company, with full and plenary powers to represent and act and contract for them, in all matters and things whatsoever, connected with the rights and interests of this Company."

"Resolved, That Robert J. Walker, Jephtha Fowlkes and T. Butler King, or a majority of them, be, and they are hereby authorized and empowered to issue and deliver so much and such portions of the stock of this Company, as they, or a majority of them, may deem or find necessary to fulfil the various agreements or contracts, and carry out the powers conferred on them by the resolutions this day adopted."

In making the above *expose* Mr. Peebles claims to have been influenced entirely by *disinterested* motives; his object being to shield the public from being imposed upon. We do not think there was much need of his warning. The fact that one-half the entire stock of the company was subscribed by Messrs. Walker and Chatfield was sufficient evidence of the character of the scheme. A railroad to the Pacific is not to be accomplished by such organizations as the Atlantic and Pacific Railroad Company.

If constructed at all, by *private* enterprize, it must be taken hold of by men possessing the entire confidence of the monied circles, both of this country and Europe. Private enterprize is not going to take up the project at present without the efficient cooperation of the general government.

Mr. Robert J. Walker is now President of the Atlantic and Pacific Railroad Company, Mr. Chatfield having sold out and quitted the concern in disgust. The fact that Mr. Walker is now the moving spirit in the company is sufficient to destroy all confidence in its object or management. We regret that the versatile talent of this gentleman should have been turned toward our railroad enterprises where it can only be exercised for mischief. If we are not mistaken, he was the leading party in a very discreditable transaction in the sale of the bonds of a railroad in Wisconsin. The bonds were negotiated under a statement which was entirely untrue, while the iron purchased with their proceeds was sold without ever going upon the company's line. We are surprised at the assurance of Mr. Walker in again thrusting himself before the public, knowing, as he must, that his agency in the above affair is well understood. If he has any influence remaining, or he can render any service to the railway interest of this country, let him spend the remainder of his days in endeavoring to resuscitate the Rock River Valley Union Railroad, and in making good the pledges he gave in reference to it. Until his agency in the above transaction is satisfactorily explained he can, of course, accomplish nothing, however busily he may employ himself.

It is proper to state, that since the above was in type, we have seen the reply of Messrs. Walker, Fowlkes, Woodhull and King to the pamphlet of Mr. Peebles. They state that the \$10,000 allowed to Mr. Walker was to cover *advances* made by him for the purpose of obtaining a route through Mexico. If so, Mr. Walker is the *victim* entitled to commiseration, having parted with \$10,000 good money for a certificate of the payment of an instalment to an equal amount on his \$10,000,000 stock, which is really not worth the paper upon which it is written. The Committee appointed to treat with Texas was simply an ordinary executive Committee, usual in similar cases, acting in behalf of the Company, and rendered necessary by the large number of Directors scattered over the country.

The Committee also state that they are progressing rapidly in the *preliminary* operations. That a numerous and *paying* subscription to the stock of the Company is rapidly taking the place of the *bogus* one; that three hundred thousand dollars have been raised to be paid to Texas for the lands offered by that State to a *Pacific* railroad; that contracts have been made for the first 50 miles of the line in Texas; that the Company have "caused to be made an instrumental survey of the *whole* of the road through Texas to the Pacific, and have advanced the first instalment in cash to contractors, and will commence the grading of the road with a large force, in the county of Harrison, in the State of Texas, on the Fourth of July next."

In conclusion, the Committee say—

This is no concern got up by us for the purpose of stock-jobbing or speculation. We have sought no aid from newspaper puff, nor have we made any appeal for congressional appropriations of land or money; but relying upon the superior character of the route, the munificent grants made by Texas of 12,800 acres for every mile of the road, and subscription by the people throughout the country, we shall continue to devote our best energies to the prosecution and, as we trust, final completion of this great enterprise.

We have thus, to prevent any possible injury to the Company, condescended to refute the charges made by this pamphleteer; but having traced, as we believe, the real author of this publication, we shall, when the evidence is complete, impale him before the public as a cowardly calumniator, who, whilst playing the part of a masked assassin of reputation, endeavors in this disguise, to escape the responsibility for his crimes.

This "masked assassin" is no less a personage, we presume, than the Hon. L. S. Chatfield, the former President of the Company, between whom and the present President no good will appears to exist.

Without questioning the motives of the organization of the Atlantic and Pacific Railroad Company, we feel justified in saying that, to us, its objects are perfectly chimerical, when its means and the parties concerned, are considered. It is one of those bubbles of ephemeral existence, decoying the inexperienced, without accomplishing the least useful end. The Company will get no valuable grant from Texas, even if it gets what it expects. It is an organization to which the public will not pay money as an investment; only in hopes of making a "speculation." The project as constituted, is without merit and without basis.—The President is a visionary, without judgment or capacity for his place. A short time only will be necessary to bring on the catastrophe, the magnitude of which will be just in proportion to the amount of money and the number of people that can be roped into the concern.

The Erie Canal.

It shakes our confidence in humanity to witness the treason of citizens of New York, who misrepresent our public works, and deny the value of their services to our state. We should as soon entertain the idea of closing the Hudson, or of blocking the entrance to our harbor. It is a dense stupidity, or cupidity, which can actuate a citizen of New York, who believes that the genius of Clinton has exercised less positive and essential influences upon the destinies of our state than that of Columbus upon America. Were a New Yorker to assert any such faith abroad, his citizenship would be doubted.

The State of New York has, in her sovereign capacity, constructed a system of canals, upon all of which no more than the cost of either the New York Central or Erie Railroads has been expended. The canals are operated at a yearly expense to the State, of less than one half of what either of the roads named are worked by their individual owners. Such is the statement of what the canals have cost, and of what it cost to operate them. Now let us look at their employment and its remuneration. They move five times the actual tonnage of the Erie road, (which is the principal freight road of the state,) but for a greater average distance, the *mile age* of their freight being more than ten times greater than upon the Erie road. For this tenfold movement, the whole charges of transportation, including *tolls* and the *receipts by carriers*, are less than three times, and but little more than twice the freight receipts of the Erie road for 1853.

It needs no comment upon these simple facts to show the value of our state canals to our state trade. It would provoke contempt to suggest that the great aggregates of surplus production, the legitimate exchanges which sustain the for-

eign commerce of New York, should be made dependent for their transit upon the ascertained and inferior capacity of any or all of our trunk lines of railroads. To misrepresent or disparage the commercial outlet of the great Lakes, and by those too, who share in the commercial harvest, would be as consistent as an effort to drain those lakes into the Mississippi river, or into Hudson's Bay.

Nor can it be urged that the interests embarked in the canal and the railroad are conflicting. Besides the great and peculiar passenger revenue of our railroads, for which canals cannot compete at all, much of the freight of the former, includes articles not suitable for canal transportation; a larger portion is carried in the winter, when the canals are closed; while much the *greatest* portion of railroad freights is *local*, and, without a railroad, would never have gone to the canal by reason of the cost of getting to it. None of these arguments are assumptions, they are *facts* of the present history of internal communication in the state of New York.

A railroad, and a profitable road at that, is one of the necessary products of a good canal.

The canal of itself affords peculiar facilities, beyond the ability of other channels, and, for that reason, secure from competition. The very circumstance that agricultural production is *periodical* and not continuous, shows that it is not destined for *immediate* consumption. Every product which appears only in particular *seasons* must be stored, *somewhere* or else be consumed when produced. For such articles of transport, celerity of a railroad does not compensate for the economy of a canal. No one pretends that the canal is the proper channel for valuable manufactures, animal products, parcels and the like; these are suitable to a railroad. But for the staples of our great interior trade, for our periodical productions of breadstuffs and provisions, for fuel and minerals, and for the periodical supplies of country stores and manufacturing establishments; the "six months stock" of groceries, dry goods hardware, manufactured iron, and other similar materials of interior commerce—the canal offers the best conveyance.

It is the *difference* between the legitimate offices of canals and railroads that makes them naturally advantageous. The railroad carries the *merchant*, the canal his *property*; the former the *invoice*, the latter the *goods*. By this discrimination of employment one sustains the other, and promotes the activity of commerce. It is in but very few instances where these conditions are changed. A heavy coal and lumber trade are about the only exceptions to the general principle. If, in such employment, the railroad cars can run to the mines or lumber depots at one end of the road, and to tide water at the other, railroads may maintain a superiority over canals.

Let us examine what canals have achieved, when regarded as a financial enterprise of the state. Upon a cost of upwards of \$30,000,000 they are paying full 7 per cent. annual net revenue, equal to 9 per cent. on the whole debt of the state. As connected with the state finances, they pay one million dollars yearly into the treasury, above the interest on the debt created on their account, and by that amount relieve the community from direct taxation for the yearly support of

government, or towards the extinction of the public debt. It would only prejudice the interests of other states to contrast the condition of our public enterprises with theirs. We shall not do it.

It is the supremacy of enlightened opinion in our state which sustains our canals and which will command, and willingly pay, for their enlargement. We might as well forget our commercial position, our noble Hudson with its yet noble harbor upon the sea, and our continuous and capacious water lines upon three fourth of our state borders, as to impair the usefulness of our canals.

Indifference to our natural and artificial commercial facilities is hard to excuse, but open hostility against the *elements* of our commercial supremacy, such as is proclaimed by the *Evening Post* of this city, ought to deprive such slanderers of all right of participation in the great fruits of our improvements.

Trial of a New Locomotive Engine for Canada.

The first engine made at the Canada Works, Birkenhead, was subjected to a trial, on Monday, previous to shipment for the Great Canadian Railway. The engine, which is the first locomotive engine made in Birkenhead, was built as No. 1, and each successive engine will be numbered onward. It was named after Lady Elgin. The second will be called Lord Elgin, and both will be despatched by the steamship *Ottawa*.

The railway is between the narrow and broad gauges in width—viz, 5 feet 6 inches, which will make the carriages more commodious, and add greatly to the steadiness of the trains. The cylinders are 15 inches diameter, and 20 inches stroke, with driving and trailing wheels, the latter 6 feet diameter, and the leading wheels 3 feet 6 inches diameter. The engine is tubular, having 178 tubes, each 1½ inch. diameter, which is equal to 872 feet of heating surface. In the fire-box the heating surface is equal to 78 superficial feet; making a total of 950 superficial feet of heating surface. The American principle of a "spark catcher" has been adopted, as the steam will be generated by wood fires, which throw sparks up the chimneys, and which require to be intercepted so, as not to damage or set fire to the forests through which the engines travel. This engine will be able to take 22 or 23 carriages 40 miles an hour. The principals of the establishment celebrated the event by dining together at the Woodside Hotel.

The land in which the Canada Works are erecting, at Birkenhead, is of irregular form, and the buildings 900 feet long by 36 feet wide. Mr. G. Harrison, manager of the engineering department (formerly a resident in Birkenhead) arrived a year ago from Canada, to initiate and conduct these works for Messrs. Peto, Betts, Brassey and Jackson. The progress of the works has been most rapid in every way, as within a year they have been erected, and two engines built and shipped.

There are 400 men at work in the engineering department, and 123 in the bridge-building department, and the latter is to be considerably increased. Of what are technically termed "pits" or places where engines are built, there are 10, and there are five passenger and five goods engines in course of construction. The works are able to manufacture 40 per year. The railway will require for its own uses this rate of manufacture for the next seven or eight years, or 300 locomotive engines. All the work, except the tubes, and some smaller matters, is made on the premises; and it is an interesting sight to see a place which but 12 months ago was a piece of waste land, covered with buildings and railways, and the ground strewn in all directions with boilers, tenders, wheels, engine-frames, and the other parts of locomotives. There are two modes for shipment

of the engines when completed—one by water, 20 feet deep, at the back of the yard; and the other by the dock railway, which runs into the work-shops.

On the opposite side of the yard is the bridge department, for the construction of the great tubular bridge to cross the St. Lawrence. It is making in a shed 215 feet long by 48 feet wide, and one span of 155 feet has already been shipped. There is a 35 horse power high-pressure engine in this shed. In this department the iron is delivered by railway, and the plates are rolled, punched, and subjected to such manipulations as will prepare them to be put together when they arrive out in Canada. The parts are so numbered and packed, that when they arrive out there will be no difficulty in riveting them together.—*London Mining Journal*.

Alabama and Florida Railroad.

Report of the Chief Engineer.—Below we give and abstract of the report of the Chief Engineer of this road, which is to extend from Montgomery to Pensacola.

Estimate for the Northern Division.—The Northern Division, extending from Montgomery to the summit of the main dividing ridge between the Alabama and Escambia rivers—30 miles, 2741 feet.

Right of Way	\$10,000 00
Grubbing and clearing, graduation, masonry and bridging	279,417 50
Superstructure	256,962 50
Water stations, turnouts, &c.	25,800 00

Total

Middle Division.—From summit above mentioned to the Florida line—84 miles, 1207 feet.

Right of Way	\$5,000 00
Grubbing and clearing, graduation, masonry and bridging	709,667 00
Superstructure	718,231 25
Water stations, turnouts, &c.	28,000 00

Total

Southern Division.—From Florida line to Gulf of Mexico at Pensacola.

Right of Way	\$2,000 00
Grubbing and clearing, graduation, masonry and bridging	283,798 80
Superstructure	377,017 75
Water stations, &c.	19,000 00

Total

Machine shops, engine houses, &c. 50,000 55

Engine cars, &c. 262,600 00

Engineering, superintendence and contingencies

Grand total

Plan of construction.—The road bed in excavation to be eighteen feet wide at the grade line: slopes three-fourths horizontal to one foot vertical, except in the sandy soil near Pensacola, where a slope of one and one-fourth feet horizontal to one foot vertical will be required. Other portions of the line where the excavations do not exceed ten feet, and a clay soil predominates, a slope of one and one-half to one will be adopted.

On embankments the road will be twelve feet wide at the grade, slopes being one and one-half horizontal to one foot vertical. Towns' Lattice Bridge will be adopted on eight of the larger streams crossed; the smaller ones will be passed by the use of trestle work of the inverted A form founded on piles, except in cases where high embankments occur where the necessary drainage will be affected by means of brick culverts, there being on the whole line a great scarcity of building stone.

The plan of track contemplated consists of cross-ties, of post oak, white oak, chestnut or pine, nine feet long and seven inches thick, showing a heart face of seven inches, and laid two feet three inches apart from the centre to centre, on which a T rail, weighing ninety tons to the mile, will be

laid and nailed securely down with hook headed spikes and the ends of the bars fastened and supported by a wrought iron chair of approved construction.

General Estimate of Business of the Road, first year after construction:

40,000 passengers at.....	\$5 00.....	\$200,000 00
Mails, per mile	200 00.....	32,000 00
20,000 bales cotton....	1 25.....	25,000 00
20,000 way bales cotton	75.....	15,000 00
50,000,000 feet lumber.	2 50.....	125,000 00
Coal freights.....		166,250 00
Other down freights.....		20,000 00
Return freights.....		50,000 00

\$583,250 00

Deduct for expenses 40 per cent....

233,300 00

\$540,950 00

or nearly eleven per cent. on its cost.

At a recent meeting of the Directors, the following gentlemen were chosen Directors of the Company, viz.

T. J. Judge, C. T. Pollard, Abner McGehee, William Taylor, T. M. Cowles, Geo. Goldthwaite, Fleming Freeman, B. S. Bibb and Geo. W. Matthews.

Northwestern (or Parkersburg) Railroad of Virginia.

At a recent annual meeting of the stockholders of this Company the President submitted the third annual report of the directors. We are pleased to see that this document bears substantial encouragement of the early completion of the road.

The whole line of 103 miles is in progress to the extent of the company's ability. The entire work is expected to cost \$4,000,000, and while only \$500,000 of this are already paid in on stock subscriptions, the Baltimore and Ohio Company and the city of Baltimore have shown their confidence in the work and their interest in its completion by the guarantee of \$2,500,000 of the Bonds of the North Western Company, by which the whole issue has been sold *at par*. From the character of such endorsers we are certain that the company have submitted to no sacrifice, and that their capital account will represent the actual and necessary cost of their road.

The importance of the Parkersburg road is identical with that of the Baltimore and Ohio. Apart from its local claims, it sustains a relation of the greatest importance to the railroad system of the country.

It forms part of the *shortest* route, in lineal distance, between the great commercial depot of the Ohio Valley and tide water. As such, it is the true prolongation of the Baltimore and Ohio road, and occupies the necessary route by which the principal business of that road must meet the Ohio river. It is about the same distance from Baltimore to Parkersburg as to Wheeling, while Parkersburg is 75 miles below Wheeling, and by that distance nearer Cincinnati, by way of the Ohio river.

The counties of Preston, Marion, Harrison, Ritchie, Taylor, Doddridge, Tyler, Wood and Wetzell, contiguous to the line of the Northwestern road, had a population, in 1850, of over sixty five thousand inhabitants. The opening of the Baltimore and Ohio road has already exercised a strong influence in favor of a part of these counties, as well as others of similar geographical characteristics.

The success of the Baltimore and Ohio road, indicated in its already large and increasing re-

ceipts, will form an additional incentive to the completion of the Parkersburg road, by which the latter will share in and contribute to the general prosperity of both.

Strike on the Erie Railroad.

There has been a strike by nearly all the engineers employed on three divisions of the Erie Railroad. Their difference with the Company will be sufficiently shown by the following communication addressed to them, through their committee, by the Superintendent of the road:

New York and Erie Railroad.

OFFICE GENERAL SUPERINTENDENT, }
New York, June 19th, 1854. }

At a meeting of the Engineers of the Eastern, Delaware and Susquehanna Divisions of the New York and Erie Railroad, to deliberate on the proper course to be adopted in regard to certain rules and regulations prescribed for their government in the running and management of the trains, and by them deemed onerous and oppressive, it was resolved that John Donohue, William Schrier and John C. Meginnis be appointed a committee to visit the General Superintendent and present their views and a written statement of their grievances.

In pursuance of the above resolution, the committee submitted said statement, and requested me to give my interpretation of the rules complained of, which was immediately done. Subsequently, at the request of the committee, I furnished it in writing, the same having been given verbally on the first interview. The following is a copy of the questions propounded, and answers given:

"To John Donohue, William Schrier, and John C. Meginnis, committee.

Gentlemen: You proposed to me the following questions:

1. How do you explain the 5th and 6th rule of Supplementary Instruction, dated May 5, 1854.

The 6th rule simply means this, that the engineer is responsible for running off at a switch at a station where his train stops, whether he shall run off before or after receiving a signal to go forward from a switchman or any other person.

The engineer is expected to see for himself, as to the position of the switches, and take no person's authority in the matter, at stations where his train stops.

The engineer is in no manner responsible for running off at a switch where his train does not stop; whether such switch is lighted or not, or whether there is or is not a target, or whether the target is right or wrong; nor when he is backing out of or into a switch, or when a switch is turned wrong after having been seen to be right.

The engineer is expected to report all switches which he finds wrong, and the absence of all lights at switches or crossings, where usually shown, which I understand to be the true meaning of that portion of the 5th rule, as you will see by rule 6 b, that you are entirely relieved from the responsibility of running off at a switch where you do not stop.

2. What do you understand to be the meaning of rule 89, referred to in Supplementary Instructions of May 15?

That you are to run past stations where your train does not stop at a much reduced rate of speed, and to haul up at such stations where by the time table a train should be receiving or discharging passengers. By the term 'much reduced rate of speed,' I shall be satisfied by your running past a station where you do not stop at such a rate of speed as you are willing to hazard on your own account, we reserving the right in this, as in all cases, to decide when an engineer is running recklessly. But the simple fact that you do run off at a switch at a station where you do not stop will not of itself be considered an evidence of recklessness.

We expect you will use all due diligence in making time on the road, which you may con-

ceive consistent with proper safety to yourself or train, and you will be fully justified in taking just such reasonable means to ensure safety as you may think proper, remembering always that the road must be run safe first, and fast afterward; this you will not consider as justifying you in taking such an advantage of the same as to lose hours where minutes would be sufficient.

3. What is the meaning of the regulations which provide that notices shall be given of all dismissals to each division superintendent and to superintendents of connecting roads?

In the first place let me say that no arrangement has been made nor has any obligation been entered into between this company and any other company not to engage persons who have been dismissed from other roads. All persons dismissed from the road are entitled to receive from the officer dismissing them a full and true statement of the cause of such dismissal, the time they have served the company, and the reputation they have heretofore sustained, all particulars connected therewith, and any palliating circumstances there may be in the case.

Respectfully yours,

D. C. McCALLUM, Gen'l. Sup't.

The explanation having been deemed unsatisfactory, nearly one hundred engineers have left the employ of the company.

The rule of the company complained of has been in operation since May 5th, and is claimed by the company to have been productive of the most favorable results. Whenever the train stops the company hold the engineer responsible for accidents.

The other correspondence between the officers and the engineers expresses a regret at losing so many valuable employees, at the same time it adheres to the necessity of the rule laid down and insists firmly upon its observance.

The company have been put to much inconvenience by the derangement of their trains, but we learn that the vacancies created are being rapidly filled.

The penalty for running the train off the track at stations where it stops, is dismissal from the company's service.

New Jersey Central Railroad.

The annual report of the Central Road of New Jersey gives the annexed statement of the business of the Company:

RECEIPTS.	
Passengers.....	\$175,694 74
Freight.....	178,739 54
Mail.....	5,736 00
Express.....	1,750 00
Rents.....	338 00
Miscellaneous.....	3,574 44
	<hr/> \$365,832 72
EXPENSES.	
Running Expenses.....	\$51,894 53
Repairs of roads.....	16,119 23
Repairs of cars, engines &c.....	22,552 59
Expense account.....	6,516 09
Miscellaneous Expenses..	7,180 24
Wood consumed.....	30,681 31
Coal consumed.....	13,819 22
Ferry expenses.....	35,869 41
	<hr/> \$186,622 63

Balance net earnings..... 179,210 09

The receipts of the previous year were \$260,899. The increase of the present year was divided as follows:

In passengers receipts.. \$39,780 44 or 30 per cent.
In freight receipts..... 61,629 37 or 52 per cent.
In other receipts..... 3,613 91 or 44 per cent.

Total increase..... \$104,933 62 or 40 per cent.

The expenses of the previous year were \$186,153 57, against \$186,622 63 this year.

These are the ordinary expenses, and are not inclusive of \$37,048 88, for accidents, renewals and depreciations, which are charged under the head of renewals, and are to be deducted from the earnings of the year.

Including the new subscriptions of the last year, the capital of the Company is \$2,000,000, of which \$1,619,935 is paid in, which, with the \$1,500,000 of mortgage bonds, represents the cost of the property of the Company. Toward the indebtedness \$285,015 15 have been paid during the year, and \$148,041 71 expended toward the lengthening of side tracks and construction of a second track.

A Coal Railroad to New York.

We give in another column the first annual report of the Delaware, Lackawanna and Western Railroad, the object of which is the formation of a direct line of railroad in connection with the New Jersey Central, from the coal fields of Pennsylvania to New York city.

Coal has now become the most important agent in the domestic economy of every civilized people. The progress of national wealth and the expansion of national industry is measured by the abundance or scarcity of this article. The wealth and power of Great Britain is based upon coal. The rapid destruction of wood in this country is rendering coal equally indispensable to ourselves. To New York, the commercial capital of the United States, and the focal point of its vast steam marine, an abundant supply of fuel is daily felt to be more and more important. A constant and abundant supply may be easily had. New York is very nearly as conveniently situated, in reference to the coal fields, as Philadelphia. Thus far she has been entirely cut off from direct connection with them during the winter season. To remove this isolation is the object of the above road. To render it adequate to its objects it is being constructed and equipped in a most substantial manner, with a double track. It is intended to render it in the outset fully equal in capacity to the Reading. The road will probably be fully completed within a year from the present time.

The above road will go into operation under the most favorable auspices. No similar work ever commenced business with so large a traffic awaiting its opening. Should the capacity of the road be sufficient, it could carry two million tons at the same rate as five hundred thousand. The supply and demand are both unlimited, and the latter must, for an indefinite period, exceed the capacity of all our works constructed to meet it.

To the City of New York, and to the poor of the city in particular, we regard the work in the light of the greatest possible benefaction. The closing of the canals by ice is the signal for putting up the price of coals, which in mid winter often goes 100 per cent. above the summer prices. With a railroad capable of delivering to our yard 5,000 tons daily throughout the year, the supply will be uniform, and prices rule as low as can be afforded with a fair profit to the carrier. The consumer will then be relieved from the burden of speculation, which often adds quite as much to the price as the cost of production.

The road has a strong hold upon the confidence of capitalists as a paying project, and money is liberally supplied to it by stockholders. Even in

these hard times, the road is being built as an investment, not a speculation, and is being carried forward with that expedition and economy that men usually observe who are expending their own means.

Railroad Depreciation in the Northern Climate.

The past winter will be remembered as unusually severe for railroad operations. Above the 43d parallel of latitude our tracks were ice-bound for most of the winter, and breakages of rails, chairs, axles, tires and wheels were common.—On the Vermont Central Railroad, in a period of two months, 76 wrought iron tires were burst and broken; while during the whole winter 43 driving wheel centers, 12 cranks, and 24 connecting rods, besides a large number of axles, were also broken. For three months the road bed was frozen as hard as a rock, and hardly a train run through without some failure of machinery. The New York Central, during the same time, suffered severely.—Fifteen axles have been broken in one week. The tracks suffered proportionately.

In view of this heavy depreciation of machinery and necessary damage to rails, would it not be a measure of economy for such roads as the Vermont Central, to lay continuous "stringers," 6 inches deep under their rails and upon the tops of the sleepers. We believe such a superstructure would preserve the necessary elasticity of the tracks, support the joints, and raise the rails above the dangerous contact with frozen ground. We believe that the additional expenses caused by the severe cold of last winter, would have been sufficient to have underlaid the rails for the whole length of the Vermont Central Road, and with such a protection the results of that season would be chiefly averted in future.

Rock Island Excursion.

There are certain steps in the progress of our railroads that mark great events in the history of these works. One of these was the opening of the Rock Island and Chicago Railroad to the Mississippi river. To a recent date this great water course was the sole channel of intercommunication between one of the finest and most productive portions of the Union, and our commercial and manufacturing districts. From New York, the depot of western produce, to Rock Island, the distance by water must exceed five thousand miles; by railroad it is only about one thousand. By the present route of commerce through the lakes and the Erie canal, the distance is only about two thousand miles—a route altogether preferable to that by way of New Orleans, in cheapness, time and climate. Commercially, the Upper Mississippi is no longer tributary to New Orleans and the Gulf of Mexico, but to the eastern cities. The Rock Island Railroad therefore has achieved a result not to be measured by the local influences of the work. It unites an independent system with the great eastern lines of improvement, and its completion forms an era in the commercial history of this country not unlike that which marked the opening of the Erie canal.

It was proper to commemorate the completion of such a work. It was, in addition, a political measure. The west and her railroads must be seen to be appreciated, the north-west in particular, which for many reasons is the most attractive

portion of it, and which has consequently shown a more magical growth than any. This portion of the west is pouring a flood of commerce and trade to the eastern cities. For the accommodation of this trade the Rock Island and Chicago Railroad occupies a peculiarly favorable position. It is the prolongation of the great Lake Shore line, a route to our mind identical with the axis of the commercial system of this country. Its great receipts proves the value of its position. It has been built with extraordinary dispatch and bids fair to be a most useful work both to its owners and the public.

Railroad Fares.

Virginia has, for years, borne the reproach of charging more exorbitant rates of fare on her railroads than the States either North or South of her. The traveler passing through Georgia, pays not more than three cents per mile; in South and North Carolina about the same. Reaching the Old Dominion, he encounters a tariff of four or five cents. Beyond that State, he again finds himself where three cents or less (per mile) will pay his passage.—But it seems, high as have been the charge on the Virginia roads hitherto, the public are to be called upon to suffer a still further imposition, in traveling through that state. From the *Richmond Enquirer* we learn that the fare on the Richmond and Petersburg road, hitherto five cents per mile, is hereafter to be six—just double the rate out of which our Georgia roads are declaring their handsome dividends. Those of our readers who know something about railroad management will not be surprised to learn that the road above named pays poorly. If its sapient President and Directors would press the figure a little further, and carry up their charge to ten-cents, it would probably pay *nothing*. True policy, both as regards the interests of the public and of these corporations themselves, suggests that they should rather do a large business at moderate charges, than do little at exorbitant rates.—*Savannah Georgian*.

To Railroad Companies and Contractors.

FOR SALE—Fifteen second hand Locomotive Engines of various sizes and descriptions and in good running order suitable for all kinds of work. For particulars apply to

CLARK & JESUP,
General Railroad Agents,
38 Exchange Place.

Also Railroad supplies of all kinds, 4t25

Prosser's Patent Lap-Welded Iron Boiler Tubes.

Tubes screwed together, flush on both sides, for Artesian Wells, &c. Free-joint Tubes, for Core Bars, Awning Frames, Railings, Leaders, &c.
Patent Wrought Iron Blacksmiths' WATER-TUBES, WATER-BACKS, &c.
Agents for KRUPP'S celebrated CAST STEEL for SHAFTS, RAILWAY AXLES, TIRES, PLATTERS' ROLLERS, &c.
P. S.—All Tools necessary for the construction or keeping in order of Tubular Boilers
24tf THOS. PROSSER & SON, 23 Flat street, N. Y.

SHANAHAN & LOEBER,
181 William-st,
(1st floor—Up Stairs.)
NEW-YORK.
MANUFACTURERS OF
THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
Chains, Scales, Levelling Rods, &c. 1y10

Sewall & Crehore

CIVIL ENGINEERS.

ST. PAUL, MINNESOTA.

JOSEPH S. SEWALL.

CHAR. FRED. CREHORE.

N. York and N. Haven R. R.

NOTICE OF SUMMER ARRANGEMENTS,



Commencing Monday, May 9, 1854.



TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A. M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A. M.—Commutation from New Haven.
9.10 A. M.—Special for Port Chester.	6.15 A. M.—Accommodation to New Haven.
11.30 A. M.—Accommodation to New Haven.	8.15 A. M.—Accommodation to New Haven.
3.00 P. M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	9.35 A. M.—Express from New Haven, Stopping at Bridgeport, Norwalk and Stamford.
4.00 P. M.—Accommodation to New Haven.	1.07 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
5.00 P. M.—Express for Boston, stopping at N. Haven.	4.00 P. M.—Special, from Port Chester.
6.35 P. M.—Commutation for N. Haven.	4.00 P. M.—Accommodation to New Haven.
6.30 P. M.—Special for Port Chester.	9.30 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Sup't

New Haven, May, 1854.

New York and Erie R. R.



PASSENGER TRAINS

leave Pier foot of Duane street, as follows, viz:—



BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.
Dunkirk Express, at 7 a. m. for Dunkirk.
MAIL, at 8 1/4 a. m. for Dunkirk and Buffalo, and intermediate stations.
WAY EXPRESS, at 12 1/4 p. m. for Dunkirk.
Rockland Passengers, at 3.30 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.
NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.
Emigrant at 6 p. m.
On Sundays only one Express Train—at 6 p. m.
These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, &c.
D. C. McCALLUM, General Sup't

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment. Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,

287 Broadway, corner Reade-st.
3m*10 Under the Irving House, New York.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to
EDW. BECH & KUNHARDT, 62 Beaver St.,
Or, A. TOWAR, Agent Pokoepsie Iron Works,
23tf Pokoepsie, N. Y.

Notice to Contractors.

PROPOSALS FOR THE ENTIRE CONSTRUCTION and equipment, or the graduation, bridging and masonry, separately, either in whole or in part, of the Mississippi and Tennessee Railroad, (extending from Memphis to Grenada, Mississippi, about 97 miles,) will be received at the office of the Company, in Memphis, till the 20th of July next. Proposals for the entire construction and equipment, and otherwise as favorable, will have preference. Profiles and estimates of the first 60 miles may be seen on application at the Engineer's Office in Memphis. Bidders must furnish satisfactory evidence of their ability to complete the work.

MINOR MERIWETHER,

Chief Engineer.

May 4th, 1854.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17 tf

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—spectular red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

G. PARISH.

15,3m*

Ogdensburgh, N. Y., April, 1853.

SEYMOUR, MORTON & CO. GENERAL R. R. AGENCY, Office, Metropolitan Bank Building. No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R.R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

MONTREAL & NEW YORK AND Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6.30 a.m. and 5 p.m., arrive at 8 a.m. and 7.30 p.m.
Leave Plattsburgh for Montreal 7.30 a.m. and 4 p.m., arrive at 10 a.m. and 6.50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate stations.

Trains connect at Moers Junction with Northern (Ogdensburgh) Railroad for Ogdensburgh and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequaled for comfort and dispatch, and attended with less fatigue and delay than any other. It possesses moreover the advantage of a short Ferriage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.

For particulars see Freight and Passenger Tariff.
BAGGAGE checked through.

H. W. NELSON, Superintendent.

Old Railroad Iron For Sale.

ABOU 250 TONS, mostly whole bars, flat iron of superior quality. Deliverable at Portsmouth Va. as fast as it can be hauled. Immediate offers are invited, addressed to

L. O. B. BRANCH, President R. & G. R. R.

Releigh N. Carolina,

None but the accepted offer will be applied to.
3t.22

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio), issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburg, (Penn.), issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions,
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot gauge, 22 tons weight, 16 + 20 inch Cylinders, and 5½ and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.

Dec. 24

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Lyon's Tables of Cubic Contents, Etc.

Those valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1 gives correct mean heights of cross sections with either two or three cuttings taken. Table 2 finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise.—Price \$1.50.

21.1f

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN, Chief Eng.
Huntingdon, May 6, 1854.

EXTENSION OF TIME.

THE period for receiving proposals for the Superstructure of Bridges and Trestle work on the Huntingdon and Broad Top Railroad, has been extended, by order of the Board of Directors, to Saturday evening, June 24th.

S. W. MIFFLIN Chief Eng.
Huntingdon, Pa., June 7, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N.Y. 191f

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of
Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

For Sale.

By the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York,

19 1f

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality
by THOMAS HUNT,
No. 53 Fulton Street,
New York.

1y10*

N. A. Boynton's VENTILATING HEATER.

PATENTED, 1853.



BRICK.

FOUR SIZES FOR BRICK WORK.
FIVE SIZES PORTABLE.



PORTABLE.

An entirely new Article, possessing advantages worthy the attention of those in want of a Powerful and Economical Heater.

SIMPLE in construction, compact in form, and easily managed and cleaned.

Is entirely of CAST IRON; has but two joints, and those so arranged, as to prevent the escape of Gases and Smoke.

The FIRE POT is lined, the RADIATING SURFACE located above the fire, and equally exposed on all sides to the action of the cold air.

Can be set in LOW CELLARS, and, by the attachment of a SELF-CLEANING RADIATOR is especially fitted for the use of Bituminous Coal.

Of the above pattern we have four sizes, to be enclosed in brick-work, and five sizes of portables, adapted to all classes of buildings, and can be furnished at a less price than any other heaters of equal capacity in present use.

Manufactured and for Sale; Wholesale and Retail,
By CHILSON, RICHARDSON & CO.
374 Broadway, New York,
Also 101 and 103 Blackstone-St. Boston.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to
September, 1850.

THOS. CHAMBERS,
President.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 26.]

SATURDAY, JULY 1, 1854.

[WHOLE No. 950, VOL. XXVII.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Gauge of Railroads.....	401
Col. Fremont's Explorations.....	402
Alabama and Tennessee Railroad.....	404
New York and New Haven Railroad.....	405
Railroad Runners.....	405
Broadway Railroad.....	405
Waterbury and Atwoods Ventilator.....	406
Railroad Exhibits.....	407
Railway Intelligence.....	408
Flushing Railroad.....	410
Public Works of Pennsylvania.....	410
Locomotive Boilers for Anthracite Coal.....	411
John Hampson.....	411
Journal of Railroad Law.....	412
Morris and Essex Railroad.....	412
Land Grants to Railroads.....	412
Great Western Railroad of Canada.....	412
Grand Trunk Railway of Canada.....	412
United States Mint.....	412
Car Ventilation.....	413
Ohio and Mississippi Railroad.....	414
Evansville, Indianapolis, & Cleveland R. R.....	414

American Railroad Journal.

Saturday, July 1, 1854.

Gauge of Railroads.

The width of *Gauge* best adapted to economical transportation, has been a question which has excited a vast deal of discussion, particularly in England, and has divided Railroad Engineers into two parties, distinguished by the terms *wide* and *narrow Gauge*. The prevailing gauge was adopted not for the reason that 4 feet and 8½ inches, was supposed to be the best one at the time, but because it corresponded to the width of the Coal tram road to which the Railroad succeeded. It was natural therefore, as the Railway expanded into a mighty system, that the propriety of any plan of construction arbitrarily, or accidentally adopted, should be questioned and discussed; and no question in Railroad Engineering has excited so much discussion, as that of the width of *Gauge*.

The extreme limits of the *Gauge* advocated in this country are 6 feet, and 4 ft. 8½ in. For what we propose to say, it is not necessary to recapitulate the arguments in favor of either, as the greatest stickler for either extreme is forced to admit, that the value of the difference between the two is

far outweighed by the matter of convenience; or, in other words, the *Gauge* question is no longer an open one, only where there are no Railroads. It is universally conceded that where the wide gauge exists, the same width should be observed in new works, and *vice versa*, where the narrow *Gauge* prevails.

With such a rule controlling the question of *Gauge*, the propriety of which will not be challenged, we have been entirely at a loss to account for the [adoption of the 6 foot *Gauge* on the Ohio and Mississippi, and Louisville and Nashville Railroads. All the lines intersecting the former will have the 4 foot 8½ inches *Gauge*; those intersecting the latter, 5 feet; *Gauges*, which must entirely isolate them from such connecting lines, and prove most injurious, if not fatal, to their success.

While it is still a mooted question what width of *Gauge* is the best, no one will question the very great importance of *uniformity*. A break of *Gauge* may, and often does operate to check almost entirely the movement of merchandise on any particular route. The expense due to a change of freight from one car to another, is variously estimated as equal to a movement of from 50 to 100 miles. But the mere cost and loss, arising from *transshipment*, are not so great, probably as those arising from the delay, occasioned. The breaks of *Gauge* at Erie and the Pennsylvania State line on the Lake Shore Road, caused immense losses, not only in *transshipment*, but in the destruction of property. In fresh meats particularly, the loss was enormous; whole cargoes of such freights becoming putrid before reaching New York. So great was the inconvenience arising from the above breaks, we have no doubt that the Lake Shore line alone would gladly have given \$500,000 to have got rid of them, could it have done no better. Here is a practical instance of the evils of two *Gauges*, and one which will always be repeated whenever they come into conflict.

Let us see how the break of *Gauge* will affect the value of the Ohio and Mississippi Railroad. Cincinnati is the best market for nearly the whole of Central and Southern Indiana. These portions of the State are now covered with a net work of Railroads of the narrow *Gauge*. Did the *Gauge* of the former correspond to these, it would constitute them a convenient *trunk* to Cincinnati. Before

reaching the State of Illinois, it crosses eight important lines of Railroad, five of which are now in active operation. It is from the district traversed by these roads, the Ohio, Mississippi is to draw its traffic. Instead of building a road to accommodate this traffic, it has taken the most effectual course to repel it. Every pound of freight received from any connecting line, must break bulk, even if received within ten miles from its first point of shipment. The injurious effect of such a break is strikingly illustrated by the direction which the freight brought to the line of the Ohio and Mississippi by the Indianapolis and Cincinnati now takes. Did the *Gauges* of the two roads correspond, all this freight would pass over the Ohio and Mississippi Road; as it is, it is now forwarded from Lawrenceburgh to Cincinnati by water. A large number of passengers take the same direction. By the adoption of an exotic *Gauge*, the Ohio and Mississippi Road has failed to make herself a part of a trunk line to Cincinnati, for the country traversed and has cut herself off from her very best source of business, without a penny to show as an equivalent for the loss.

The same strain of remark applies to the relations of the above with all the other roads it crosses. The evils arising from the break of *Gauge* in each case are the same in *kind*, only less in proportion to the distance over which freight and passengers are to be carried. The truth is, no method could have been devised by the Ohio and Mississippi Railroad, so calculated to drive away business instead of attracting it; of exciting the ill will and hostility of the people upon its line, instead of their good will. The result probably will be that the section traversed by the above road, aided by the various and powerful Railroad interests which exist, will unite upon the construction of a new line to Cincinnati, with a *Gauge* adapted to the route traversed. Already are various roads commenced, with narrow *Gauges* running west, from Cincinnati the greater part of which, probably never would have been proposed, but for the adoption of the *wide Gauge* by the Ohio and Mississippi. A double mischief is the result; a direct loss of trade to the road, and in the end, rival lines which must divide a business which otherwise might have been monopolized by the former.

A similar view may be taken of the impolicy of

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio,) issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburg, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot gauge, 22 tons weight, 16 + 20 inch Cylinders, and 5½ and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.

Dec. 24.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Lyon's Tables of Cubic Contents, Etc.

Those valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1. gives correct mean heights of cross sections with either two or three cuttings taken. Table 2 finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise.—Price \$1.50. 21.1f

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN, Chief Eng.

Huntingdon, May 6, 1854.

EXTENSION OF TIME.

THE period for receiving proposals for the Superstructure of Bridges and Trestle work on the Huntingdon and Broad Top Railroad, has been extended, by order of the Board of Directors, to Saturday evening, June 24th.

S. W. MIFFLIN Chief Eng.

Huntingdon, Pa., June 7, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,

No. 61 Camp Street,

New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N.Y. 191f

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of

Bolts and Bolt Ends

for Sale by

BRIDGES & BROTHER,

64 Courtland st., N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

Or BRIDGES & BRO.,

19 1f 64 Courtland st., New York,

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality

by THOMAS HUNT,

No. 53 Fulton Street,

New York.

1y10*

N. A. Boynton's VENTILATING HEATER.

PATENTED, 1853.



BRICK.

FOUR SIZES FOR BRICK WORK.

FIVE SIZES PORTABLE.



PORTABLE.

An entirely new Article, possessing advantages worthy the attention of those in want of a Powerful and Economical Heater.

SIMPLE in construction, compact in form, and easily managed and cleaned.

Is entirely of CAST IRON; has but two joints, and those so arranged, as to prevent the escape of Gases and Smoke.

The FIRE POT is lined, the RADIATING SURFACE located above the fire, and equally exposed on all sides to the action of the cold air.

Can be set in LOW CELLARS, and, by the attachment of a SELF-CLEARING RADIATOR is especially fitted for the use of Bituminous Coal.

Of the above pattern we have four sizes, to be enclosed in brick-work, and five sizes of portables, adapted to all classes of buildings, and can be furnished at a less price than any other heaters of equal capacity in present use.

Manufactured and for Sale, Wholesale and Retail,

By CHILSON, RICHARDSON & CO.

374 Broadway, New York,

Also 101 and 103 Blackstone-St. Boston.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to

THOS. CHAMBERS,

President.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 26.]

SATURDAY, JULY 1, 1854.

[WHOLE No. 950, VOL. XXVII.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Gauge of Railroads.....	401
Col. Fremont's Explorations.....	402
Alabama and Tennessee Railroad.....	404
New York and New Haven Railroad.....	405
Railroad Runners.....	405
Broadway Railroad.....	405
Waterbury and Atwoods Ventilator.....	406
Railroad Exhibits.....	407
Railway Intelligence.....	408
Flushing Railroad.....	410
Public Works of Pennsylvania.....	410
Locomotive Boilers for Anthracite Coal.....	411
John Hampson.....	411
Journal of Railroad Law.....	412
Morris and Essex Railroad.....	412
Land Grants to Railroads.....	412
Great Western Railroad of Canada.....	412
Grand Trunk Railway of Canada.....	412
United States Mint.....	412
Car Ventilation.....	413
Ohio and Mississippi Railroad.....	414
Evansville, Indianapolis, & Cleveland R. R.....	414

American Railroad Journal.

Saturday, July 1, 1854.

Gauge of Railroads.

The width of *Gauge* best adapted to economical transportation, has been a question which has excited a vast deal of discussion, particularly in England, and has divided Railroad Engineers into two parties, distinguished by the terms *wide* and *narrow Gauge*. The prevailing gauge was adopted not for the reason that 4 feet and 8½ inches, was supposed to be the best one at the time, but because it corresponded to the width of the Coal tram road to which the Railroad succeeded. It was natural therefore, as the Railway expanded into a mighty system, that the propriety of any plan of construction arbitrarily, or accidentally adopted, should be questioned and discussed; and no question in Railroad Engineering has excited so much discussion, as that of the width of *Gauge*.

The extreme limits of the *Gauge* advocated in this country are 6 feet, and 4 ft. 8½ in. For what we propose to say, it is not necessary to recapitulate the arguments in favor of either, as the greatest stickler for either extreme is forced to admit, that the value of the difference between the two is

far outweighed by the matter of convenience; or, in other words, the *Gauge* question is no longer an open one, only where there are no Railroads. It is universally conceded that where the wide gauge exists, the same width should be observed in new works, and *vice versa*, where the narrow Gauge prevails.

With such a rule controlling the question of Gauge, the propriety of which will not be challenged, we have been entirely at a loss to account for the adoption of the 6 foot Gauge on the Ohio and Mississippi, and Louisville and Nashville Railroads. All the lines intersecting the former will have the 4 foot 8½ inches Gauge; those intersecting the latter, 5 feet; Gauges, which must entirely isolate them from such connecting lines, and prove most injurious, if not fatal, to their success.

While it is still a mooted question what width of Gauge is the best, no one will question the very great importance of *uniformity*. A break of Gauge may, and often does operate to check almost entirely the movement of merchandise on any particular route. The expense due to a change of freight from one car to another, is variously estimated as equal to a movement of from 50 to 100 miles. But the mere cost and loss, arising from *transshipment*, are not so great, probably as those arising from the delay, occasioned. The breaks of Gauge at Erie and the Pennsylvania State line on the Lake Shore Road, caused immense losses, not only in *transshipment*, but in the destruction of property. In fresh meats particularly, the loss was enormous; whole cargoes of such freights becoming putrid before reaching New York. So great was the inconvenience arising from the above breaks, we have no doubt that the Lake Shore line alone would gladly have given \$500,000 to have got rid of them, could it have done no better. Here is a practical instance of the evils of two Gauges, and one which will always be repeated whenever they come into conflict.

Let us see how the break of Gauge will affect the value of the Ohio and Mississippi Railroad. Cincinnati is the best market for nearly the whole of Central and Southern Indiana. These portions of the State are now covered with a net work of Railroads of the narrow Gauge. Did the Gauge of the former correspond to these, it would constitute them a convenient *trunk* to Cincinnati. Before

reaching the State of Illinois, it crosses eight important lines of Railroad, five of which are now in active operation. It is from the district traversed by these roads, the Ohio, Mississippi is to draw its traffic. Instead of building a road to accommodate this traffic, it has taken the most effectual course to repel it. Every pound of freight received from any connecting line, must break bulk, even if received within ten miles from its first point of shipment. The injurious effect of such a break is strikingly illustrated by the direction which the freight brought to the line of the Ohio and Mississippi by the Indianapolis and Cincinnati now takes. Did the Gauges of the two roads correspond, all this freight would pass over the Ohio and Mississippi Road; as it is, it is now forwarded from Lawrenceburgh to Cincinnati by water. A large number of passengers take the same direction. By the adoption of an exotic Gauge, the Ohio and Mississippi Road has failed to make herself a part of a trunk line to Cincinnati, for the country traversed and has cut herself off from her very best source of business, without a penny to show as an equivalent for the loss.

The same strain of remark applies to the relations of the above with all the other roads it crosses. The evils arising from the break of Gauge in each case are the same in *kind*, only less in proportion to the distance over which freight and passengers are to be carried. The truth is, no method could have been devised by the Ohio and Mississippi Railroad, so calculated to drive away business instead of attracting it; of exciting the ill will and hostility of the people upon its line, instead of their good will. The result probably will be that the section traversed by the above road, aided by the various and powerful Railroad interests which exist, will unite upon the construction of a new line to Cincinnati, with a Gauge adapted to the route traversed. Already are various roads commenced, with narrow Gauges running west, from Cincinnati the greater part of which, probably never would have been proposed, but for the adoption of the *wide Gauge* by the Ohio and Mississippi. A double mischief is the result; a direct loss of trade to the road, and in the end, rival lines which must divide a business which otherwise might have been monopolised by the former.

A similar view may be taken of the impolicy of

introducing the wide gauge into Kentucky, for roads proposing a connection with Nashville and Knoxville. All the roads intersected by the Louisville and Nashville railroads will have a gauge of 5 feet, involving a transshipment of all the business received from them. On the other hand, the Cincinnati line, which is now nearly completed to Danville, to be extended to Nashville by way of *Glasgow*, will have the gauge of the connecting roads, and will compete, and successfully, for the trade air d at y the Louisville and Nashville railroad, the gauge of which will render it another Chinese wall o cut off from, instead of drawing the trade toward, Louisville. One reason why this city has extended liberal aid to the above road, is the expectation that it would eventually form the part of a great line to Knoxville, and the Southern Atlantic cities. With this view the Nashville line takes the course in the direction of Knoxville for a considerable distance. But it is easy to see that a six feet gauge can never be carried from Louisville to Knoxville. Any road that is built must form a part of a line to Cincinnati as well as to Louisville. The principal portion of the means necessary for any road from Knoxville to Danville, Ky., must be furnished by the lines interested in the connecting link. As these roads are of the 5 feet gauge, they will, of course, insist upon its adoption of a gauge similar to their own. Should the Louisville and Nashville assist in building such link, it will be one of a dozen, all having a different and uniform gauge. Any road built connecting Kentucky with the Southern lines of railroad must have a five feet gauge. The roads composing the entire line from the Ohio to the South Atlantic and Gulf cities, will naturally favor their complements that have a corresponding gauge, and this will be possessed only by the Cincinnati line. That city will obtain a decided advantage over Louisville, which will find that the transshipment which the six feet track will require, will drive all the business to the very rival from which she has most to fear.

Such are some of the grand results which the Ohio and Mississippi, and Louisville and Nashville are proposing to secure to themselves, by their violation of the most obvious dictates of common sense. Were the object to secure a *better* gauge than the 4 feet 8½ inches, certainly the 6 feet would not be adopted. This is regarded as too wide by avowedly wide gauge men. In the only two instances in which the question of gauge could be considered an open one, in Canada and West of the Mississippi, not the six feet, but the five and a half feet was adopted. It must be considered that these innovations were made by wide gauge engineers, under circumstances allowing the fullest liberty of adopting the gauge *theoretically* the best. These facts show that six feet is considered *too* wide a gauge, even by wide gauge engineers. It is so considered by engine makers. The managers of the Erie road would gladly reduce the width of the track of *their* road if they could. Upon what principle then, we should like to know, was the 6 foot Gauge adopted on the Ohio and Mississippi, and Louisville and Nashville Railroads; not on the ground of its superiority, for both authority and practice is against such a Gauge, and we happen to know that Mr. Morton, one of the leaders of the wide Gauge party in this country, strenuously opposed its adoption on the former

road, upon the grounds stated by us. Had the wide Gauge been adopted on the ground of its *superiority*, a width exceeding 5½ feet would not have been used. The true reason in both cases undoubtedly was, the éclat that could be gained out of the use of the extra wide Gauge. If any Gauge is good, the inference assumed was, the wider the better. By such *clap-net* it was expected that the populace could be tickled, that the merits or demerits, of the project could be hidden under, and all objection silenced, by a sounding title. A *six-feet* Gauge has been made to stand for a good route, plenty of money and competent management. It is *really* used to conceal the lack of all these. Against all such nonsense we protest. Against the introduction of such a Gauge, when the narrow is the prevailing one, we protest still stronger. Its use under such circumstances is enough to impeach the judgment of those urging it. It is sufficient reason against their competency to superintend the construction of Railroads. The danger is imminent that the money expended upon each road will be thrown away by the necessity created for the construction of other roads, to furnish the accommodations which the former fail to supply. Such folly ought to be checked or corrected in the outset; and we call attention of the creditors and Stockholders of the above roads to the danger to which they are exposed. Both roads can better afford to sacrifice a million each, than to use any Gauge not in harmony with their connecting lines. Will they not amend their mistakes in time, and not leave them to be corrected by other parties, involving a still greater loss to the former, to say nothing of the cost to the public?

Col. Fremont's Exploration.

Colonel Fremont has addressed to the National Intelligencer an account of his exploration of the Central route for a railroad, from which we take the following abstract:

"The country examined," says Col. Fremont, "was from the Missouri frontier, at the mouth of the Kansas River, to the Valley of Parowan, at the foot of the Wahsatch Mountains within the rim of the Great Basin, at its south-eastern bend—along and between the 38th 39th parallels of latitude; and the whole line divides itself naturally into three sections, which may be conveniently followed in description.

The first or eastern section consists of the great prairie slope, spreading from the base of the *Sierra Blanca* to the Missouri frontier, about 700 miles; the second or middle section comprehends the various Rocky Mountain ranges and interlying valleys, between the termination of the great plains at the foot of the *Sierra Blanca* and the Great Basin at the Parowan valley and Wahsatch Mountains, where the first Mormon settlement is found, about 450 miles; the third or western section comprehends the mountainous plateau lying between the Wahsatch Mountains and the *Sierra Nevada*, a distance of about 400 miles.

The country examined was upon a very direct line—the traveled route being about 1,550 miles over an Air-line distance of about 1,300 miles.

The First section.—Four separate expeditions across this section, made before the present one, and which carried me over various lines at different seasons of the year, enable me to speak of it with the confidence of intimate knowledge. It is a plain of easy inclination, sweeping directly up to the foot of the mountains which dominate it as highlands do the ocean. Its character is open prairie, over which summer traveling is made in every direction.

For a railway or winter traveling road the route would be, in consideration of wood, coal, building

stone, water and fertile land, about two hundred miles up the immediate valley of the Kansas, (which might be made one rich, continuous cornfield,) and afterward along the immediate valley of the Upper Arkansas, of which about two hundred miles, as you approach the mountains, is continuously well adapted to settlements as well as to roads. Numerous and well watered and fertile valleys—broad and level—open up among the mountains, which present themselves in detached blocks—outliers—gradually closing in around the heads of the streams, but leaving open approaches to the central ridges. The whole of the inner-mountain region is abundant in grasses, wood, coal and fertile soil. The Pueblos above Bent's Fort prove it to be well adapted to the grains and vegetables common to the latitude, including Indian corn, which ripens well, and to the support of healthy stock, which increase well, and take care of themselves summer and winter.

This character of country continued to the foot of the dividing crest, and to this point our journey resulted in showing a very easy grade for a road, over a country unobstructed either by snow or other impediments, and having all the elements necessary to the prosperity of an agricultural population, in fertility of soil, abundance of food for stock, wood and coal for fuel, and timber for necessary constructions.

The climate is mild and the winters short; the autumn usually having its full length of bright, open weather, without snow, which in winter falls rarely and passes off quickly. In this belt of country lying along the mountains the snow falls more early and much more thinly than in the open plains to the eastward; the storms congregate about the high mountains and leave the valleys free. In the beginning of December we found yet no snow on the *Huerfano* river, and were informed by an old resident, then engaged in establishing a farm at the mouth of this stream, that snow seldom or never fell there, and that cattle were left in the range all the winter through.

The above description is so different from all others, that there seems to be a direct conflict of testimony in reference to the climate, soil and productions of the Arkansas Valley and the eastern slope of the Rocky Mountains. Major Emery, who accompanied Gen. Kearney's expedition which took the route of the Arkansas, says in his report, that "near the meridian of 99, the country changes almost imperceptibly, until it merges into *arid* and *barren* wastes. The transition is marked by the occurrence of *cacti* and other spinose plants, the first of which was seen in longitude 98. The country embraced between this point and *Bent's* Fort is totally different in character from that east of it." The Arkansas for this distance runs over a bed of loose shifting sand, and falls at the rate of 7 4-10 feet per mile. The bottom lands, which can be irrigated, are from one-half to two miles wide. "Beyond these," says Major Emory "the ground rises by gentle slopes into a wilderness of sand hills on the south, and *prairie* on the north. The soil of the plains is a *granitic* sand, and is intermixed with the exuviae of animals and vegetable matter, supporting a *scanty* vegetation. The eye wanders over these immense wastes in search of trees. *Not one is to be seen.* The only tree found on the bottom lands is the *Cotton-wood*. And it frequently happens that not one of these is seen in a whole day's journey; buffalo dung and the wild sage constituting the only fuel to be procured." Such is Major Emory's account of a region which Col. Fremont describes as "having all the elements necessary to the prosperity of an agricultural population, in fertility of soil, abundance of food for stock, wood and coal for fuel, and timber necessary for constructing." The only

tree met with is the cotton-wood, which is notoriously *unfit* for the construction of a railroad.—In this conflict of testimony, who shall be regarded authority?

Upon the upper waters of the Arkansas, Col. Fremont says the climate is *mild* and the winters *short*. We do not see how a mild climate and short winter can prevail at an elevation varying from 4,000 to 8,000 feet above the sea, in latitude 38° 30'. Certainly Col. Fremont's statement conflicts with what has been supposed to be an unvarying law, that the mercury falls as we ascend from the earth's surface. The change due to 4,000 feet elevation is equal to about 13 degrees of latitude, which would give Bent's Fort the climate of Pembina Settlement on the Red River of the North, and a colder climate than that of Lake Superior. Such, we have no doubt, is the fact. The higher we ascend from Bent's Fort the greater the degree of cold, till in fact we enter, as far as the climate is concerned, the *Arctic Circle*.

We are not left to conjecture as to the climate of Bent's Fort. During the time that General Kearney camped in its vicinity from July 27th to August 3d, the range of the thermometer did not exceed 66. The following winter, Lieut. J. W. Abert, returning from New Mexico to the United States, reached Bent's Fort Jan. 17, 1847. "The thermometer," he says in his report, "has all day been 7 degrees *below* Zero; and I was told that for several days previous the temperature of the air had been of the same degree of coldness."—This account is what we should expect from the great elevation of Bent's Fort. The latter expedition, for the whole distance, suffered terribly from the intensity of the cold. We cannot reconcile the evidence furnished by our knowledge of the great elevation of Bent's Fort, of the head waters of the Arkansas, and the direct testimony above quoted, with Col. Fremont's description.

Col. Fremont describes the country at the head of the Del Norte as similar to that at the head of the Arkansas. He says—

At this place the line entered the middle section and continued its western course over an open valley country, admirably adapted for settlement, across the San Luis valley, and up the flat bottom lands of the Sah-watch to the heights of the central ridge of the Rocky Mountains. Across these wooded heights—wooded and grass-covered up to and over their rounded summits—to the *Cochatope* pass, the line followed an open easy wagon-way, such as is usual to a rolling country. On the high summit lands were forests of coniferous trees, and the snow in the pass was four inches deep.—This was on the 14th of December. A day earlier, our horses' feet would not have touched snow in the crossing. Up to this point we had enjoyed clear and dry pleasant weather. Our journey had been all along on dry ground; and traveling slowly along, waiting for the winter, there had been abundant leisure for becoming acquainted with the country. The open character of the country, joined to good information, indicating the existence of other passes about the head of the Sah-watch. This it was desirable to verify, and especially to examine a neighboring and lower pass connecting more directly with the Arkansas valley, known as the Pow-che.

"But the winter had now set in over all the mountain regions, and the country was so constantly enveloped and hidden with clouds which rested upon it, and the air so darkened by falling snow, that exploring became difficult and dangerous, precisely where we felt most interested in making a thorough examination. We were moving in fogs and clouds, through a region wholly unknown to us, and with-

out guides, and were therefore obliged to content ourselves with the examination of a single line, and the ascertainment of the winter condition of the country over which it passed, which was in fact the main object of our expedition.

This does not look very favorable for a *winter* route at the head waters of the Del Norte, especially as it took Col. Fremont's party 10 days to make *one hundred miles*. We are still incredulous that a country at an elevation of from 8,000 to 10,000 feet above the sea, can be admirably adapted for settlement.

After crossing the *Sierra Blanca*, Col. Fremont found, in his opinion, a good route for a railroad to the Mormon Settlement at Parowan, though the account he gives of his journey over this part of his route would certainly lead to a different conclusion. From the head of the Del Norte to this place, the route for the greater part of the way is through lofty mountain ranges, more or less obstructed by snow. Parowan is in the great basin of Utah, and lies on the western slope of the Wahsatch range.

At Parowan (says Col. Fremont) the line of exploration entered the third or western section, comprehending the mountainous *plateau* between the Wahsatch Mountains and the Sierra Nevada of California. Two routes here suggested themselves to me for examination; one directly across the *plateau* between the 37th and 38th parallels; the other keeping to the south of the mountains, and following for about two hundred miles down a valley of the Rio Virgen—Virgin River—thence direct to the Tejon Pass, at the head of the San Joaquin Valley. This route down the Virgin River had been examined the year before, with a view to settlement this summer by a Mormon exploring party under the command of Major Steele of Parowan, who (and others of the party) informed me that they found fertile valleys inhabited by Indians who cultivated corn and melons, and the rich ground in many places matted over with grape vines. The Tejon Passes are two, one of them from the abundance of vines at its lower end) called *Caxon de las Uvas*. They were of long use, and were examined by me, and their practicability ascertained in my expedition of 1848-49; and in 1851, I again passed through them both, bringing three thousand head of cattle through one of them.

The *practicability* of the *Tejon Passes* was not ascertained by Col. Fremont. This still remains a mooted question, as will be seen by the following account of them by Lieut. Williamson, to whom has been entrusted their examination, and who after careful exploration reports as follows:

"Still further south there are two passes leading into the head of the Tulare Valley, at a place called Tejon. A wagon road passes through one, which is beginning to be known as the Tejon Pass, and it is the worst wagon road I ever saw. The pass fortunately presents some good features for a railroad. Two small streams run from near the summit—one into the basin, the other into the Tejon—but their sources are separated by a narrow divide over 1500 feet high. I have great hope that a survey will show that should this ridge be tunneled, the road can pass up one creek through the tunnel, and down the other. The summit of the Tejon Pass is 4,500 feet above the Tulare Valley.

The other pass coming into the Tejon is called the Canada De Las Uvas (grape ravine). In this a small brook descends into the Tejon, 1,400 feet in 4 miles, while the rest of the pass is of gentle ascent and descent. The summit is 3,100 feet above the Tulare Valley—the same height as that of the passes before mentioned. Two modes would naturally suggest themselves for making a road through this pass. One, a system of inclined planes with stationary engines over the 4 miles above mentioned; a second, by following along the side

hills. Before I express an opinion on these points I must wait till a survey of the pass is made. I intend to leave here to-morrow for the Tejon, 25 miles distant, and shall run a line of levels through the Tejon Pass and the Canada De Las Uvas, at the same time making an accurate sketch of the hills and ravines on each side. From the data thus obtained, I shall be able to give full information on the subject."

The examination of Lieut. Williamson shows the substance of what is so practicable. He *hopes* the difficulties which appear insurmountable may yield to a further and more careful exploration. We think that these examinations are entitled to much greater weight than the mere dictum of Col. Fremont.

"Knowing the practicability of these passes," continues Col. Fremont, "and confiding in the report of Major Steele, as to the intermediate country, I determined to take the other (between the 37th and 38th parallels,) it recommending itself to me as being more direct towards San Francisco, and preferable on this account for a road, if suitable ground could be found; and also as being unknown, the Mormons informing me that various attempts had been made to explore it, and all failed for want of water. Although biased in favor of the Virgin River route, I determined to examine this one in the interests of geography, and accordingly set out for this purpose from the settlements about the 20th of February, traveling directly westward from Cedar City, (eighteen miles west of Parowan.) We found the country a high table land, bristling with mountains, often in short isolated blocks, and sometimes accumulated into considerable ranges, with numerous open and low passes.

"We were thus always in a valley and always surrounded by valleys more or less closely, which apparently altered in shape and position as we advanced. The valleys are dry and naked, without water or wood; but the mountains are generally covered with grass and well wooded with pines; springs are very rare, and occasionally small streams at remote distances. Not a human being was encountered between the Santa Clara river near the Mormon settlement and the Sierra Nevada, over a distance of three hundred miles. The solitary character of this uninhabited region, the naked valleys without water courses, among mountains with fertile soil and woods and grass abundant, give it the appearance of an unfinished country.

"Commencing at the 38th, we struck the Sierra Nevada on about the 37th parallel about the 15th March.

"On our route across we had for the greater part of the time, pleasant and rather warm weather; the valley grounds and low ridges uncovered, but snow over the upper parts of the higher mountains. Between Feb. 20 and 17th of March, we had several snow storms, sometimes accompanied with hail and heavy thunder; but the snow remained on the valley grounds only a few hours after the storm was over. It forms not the least impediment at any time of the winter. I was prepared to find the Sierra here broad, rugged and blocked up with snow, and was not disappointed in my expectation. The first range we attempted to cross carried us to an elevation of 8,000 or 9,000 feet and into impassable snow, which was further increased on the 16th by a considerable fall.

"There was no object in forcing a passage, and I accordingly turned at once some sixty or eighty miles to the southward, making a wide sweep to strike the *Point of California Mountain* where the Sierra Nevada suddenly breaks off and declines into a lower country. Information obtained years before from the Indians led me to believe that the low mountains were broken into many passes, and at all events I had the certainty of an easy passage through either of Walker's passes.

"When the Point was reached, I found the Indian information fully verified; the mountain sud-

denly terminated and broke down into lower grounds, barely above the level of the country, and making numerous openings into the valley of the San Joaquin. I entered into the first which offered, (taking no time to search, as we were entirely out of provisions and living upon horses,) which led us by an open and almost level hollow, thirteen miles long, to an upland not steep enough to be called a hill, over into the valley of a small affluent to Kern river; the hollow and the valley making together a way where a wagon would not find any obstruction for forty miles.

"The country around the passes in which the Sierra Nevada here terminates declines considerably below its more northern elevation. There was no snow to be seen at all on its eastern face, and none on the pass; but we were in the midst of opening spring, flowers blooming in fields on both sides of the Sierra.

"Between the point of the mountains and the head of the valley at the Tejon, the passes generally are free from snow throughout the year, and the descent from them to the ocean is distributed over a long slope of more than 200 miles. The low dry country and long slope, in contradistinction to the high country, and short, sudden descent and heavy snows of the passes behind the bay of San Francisco, are among the considerations which suggest themselves in favor of the route by the head of the San Joaquin."

We must confess ourselves incredulous as to the correctness of Col. Fremont's observation upon his newly discovered passes. In the first place, had such passes existed, they must have been known and traversed. The indications furnished by the course of the streams, and the general slope of the Sierra Nevada range, is decidedly against such depression as he speaks of. Neither is it possible that the descent from these newly-discovered passes can be distributed over 200 miles to the sea. His *new* route crosses the mountain ranges at *right angles* to their general direction, and of course must fall more rapidly into the San Joaquin Valley than those entering the head of the valley through Walker's or the Tejon passes, and which can follow down the sides of the mountain to the plain below. Yet through these passes we have seen that the head of the valley cannot be reached short of an incline of 250 or 300 feet to the mile.

We are sorry to say in conclusion, that Col. Fremont's account of his tour seems to us to be the argument of a *partisan*, instead of an *impartial* record of actual observations. To publish, without remarks, his account of his tour, would help to mislead the public instead of instructing it.—More than this, we have good reason to believe that the publication of Capt. Gunnison's notes will establish beyond contradiction the incorrectness of Col. Fremont's assertion that a favorable route is found upon his line through the great Rocky Mountain Range. We learn that these mountains cannot be crossed by any practicable line, nor without long tunnels, which of themselves render his route impossible. We presume that Col. Fremont took no measurements that can be relied upon. The rapidity with which he pushed forward rendered it impossible for him to take such. On the contrary, Capt. Gunnison's party was organized expressly for scientific observation, which renders it altogether probable that his measurements of *Sangre de Christo* and *Cochetopee* passes are correct. Should these observations contradict the report of Col. Fremont *in toto*, as we are assured they will, they will place him in an awkward predicament. We have had enough

of partisan statements already; and if Col. Fremont be such, he will suffer more in his reputation than he did physically upon his most hazardous and adventurous journey.

Alabama and Tennessee Railroad.

GRANTS OF LAND TO RAILROADS.

The above Company have memorialized Congress for a grant of land to aid in the construction of this line of Railroad. The following is the substance of the memorialist.

An inspection of the Map of the United States will indicate that the most direct and expeditions route for travel and the United States Mail, between the northeastern cities of the Union and the Gulf of Mexico and Texas is, commencing at Portland, Maine, through Boston, New York, Philadelphia and Baltimore to Washington City; thence in a southwest direction through Alexandria and the Valleys of Virginia to Abington; thence in the same direction and following the same valleys through East Tennessee and Northwest Georgia to their termination in Middle Alabama; thence in the same course over the level plains of Middle and South Alabama, by Selma to Mobile and to New Orleans. This general route with slight exceptions was selected by General Bernard, the distinguished Chief Engineer of the United States, as early as 1820, after thorough explorations, as the most direct and practicable route for the transportation of the United States Mail.

Within the last few years, without any concert of action, but attracted by the vast amount of commerce and travel tributary to this line and the great natural advantages for railway construction offered by the North Atlantic Coast and by the valleys of Virginia, Tennessee, Georgia and Alabama, the different States intersected by the route have constructed and placed under contract a system of railways which in three or four years will present a *grand National Trunk Line of continuous Railways* on this route, from Maine to Texas.

One of the most important links in this great National Chain of Railroads is the Alabama and Tennessee Rivers Railroad.

This *great National Trunk Line* may be said to commence at Portland, Maine; thence it passes through Boston, New York, Philadelphia and Baltimore to Washington City. Up to this point the line is in operation; from Washington to Alexandria is a short gap of seven miles, at present supplied by steamboats. From Alexandria, the line is continued southwardly by the Orange and Alexandria Railroad, and its extension to Lynchburg, 174 miles, of which 90 miles are in running order and the remainder under way. From Lynchburg, the Virginia and Tennessee Railroad continues the great national line by way of Abington, to the Northern boundary of Tennessee, 205 miles; 100 miles of it being in operation and the remainder in the course of rapid construction. Through East Tennessee, the East Tennessee and Virginia Railroad, one hundred and thirty miles long, and the East Tennessee and Georgia Railroad 111 miles long, extend the Grand Line by Knoxville to Dalton, Georgia; thence through Georgia to the Alabama State line, it is continued by a railroad 45 miles, recently chartered, and on which subscriptions are being made; thence the Alabama and East Tennessee Railroad, 45 miles, extends the grand line to the Alabama and Tennessee Rivers Railroad at Jacksonville; thence the Alabama and Tennessee Rivers Railroad continues the Grand Line 145 miles to Selma; of this distance 56 miles are in running order, and about 70 miles are graded. From Selma to Mobile, the Mobile and Selma 45 miles and Mobile and Girard 100 miles long, extend the line to Mobile. The Mobile and Selma Railroad has been recently chartered and the Mobile and Girard Railroad Company have means nearly sufficient to build their section. From Mobile to New Orleans the grand line is still continued by the Mobile and New Orleans Railroad 189 miles; this railroad is in the hands

and under the direction of gentlemen of wealth and of acknowledged financial abilities, and will from its admirable location for business be speedily constructed. The Grand Trunk Line does not stop at New Orleans, but is taken up and carried westward into Texas, by the New Orleans and Opelousas Railroad now in the course of construction with large means; and also by a railroad from New Orleans to the Sabine River in the direction of Galveston and Houston, for which grants of land are also asked. The last annual reports of the railroad companies composing the grand route south of Washington to Dalton, Georgia, give assurances that this part of the line will be in operation in 2 years or less time. From Dalton southwardly a part of the line is now available by steamboat navigation; a considerable portion will be in running order in two years, and should Congress aid by grants of land, as now respectfully asked for, the whole distance can be placed in working order in three years or perhaps less time, and thus will be accomplished the longest continuous line of railway in one general direction in the United States or elsewhere, with the exception of the proposed Pacific Railroad.

By tracing on a map the lines of railroad which have been thus described, it will be seen that the Alabama and Tennessee Rivers Railroad with its connections and extensions, will afford an outlet to the Gulf of Mexico for all that section of the United States north of a line drawn from Richmond, Virginia, to Selma, Alabama, and east of a line drawn from Selma to the eastern boundary of Lake Erie, a territory containing about 324,000 square miles, and a population of 13,000,000. And that to a very large portion of this territory it offers the most direct route for travel and the transportation of the United States Mail to the Gulf of Mexico and Texas.

There is, however, another important national consideration why the Alabama and Tennessee Rivers Railroad should be immediately constructed and assisted in the manner proposed.

Sir Charles Lyell in his geological exploration in the United States, speaking of the Alabama coal field, says that 'It forms the southern prolongation of the great Appalachian coal field. Its geographical situation is peculiarly interesting, for being situated in latitude 33 deg. 10 min. north, it constitutes at present the *extreme southern limit* to which the ancient carboniferous vegetation has been traced in the northern hemisphere, whether on the east or the west side of the Atlantic.'

To this may be added that it is the nearest coal field of any yet discovered in the Gulf of Mexico. The Alabama and Tennessee Rivers Railroad taps the Alabama coal field at its most southern extremity, and connects it with the Gulf of Mexico by only 54 miles of railroad, and 300 miles of descending navigation by the Alabama river. Such are the advantages offered by this railroad and river transportation, that coal may be delivered at Mobile at from 4 to 5 dollars per ton, and in the ports at the Gulf at from 6 to 7 dollars per ton. These charges will be considerably reduced by the construction of the Mobile and Girard and Mobile and Selma railroads. The coal is of an excellent quality for steam purposes, and the supply is abundant.

The great national importance of having adequate and cheap supplies of coal in the Gulf of Mexico, will be recognized by all acquainted with the value and necessity of steam marine in modern warfare and commerce.

A large portion of the lands asked to be granted for this railroad, have been in the market for upwards of twenty years, and still belong to Government because valueless for want of an outlet to a market. The construction of this road which can soon be accomplished by the aid of alternate sections as proposed, would enhance the value of the remainder of the lands to an extent which would richly repay the Government for the grant.

Finally, the Alabama and Tennessee Rivers Railroad would prove of immense national ad-

vantage in the defences of the Gulf of Mexico, as it would present the best route by which the troops and supplies of a large portion of the west and northeast could be transported to the Gulf with the utmost safety, certainty and dispatch."

New York and New Haven Railroad.

The recent annual report of this company gives the following account of its operations for the past year.

The gross earnings of the year, April 1, 1853, to March 31, 1854, have amounted to \$961,277, as follows:

From passengers, fares.....	\$743,691 93
From passengers, commu- tation.....	32,558 10

Passenger receipts.....	\$776,250 63
From freight.....	144,932 54
From mail service.....	14,722 82
Miscellaneous sources.....	17,026 71
Balances from connecting roads.....	8,345 64

Total as above.....\$961,277 74

The current charges for the year's service, exclusive of large expenditures upon the old track in ballasting and adjusting the grades to correspondence with the new or second track, have amounted to \$467,654 76.

Transportation, wages salaries, &c., &c.....	\$162,340 97
Repairs of road, bridges, and build- ings.....	80,067 68
Repairs of locomotives, tenders, cars, &c., &c.....	70,143 93
Oil, tallow, waste, &c.....	15,846 21
Wood consumed.....	100,352 45
Haulage of cars in New York.....	33,903 52

Total as above.....\$467,654 76

The net earnings of the Transportation Department for the year are thus \$493,622 98.

Of this sum the Harlem Railroad Company have been paid for the use of their Road \$74,026 55.

Leaving a balance of net earnings to the credit of the profit and loss ac- count of.....	\$419,596 43
To which add dividend on Harlem Stock.....	6,400 00
And balance to credit 1st April, 1853	20,276 70

Total on 1st April, 1854.....\$446,273 13

From this amount have been paid \$182,938 95 for annual charges, interest, &c.

The Canal Railroad of Connecticut, leased by the New York and New Haven, has been operated the past year at a loss of \$25,583.

A condensed balance sheet on 1st April, 1854, stands as follows:

DR.—Railroad, with two tracks from New-Rochelle to New Ha- ven with all appendages, cost.....	\$3,873,831 04
Equipment—23 Locomotives, Cars, &c.....	601,319 23
Property, in New York, &c., &c.....	656,798 12

Total.....\$5,131,948 39

CR.—By Capital Stock \$3,000,000 00

By Bonds issued.....

1,901,000 00

By Sundry Ac-
counts, Loans,
&c.....

140,948 39

Total.....\$5,131,948 39

The expenditures necessary for the completion of the bridges and some other works, not inclusive of a double track from New-Rochelle to the Harlem Road, will probably increase the capital accounts to \$5,250,000.

The apparent net earnings of the past year were \$262,334 18. These have been used in payment

of claims made upon the company in consequence of the Norwalk calamity, by which 45 lives were lost, and a large number of persons injured. Of these claims, 40 have been settled at a cost of \$252,311 35. No dividend has been declared for the past, and we presume none will be for the first half of the present year.

The great depreciation of the stock of this company has undoubtedly been helped by the Norwalk accident. The road, however, has had its life blood squeezed out of it in the same manner, as have the Erie and the Central. It has cost at least 50 per cent. more than it should. It probably occupies the best line for business in the United States, and there is no sufficient reason why it should not command as great a premium as the roads between New York and Philadelphia. In the latter case, the managers make their money out of the earnings of their road. In the former, there has been altogether too much money made out of construction, to allow much for dividend.

Railroad Runners.

There are four railroad companies in the United States that probably pay annually \$100,000 each to runners. Others pay large sums, proportioned to the rivalry to which they are subject, or their desire to get business.

A portion of these runners are men entirely destitute of character. In fact, the more unprincipled, the better fitted they are for their vocation. Their success is measured by the adroitness with which they can impose upon the unwary traveler, by representing to him that their line is the *shortest, cheapest*, and most comfortable route, in spite of the fact that it is the inferior one in all these respects. The test of fitness of a good runner is his success, no matter by what means this success is obtained.

It is not pretended that runners increase travel. It is admitted that they are a pest to the traveling public and society. They do not increase the aggregate receipts of railroads. They are the indication and the result of a rivalry which costs a vast sum, while in the long run they do not add a penny to the receipts of any road, as the forces employed by the rival lines are so well matched, as to end in a drawn game, however furious may have been the contest.

Railroad companies admit to the fullest extent the evils of the system. Go to the Erie railroad, and its managers will repeat what has been said by ourselves. But, say they, we must employ runners against the Central and other lines; and until the above is put down by a combination of companies, we must practice it in self-defence.—The Central would probably make a similar reply.

So with the two Michigan lines. All admit and deprecate the evil, but all continue to practice it, from a feeling of necessity to defend themselves from the aggressions of their neighbors. A constant warfare is thus kept up, expensive to the companies, annoying in the highest degree to the traveler, and demoralizing to the parties employed, and to the general tone of service upon railroads.

The evil has its origin in a mean and short-sighted jealousy, equally inconsistent with the true interest of railroads and of the public. A state of warfare is one of semi-barbarism, whatever the objects for which it is waged. No road can, in the long run, gain any advantage over

others, except by furnishing better accommodations to the public. Such advantages runners cannot secure. On the contrary, so long as they are employed, companies will be very apt, in relying upon their exertions for business, to neglect those measures which lie at the foundation of all success.

The roads centering in New York, with the Central, can correct the abuse complained of, if they will. Should they all agree to discontinue the practice of soliciting business, and support offices in which the tickets of all are sold upon equal terms, they would do just as much with vastly less cost. No slight reward would be the satisfaction on the part of the managers, which always accompanies an honorable and highminded manner of conducting business operations. There is no department in railroad management that calls more loudly for reform. When the remedy is so simple, shall it not be applied?

For the American Railroad Journal.

Broadway Railroad, etc.

MR. EDITOR,—Many plans have been brought forward since I suggested the idea of an elevated railroad in Broadway. I have read the article in your last number of the "Railroad Journal" on this subject. The objections you refer to against the plan noticed by you of a covered way over the sidewalk for the running platform of the cars, are certainly valid; upon the ground of its obstructing the view, and injuring the beauty and convenience of this municipal highway.

If the necessity should occur to get rid of the inconveniences of the present travel of the omnibuses on Broadway, then I would recommend the resort to my original suggestion of an uncovered and elevated railway, which will cause no obstructions to be introduced of a character offensive to the eye. It consists of a single rail, placed on a line with the curb of the pavement, and elevated so high as that the bottom of the cars will be level with the second floor of the houses along Broadway. This height, of course, will free the footway below from any inconvenience from the passing train. It will be understood, Mr. Editor, that the cars on this plan of road will straddle the road, that is, the body of the cars will be below the line of the rail on each side of the same, the wheels being above in place of below the floor of the carriage. This state of the cars in operation insures them against the possibility of flying off the track.

I inclose you a paper, which gives a statement of the merits of this plan of railway, and of its economy compared with the present plan of these roads, and I would respectfully invite the attention of railroad companies to it, for the line best suited for the safe conveyance of passengers.

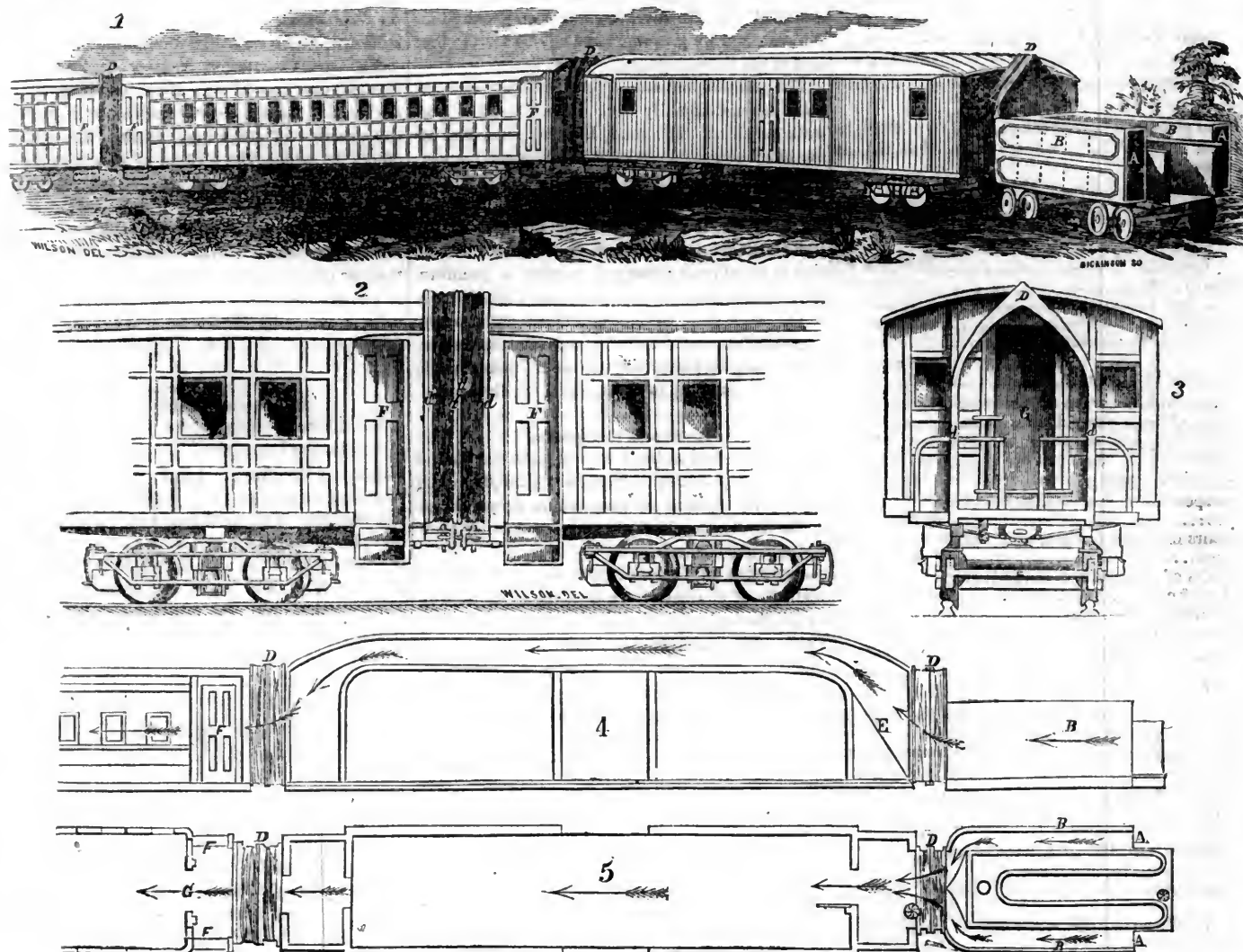
My object in bringing forward this plan is to lessen the dangers and accidents of the present plan of railroads, under increased speed.

The traveling public, at least, look for an immunity from these disasters. Life is too precious to be trifled with under the present system; and it is due to a confiding public, that those who provide this means of locomotion should also insure safety of transit to persons and property transported.

I will not encroach, sir, further on your time than to appeal to our railroad companies to adopt this plan for their passenger trains.

ROBERT MILLS,
Engineer and Architect,
City of Washington.

Waterbury and Atwood's Mode of Ventilating Railway Cars, and Excluding Dust, Smoke and Cinders.



The mode represented in the above cut has been in use on the Naugatuck Railroad over a year, thus testing it through all the seasons, and the great satisfaction it has given to all connected with the road as well as to the passengers over it, induces the proprietors of the patent to offer it to Railroad companies for adoption.

It consists in taking the air near the front of the train at the sides of the tender and passing it through, over or under the baggage car, and, by suitable connections and partitions conveying it from car to car through the whole length of the train.

Fig. 1, is a train without the engine.

Fig. 2, is a side elevation of two passenger cars to show more particularly some of the details of the arrangement.

Fig. 3, is an end elevation for the same object.

Fig. 4, is a longitudinal section of tender, baggage car with air chamber, and part of a passenger car with connections, showing the course of the air over a baggage car, &c., as indicated by the arrows.

Fig. 5, is a plan view of fig. 4.

A. A. are the mouths of the air receivers on each side of the tender, as shown in fig. 1, 4 & 5; and ought to contain at least 6 square feet each. B. B. are the out sides of the receivers by which the air is conducted along the sides of the tank to its rear, where it is directed into the car coupled with the tender by the guide, C., Fig. 5. D. D. are flexible connections between the cars. In Fig. 2 & 3 are seen the frames of wood, d d d d, to which the flexible connections are nailed. E. is a movable canvass guide to direct the air coming from the rear of the tender over the top of the baggage car. F. F. F. are doors in the partitions across the platforms. G. is the rear door of the train by which the quantity and pressure of the air passing through the cars is regulated.

As a train in motion in a still, hot summer day, is always surrounded by the heated, gasses, steam, smoke, soot and cinders from the engine, and by the dust raised in the rapid onward sweep of the train, and as at such times the full force of the sun is exerted upon the thin walls and low roof of the cars, it is of the first importance that a large volume of air should be passed through their

whole length, far more than is needed for healthy respiration. As an evidence of the great quantity required, we see passengers endure the dust, smoke, sparks &c., at an open window rather than be deprived of the requisite quantity of air, though it may be loaded with impurities. It will be observed that it is an important feature of our invention to pass the air received at the forward part of the train, from car to car, in such quantities as will enable us to make a cooling breeze in hot weather, though only enough for healthy respiration be used in cool weather. We have found that for one car only, an opening of at least eight square feet, transverse section, is necessary since it is a rapidly passing current that is desired by passengers in hot weather; and this essential requisite for comfort is lost if a portion of the air is taken away by open windows, registers, or any other similar device. The current must be passed on without diminution, and any plan which does not effect this, is radically defective and will be ineffectual in the second or third car. It is therefore necessary to supply a train of one car only, with a current that would be sufficient for a train of ten cars, and any arrangement of receivers

large enough to take in sufficient air forward, for each separate car would involve such cumbersome attachments as to require an enlargement of engine houses, cuts bridges &c., and if the attempt were made to take it in at each separate car it would be charged with impurities, which we believe it practically impossible to separate, so as to render it fit to enter a car.

The following is submitted as an evidence of the estimation in which this invention is held by those who are thoroughly and practically acquainted with it.

CHAS. ATWOOD, Agent,
Birmingham, Ct.

OFFICE MADISON AND INDIANAPOLIS R. R. Co.,
Madison, May 6, 1854.

MESSRS. WATERBURY AND ATWOOD:

GENTS:—Your esteemed favor of the 27th ult., was duly received, in which you ask me for a statement of my experience and the practical result of your mode of ventilation and exclusion of dust, smoke and cinders from Railway Cars, as applied to the cars of the Naugatuck Railroad while I was Superintendent of that Road, and in answer, I have much pleasure in saying that your mode of ventilating and excluding dust, smoke and cinders from cars was attached to the train on the Naugatuck Railroad about the 1st of June, 1853, and was continued on the train as long as I remained on the road, and that the improvement exceeded my expectation, and operated to my entire satisfaction, as well as that of every person connected with the road, and to the unqualified approbation of all passengers over the road; and in order to do justice to your valuable invention, which in my opinion is to be known and appreciated on all railroads where passenger cars are run, I would state that I consider the advantages of your mode of ventilation, such as to render it superior to any that has been offered to the Public, for the following reasons, viz:—

1. Complete exclusion of dust, smoke, soot and cinders.
2. The perfect adaptation for supplying a train of passenger cars with sufficient air, not only for healthy respiration, but, during the heat of summer, with a cool and refreshing breeze, which can be regulated and adapted instantly by the conductor to any state of the atmosphere.
3. Its easy adaptation in winter, to effect a perfect ventilation and a delightful equalization of heat.
4. Perfect safety to passengers and conductors in passing from car to car, and comfort of being protected from the inclemency of the weather by covered passages.
5. Freedom from annoyance of dust, smoke and cinders, upon opening the doors by the conductor, railway operatives or passengers, when the cars are in motion.
6. The great security and comfort of brakemen, when at their brakes, thereby rendering them at all times more efficient than heretofore, especially in cold and inclement weather, and a protection of their health as well as their comfort.
7. The preservation of the furniture and upholstery of the cars to an extent sufficient in the wear of the cars, to more than cover the cost of the attachment of the improvement.
8. The train is run, worked, coupled and managed in all respects with equal facility, convenience

and cost, as before the attachment of this ventilator.

9. That I am of opinion, and am not alone in entertaining it, that there are no cars in this country as comfortable for the traveller, as those now in use on the Naugatuck Railroad, and feel a confidence and pleasure in recommending them to the favorable consideration of all railroad men.

Very respectfully, yours,

PHILO HURD,

Vice-Prest. Madison and Indianapolis and Peru Railroad.

OFFICE NAUGATUCK RAILROAD COMPANY,
Bridgeport, June 22, 1854.

MESSRS. ATWOOD & Co:

GENTLEMEN:—Having been shown a letter of Philo Hurd, Esq., formerly Vice-President and Superintendent of this Railroad Company, and now occupying a similar position with the Madison, Indianapolis and Peru Railroad Company, in reference to your plan of excluding dust from railway cars, and furnishing an agreeable ventilation to the same, I am free to say, that I add my testimony to his, in reference to the same.

After one year's experience in the use of your ventilator upon our road, I am enabled to state that it is perfectly successful in its operation.

It is simpler and cheaper in respect to construction, than any other method before the Railroad public. I consider its use necessary to every well regulated Railroad.

Yours truly,

E. F. BISHOP,

President Naugatuck Railroad Company.

Railroad Exhibits.

A correspondent furnishes the following:—In looking over the annual reports to the Legislature of the various Railroad Corporations in this State, I find that the earnings and receipts are in most cases represented to be the same. Such representations are, however, not only incorrect in point of fact, but eminently calculated to mislead all who are not acquainted with the details of such business.

Persons who have ever looked into the freight houses of any of our railroads must have noticed that they always contain more or less property which has been transported over the road and the freight thereon, or price for transportation earned, though not yet collected or received, because the owners and consignees have not called for their property. I believe it is the rule of all railroads to require the payment of their charges on the delivery of the property and that only a very small part of the freight is paid in advance at the place of shipment. It is therefore reasonable to suppose that the charges on goods remaining in the freight houses are for the most part unpaid and the aggregate amount where the road is of much length, and consequently having a good many stations, must be considerable.

In like manner a road may be so connected with other roads that its receipts may embrace not only its own earnings but a portion also of theirs. Thus a passage ticket may be sold at a New York office for Chicago or St. Louis, and the price thereof will all be included in the reported receipts of the local company. It is obvious, however, that a large, perhaps the largest portion of it belongs to the various connecting lines. So also with freight, and where such connections are extensive, the amount so collected for them must be very large. These collections in the aggregate constitute "receipts", what remains after paying the connecting lines their shares are "earnings."

It is clear, therefore, that to report the earnings of any road to be the same as their receipts, is an abuse of terms, occasioned either by gross inattention to accuracy, or designed deception of the pub-

lic. Indeed, it cannot well be doubted that it has not unfrequently been done by interested parties for the very purpose of conveying to stockholders and the public at large, an exaggerated idea of their actual business. Such statements may not be signed by any responsible officer, but their effect, and unquestionably their intent, are the same as if they were, and the fact that they are suffered to pass uncontradicted shows that the managers are willing that they should be so understood. I am gratified to perceive indications in certain quarters of reform in this particular.

It can readily be imagined that this practice of publishing receipts, makes a good deal of figuring necessary to balance the accounts at the end of the year. The company being committed by their monthly reports, are obliged to account for the amount as so much actually earned, and this can only be done by charging the difference to "construction," or some other head of account equally appropriate.

It cannot be concealed that the published reports of Railroad companies are looked upon to a great extent with more or less distrust. It is conjectured that they are published for a purpose, and are not a true and bona fide exhibit of the business done on them. Such distrust is generally to be lamented, and therefore all ground for it should be removed. The immense capital invested and the magnitude of the interests involved, demand not only the strictest integrity and economy in their administration, but the most thorough and systematic accuracy in their accounts and exhibits. This is both right and politic. In no other way can the confidence of capitalists both here and in Europe, and others whose aid is indispensable in the prosecution of these great enterprises, be secured and retained. Success in this, as in every other great interest of society, to be enjoyed must be deserved.

VERITAS.

We are requested so publish the above article which appeared in the *Commercial Advertiser* of May 23.

We know of only one company the Erie, which has been accustomed to publish receipts for earnings. But this was under a different regime, and has been discontinued, not leaving as we are aware, any cause of complaint.

We see no difficulty in making out at an early day, sufficiently correct statements of the earnings of a road, no matter how intimate may be its relations with other companies. Providing the money were received as earned, there would be no difficulty in determining the proportions that each company was entitled to. There is nothing in the way of determining what each company should receive, as their respective interests in a given freight, is a matter of prior agreement. It is well known that the earnings of English Railroads are reported weekly, and we all know that the relations of these are much more ramified than are our own.

We never knew but one company that confounded receipts with earnings. We exposed the practice long ago, and we are happy to say that it has been corrected.

Cumberland Coal and Iron Company.

The Alleghanian says the following is the statement of the present condition of this Company:

Railroad, rolling stock, mine cars, machinery, &c.....	\$575,316.65
Canal boats, schooners, barges and other personal property, real estate in Cumberland, Alexandria and Baltimore.....	405,079.42
Mining lands, improvements at the mines, &c.....	4,595,897.71
Cash assets, bills receivable, balances due on accounts.....	267,197.82
	<hr/> \$5,902,491.60

2,822 shares of the capital stock belonging to the company.

There is no floating debt. The amount of bonded indebtedness is \$537,000.

American Railroad Journal.

Saturday, July 1, 1854.

Agents for the Journal.

To prevent imposition we feel constrained to state that we have no regularly authorised agents in this Country. To persons in the commission agency business or book trade who remit us names of new subscribers with the price of subscription, we allow the usual commission and send the paper as desired, but we hold ourselves responsible for the acts or contracts of no man not connected with this office and regularly authorised by us to do business in our name.

Persons desiring the Journal should send their address directly to us by mail and may also remit their subscription to this office in bank notes current in their own State, unless they can conveniently procure funds of this State. All such remittances will be duly acknowledged by mail on their receipt. Persons receiving accounts of their indebtedness to this office, will oblige us by remitting as above, at their earliest convenience.

Railway Intelligence.

The interests of those who constitute the bone and sinew of all enterprises, having for their ultimate object the internal improvement of the country—the stockholders—demand that they should be made thoroughly acquainted with all the operations of the new and old roads in the country. In other words, they must be "posted" in all the earnings and expenditures, cost of construction and operation, amount of earnings devoted to running expenses, and amount carried to construction account, amount of dividend declared, and how payable, whether in stock or cash, etc.

It is for this purpose, and to ascertain the progress of new and the success of old roads, that they take the Journal. They reasonably expect to find in it all the above information, and they are not usually disappointed. Contractors take it for the purpose of seeing what works are to let, and what companies are organizing with a view to letting contracts. Bankers take it, to see whether the securities of companies are trustworthy; and if they cannot find in it lucid statements of their affairs, they are apt to look upon them with distrust. Manufacturers of machinery and equipment take it, that they may see what companies are in want of such articles as they are prepared to furnish, and whether the credit of the Company is such as to guaranty the security of their sales to them. And, Railway Companies themselves take it, in order to know where they may get all the accommodations and articles mentioned.

So, it will be seen that the columns of the Journal are looked upon as a sort of exchange, where all the views of the various parties enumerated may be compared, through their advertisements and communications; as a means for the general diffusion of knowledge upon all topics connected with railway enterprises. The stock and bond list of the Journal is about being perfected, in a manner to convey much additional intelligence which will be of the greatest importance to all parties.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividen ^d for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	88
Androscoggin and Kennebec.. "	55	824,863	1,043,540	2,038,140	177,003	80,053	none	30
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	95
York and Cumberland,..... "	20	285,747	341,100	713,605	23,949	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell..... "	15	600,000	none.	651,214	182,545	51,513	8	104
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	51
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	82
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	87
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6 1/2	77
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	96
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	77
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	90
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	84 1/2
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central "	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,897	122,866	none	97 1/2
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,823	13,144	none	11 1/2
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	94 1/2
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	68
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	97
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	116
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,718	428,173	7	83
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	53
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,609	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna..... "	35	687,000	400,000	1,070,766	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	62 1/2
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	61
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	44 1/2
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	99
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,132,834	480,137	195,847	.....	14 1/2
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington..... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	287,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	81	2,197,840	476,000	3,245,720	603,942	316,259	10	181
New Jersey Central..... "	63	986,106	1,500,000	2,879,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster... "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,937	2,480,626	1,251,987	7	77
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	74 1/2

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102 1/2
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna.. "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.. "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	984,424	456,468	7 1/2	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	.....	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga.. "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	70 1/2
Cleveland and Toledo..... "	147	2,000,000	1,800,000	.....	.....	.....	.....	88
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102 1/2
Cincinnati and Marietta.... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky.... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77 1/2
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley.. "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77 1/2
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati.. "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis.... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Terre Haute and Indianapolis "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	123
Michigan Southern and Ind. N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	100
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	94 1/2
Pacific..... Mo.	38	.....	non	In progress	Recently opened.	.....	.....	.....

It is perfectly clear that the AMERICAN RAILROAD JOURNAL with its THIRTY THOUSAND readers, composed of, and embracing nearly all the classes mentioned above, as in any manner interested in the construction, operation or furnishing of Public Works in this country, and the Capitalists and their agents abroad, who invest in American Securities; is the best channel through which to communicate all important Railway intelligence. By this channel it reaches all the parties interested in its receipt; it penetrates every nook and corner of this land, from the banker's office in Wall street to the Engineer's tent in Washington Territory, California and South America, while in Europe it is the medium of communication upon the state of Railway affairs in this country to the ROTHSCHILD'S, BARINGS, and a long list of bankers and capitalists in the English, French and German Cities, and the iron workers who trade iron for the bonds of our roads.

In this view of the case, it becomes a matter of much importance to Railway Companies, that they should communicate *authentic* statements of their affairs to the public and their creditors *through* the columns of the *Journal*. It is no exaggeration to state that such intelligence reaches, at least, *ten* times the number of persons whom it is desirable to enlighten, through this medium than any other. Those desiring such information, seek for it here, as the most appropriate place, and, as they find it in a convenient form for preserving for future reference. Our foreign correspondents often enquire why Railway Companies do not more generally advertise their notices of dividends, detailed statements of monthly earnings and expenses, of progress of new work, &c., &c. These matters are of great interest to them, as guides in their investments. If a Railway Company would enjoy good credit for its securities at home and abroad, it should do its portion toward disseminating correct intelligence.

Shunk on Railway Curves.

We have received from the publishers Messrs. E. H. BUTLER & Co., of Philadelphia a very neat little work of the above title which is devoted to information, designed to be of great use to young engineers. It purports to contain a full description of the instruments, the manner of adjusting them, and the methods of proceeding in the field, new and simple formulæ for compound and reprise curving,—rules for calculating excavation and embankments,—staking out work &c., together with tables of natural sines and tangents, radii, chords, ordinates and others of general use in the profession, by WM. F. SHUNK, Civil Engineer.

The work is evidently the result of much labor and investigation, though we hardly feel competent to pronounce upon its utility or correctness.

To Contractors.

The attention of contractors and bridge builders is invited to the lettings of the work on the State canals, advertised in the *Journal* of to-day. It will be seen that a large amount of work is to be let, and at this time of stringency in the money market, which occasions some suspension and delay on certain portions of railroad work, it is worthy the attention of those contractors who desire to keep their men and materials employed at good wages and sure pay. However much private enterprises may be delayed, the great work of the "Enlargement" must go ahead.

Flushing Rail Road.

One of the peculiarities and inconveniences of New York, is the difficulty of reaching any of its suburbs, and of keeping up a constant and convenient communication with them. The only egress from the city by land, is by the head of the Island, from 8 to 12 miles from the City Hall. Four miles of this distance is through the densely inhabited portions of the city, requiring nearly an hour for its passage by any mode of conveyance. The time consumed in reaching the country has consequently been so great as to retain a very large portion of the active and business population on the Island; a population which in the case of other cities, spread themselves over the surrounding country.

A very important improvement has just been completed, as one of the remedies of the inconvenience complained of—the Flushing Railroad. Flushing lies about 10 miles from New York, on the north side of Long Island, and immediately upon the Sound. In natural beauty it cannot be surpassed. It is well known that the north and south shores of Long Island present a most striking contrast, the latter being a low, wide, sandy, level plain, while the northern shore is high, undulating, in some places broken, and deeply indented, every few miles, by clear and sparkling bays. No town presents a greater variety of beautiful building sites, which combine delightful prospect, pure air and water, and a fertile soil. All these natural advantages have been heightened by a superior culture, particularly in the matter of trees, of which the finest specimens we have ever seen, can be found in Flushing. This town as is well known, has for a long time been the seat of the finest nurseries in the United States. They have created, and have furnished the means of gratifying a degree of taste in all the branches of horticulture, which can be found in no other suburb of New York. The whole town is divided into beautiful gardens and beautiful groves, both of ornamental and forest trees, while the varied topography gives to nearly every house the benefit of a fine view of the Sound and its numerous bays.

This beautiful suburb has, like nearly all the others of New York, been comparatively isolated from the city. It maintains pretty constant Steamboat communication, but an excessively cold winter freezes up the bay, while the lowest tides frequently disturb the regular running of the boat in the summer, rendering this mode of conveyance too uncertain to suit the necessities of the man of business, who must report himself in the city with military exactness, at a certain hour. Up to the present time consequently, Flushing has retained all the characteristics of the country, and is scarcely more densely inhabited than any agricultural town 100 miles distant.

This isolation has now been removed by the construction of the Flushing Railroad, which was opened to the public on the 26th inst. The City terminus of this road is at Hunter's Point, near Green Point, opposite 35th street, and about 3½ miles from the Fulton Market Slip, to which the boats of the road are to run. The advantage of running to Hunter's Point is, that the Railroad train can maintain its full speed to the dock, from which to the city, the passengers can be transported at the rate of 15 miles to the hour. In this manner the intervention of horse power is obviated.

The time necessary for the *through* trip will not exceed 35 minutes, which is no greater than that consumed in going from 26th street to the City Hall. As far as *time* is concerned, a person residing in Flushing, loses no more in getting to his business, than if he resided in any of the upper Wards, in which the entire business portion of the city will soon be found. The Railroad will in a few years constitute Flushing another Williamsburgh or Brooklyn. It has advantages for residences that these can never possess. At the next National Census, it will probably be a city of 20,000 inhabitants.

The Railroad we presume will not rest long at Flushing. As going east, the country continues to improve in beauty and attraction, we regard the eventual extension of this Road to Cold Spring as certain. The North Shore of Long Island will then become the *Summer* resort of the surplus population of the city, as well as the permanent abode of all who prefer the quiet of a beautiful and healthy country residence, to the restraints and inconveniences and unhealthiness of a city life, particularly—the filthy city of New York.

Past, Present, and Future of the Pennsylvania Public Works.

Nearly one hundred years ago, measures were commenced for the improvement of internal communication in the then *province* of Pennsylvania. Sixty years ago, four miles of the Schuylkill and Susquehanna Canal were opened. Twenty eight years ago, the State of Pennsylvania commenced its great system of railroads and canals.

Never had a public improvement a greater aim. In no other instance, in this country, was a greater obligation ever assumed, for such a purpose, by any community. A connection of the Delaware and Ohio rivers, it was hoped, would control the course of the internal commerce of the Northern states. The state system of improvements was established; the enormous public debt of Pennsylvania was created, while a yet larger sum was expended upon the cherished enterprise of the state. The state has now contracted a debt of forty millions, and expended, as has been publicly stated, one hundred millions in the construction and operation of her public works.

The state, is now seeking a purchaser for her "main line" of public works, at the sum of \$10,000,000. These works are represented in the state reports, to have cost about \$16,500,000 although this does not include the vast sums sacrificed by the state on their account and not represented in the first cost.

To this offer the Pennsylvania Railroad Company reply in an estimate of the real value of the works, as an object for their own purchase and operation. The Company appraise the whole establishment at \$7,000,000, but remark that such a valuation is based upon a large prospective increase of business, upon the continuance of the Columbia Railroad as a part of the Pennsylvania Railroad, and upon the assumption that a railroad stock paying common interest is worth *par*.

Whether the state would be influenced by a possible offer, based upon the estimate of the Railroad Company, is not known. The acquisition of \$7,000,000, if applied towards the extinction of state bonds, would probably save more interest than the operation of the works is likely to pay.

The "main line" of public works, extending from Philadelphia to Pittsburgh, 395 miles, comprise 118½ miles of railroad with a rise and fall of about 4,470 feet; and 277 miles of canal, having 174 locks, and a rise and fall of 1142 feet. The principal summit overcome at the Alleghenies is 2291 feet above tide.

Regarded as a commercial route, this line of 395 miles has about 5,600 feet of rise and fall, involving three transshipments at the intersection of the railroads and canals—while the western harbor of the canal is at the head of the navigation of the Ohio, and the eastern depot one hundred miles from the ocean. Were the Union canal and the Schuylkill Navigation employed as the eastern division of the main line, the entire length would be about 425 miles, with 38 miles of severe mountain grades, and about 300 canal locks; or about four times the lockage per mile of the Erie canal.

Leaving out the Columbia road, the Pennsylvania Company do not value the canal portion of the line and Portage railroad beyond \$3,000,000, about are fourth of their nominal cost to the state.

The future value of the "main line" beyond Columbia, will be nothing until it is improved by an outlay of \$3,000,000, for in its present condition it would probably cost more to operate it than would be earned.

It is believed by many friends of Pennsylvania improvements that the position of the "main line" is a good one for the command of the trade of the Ohio valley. They argue that it would cost no more to bring freight, by land, from the Ohio valley to the eastern base of the Alleghenies than to Lake Erie. This offsets Ohio river navigation against that of the lake Erie, and puts 150 miles of the Hempfield and Pennsylvania roads, with grades of 66 feet, and a rise of nearly 1500 feet, against the transit across Ohio. It is a forced comparison, not altogether favorable to the "main line."

The Ohio valley, East of Scioto county, Ohio, is not however a great producing or trading district. The counties on the Ohio bank rank generally as second and third rate in the population of Ohio, while the Virginia counties with the exception of Ohio county, are among the most thinly settled in that state. Below Scioto county we apprehend there is but little trade seeking its way up stream to Pittsburg or Wheeling, which would ever be likely to benefit the Pennsylvania canal line.

But into whatever hands the public works may fall, the state of Pennsylvania must continue, for aught we can see, to *tax* their trade. *Something* must be taxed, and roundly too, else there will be no revenue. The customers of the Pennsylvania Railroad Company, alone, paid, the last year, \$555,725 11 as *tolls* and *taxes* to the state, besides the usual local taxes to which all railroad property is subject. So far, the business of the public works has been taxed heavily towards the payment of the interest upon their excessive actual cost.

The public burdens compared with those of the state of New York, are a collection of nearly \$6,000,000 of revenue from 2,500,000 people in Pennsylvania, against that of \$2,500,000 from 3,500,000 people in New York; or three and a half times more from each individual in Pennsylvania than

in New York. So far the "public works" of the former state have been saddled with the load, until the public, although they *felt*, could not see the difference. The value of the public works will depend, in future, upon the amounts to which they are assessed for the support of the state; while if they are placed, in this respect, upon an equitable basis with other property, we must await, with much curiosity, the effect on *all* property.

Locomotive Boiler for Anthracite Coal.

Much of the difficulty in burning Anthracite coal in locomotives has arisen from the contracted proportions which are unavoidable in locomotive furnaces. Where a twenty horse engine has, perhaps, 15 square feet of grate area, a locomotive consuming ten or twenty times more steam has not more than twenty or twenty five feet grate. The success of Winans' coal engines dated from the first enlargement of their grates. The Baltimore coal engines have now less than twenty five square feet of grate, an allowance which with their present form of furnace appears to be all that is practically attainable. But the present size of these grates has been obtained by extending them lengthwise until the front ends of the bars are nearly beyond the reach of the fireman's shovel. Their length is *seven feet*. To be able to fire such a furnace without too much labor, an opening has been made through the water space which forms the top of these furnaces, and a coal box has been applied, having a door on its top and a sliding plate in the bottom. This box is charged with coal, the top covered and the bottom with drawn, by which the coal is dropped upon the center of the grate. This is a very unsatisfactory method of firing as the coal is not spread over the grate, leaving a large proportion uncovered, and preventing a proper combustion even of what is dropped in the grate. Many of the fireman upon the Reading road will not feed the coal through the top of the furnace at all, but do their best to keep a proper fire by feeding through doors at the hind end.

To secure what is desirable, the largest practicable extent of grate and the easiest access for firing, we have proposed, for freight engines having small driving wheels all in front of the firebox, that the tubes be lengthened sufficiently to place the firebox entirely behind the rims of the back drivers, and that the grate be then extended across the track to the greatest width allowable for the engine. Upon this plan a grate of from 30 to 50 square feet would be practicable upon the narrow gauge, and one from 8 to 10 feet more upon the six feet gauge. Such a grate would be fed from doors across its entire width, whereby every inch of surface could be properly covered with coal. The firebox would be extremely shallow at its sides, having sloping walls, ascending to the crown. The crown sheet would therefore be quite small, and would not consequently sustain an excessive pressure.

Such a firebox, unless the forward end of the engine was quite heavy, would throw it out of balance. Winans' coal engines, however, as constructed with furnaces of seven feet length, and unsupported behind the firebox, weigh heaviest on the forward wheels. If a heavy engine, like a first class burden engine, have a proper amount

of material in the fastening of the cylinders, such a plan of furnace as we propose, would not in our opinion, throw the engine injuriously out of balance.

The only other objection is in the use of extremely long tubes. Such a boiler would require from 15 to 17 feet length of tubes. If copper tubes however, 1½ inches diameter and 13 feet length, will remain tight, as they do in many cases, we should not hesitate to say that iron tubes, 3 inches in diameter and 16 feet long, well set, would remain equally tight. Iron is less expanded by heat than copper, and once well set, will resist more strain. A 3 inch tube would allow nearly double the bearing surface for a joint at the ends as one of 1½ inches. The 2½ inch iron tubes, 14 feet long, in the engines made by the Baltimore and Ohio road, are reported as giving no trouble by leakage.

So far as the length of tubes would affect the draught of the fire, we believe that to be a matter depending altogether upon the size of the tube, and that for this reason a three inch tube of 16 feet length, would give as free draught as a 2 inch tube of 11 feet. A single tube of 3 inches diameter would have more than double the area of opening of a 2 inch tube, and by that circumstance would contain a sufficient amount of heat to compensate for its extra length.

Such a boiler would conform with the conditions required in heavy engines for working maximum trains, and for working heavy grades. It is probable that a boiler upon the plan we have proposed will be tested within a few months upon an important line of road interested in the adaptation of coal to locomotives.

John Hampson, Esq.

We regret to announce the death of JOHN HAMPSON, Esq. of Carrollton, La., one of the oldest Railway Engineers in this country. Mr. HAMPSON was conversant with both Civil and Mechanical Engineering, and has from time to time communicated important and interesting information to the *Journal*, to which he was for many years a subscriber, up to the date of his decease. Although for several years Mr. Hampson has been a resident of Louisiana, he was formerly a resident of this city, and much interested in the early manufacture and trial of locomotives. The following extract from a letter received from him some years since, contains some interesting facts for young machinists:

In 1829, the Delaware and Hudson Railroad Company imported 2 Locomotives from England, of the old form; one of them was erected and tried in the West Point Company's shop, at the foot of Beach street in your city, and the other was tried at Duncombe's near the East River. I did not see them on a Railroad, but I heard they did not succeed. In the latter part of 1829, or perhaps in the beginning of 1830, a Locomotive Engine was made at the said West Point Company's Shop, for the Charleston and Hamburg Railroad. This was employed in conveying materials for the continuation of the Road, and I believe was the first one made in America that performed successfully; about the end of the latter year, another one was made at the same establishment for the same Railroad Company. In the beginning of 1831, an Engine was also made at the same place for the Albany and Schenectady Rail-

road; the writer assisted in its construction and tried it on the Railroad; it was called the De Witt Clinton, and was of small size, not weighing quite 4 tons; it would not take over 3 cars (small ones) from Albany up to Schenectady, however, *alone* it attained a speed of near 40 miles an hour. Soon after this Engine commenced running, which was about July 1831, one of Stevenson's improved Locomotives arrived on the Road from England; it had 4 wheels of the same size, and 10 inch cylinders, 14 inch stroke. The contrast between this Engine and the American one, was great, the latter being a beautiful, light, race-horse, looking machine, while the former looked heavy and "Elephantine" in comparison; it was immediately christened "John Bull." However, it proved to be an excellent machine, and the writer has, on the Mohawk and Hudson Railroad (in 1831,) frequently driven it, with a train of cars behind it, 5 miles in 12 minutes. This, I believe, was the first English Engine that run with regular passenger trains in this country, at least I am not aware of any one before it; by the way, this Engine was subsequently altered, and I believe was the first Locomotive under which a truck was placed, which was done in the Railroad Company's Shop, under the direction of Mr. Asa Whitney, the Company's Superintendent.

Yours, &c.,

JOHN HAMPSON,
Engineer New Orleans and Carrollton R. R.

Journal of Railroad Law.

RAILROAD DAMAGES FROM USING AN UNSUITABLE CAR.

The following is a fuller statement and also the charge of Judge Slosson in the case of *McQuade vs. the Erie Railroad Company* which we briefly reported last week.

This was an action to recover damages for injuries occasioned by an accident on one of the defendants' railroad trains. The plaintiff alleged that he was traveling as a newsboy on an express train of the New York and Erie Railroad Company, and that in place of the ordinary baggage car a freight car had been substituted, which was thrown from the track near Owego, whereby the plaintiff was severely injured, his leg being broken, and his head severely cut. Testimony was adduced tending to show that a freight car was more liable to run off the track than a baggage car, especially when not heavily loaded. Damages laid at \$10,000.

In defence it was shown that the Company had made a contract with one Skelly, a news agent, by which it was provided, for a stipulated sum, that he should have the privilege of sending two boys on each train as far as Middletown, and one beyond, but it was in evidence, as well from Skelly's testimony as from that of one of the officers of the Company, that it was expressly agreed that the Company should not assume any risk or liability in respect to Skelly or his boys. It appeared that a person by the name of Sickerson was the regular newsboy, whose business it was to distribute papers upon this train, but that his hand being injured he had obtained McQuade to take his place. There was conflicting evidence as to whether this was done with Skelly's knowledge or consent. Both Sickerson and McQuade were on the train at the time of the accident, and the conductor testified that McQuade *had no pass*, but that he consented that he should go on. The accident took place beyond Middletown, while the train was on its way to Elmira. The defendants further denied that there was any negligence on their parts as the cause of the accident, and they called to the stand the Superintendents of the New Jersey, Harlem and Hudson River Railroad Com-

panies, and various persons who testified that a freight car was as safe as a baggage or passenger car; and it was in evidence that the track was in good order a short time previous to the accident, and that upon examination it was found that the rail had been raised some inches from its chair by the action of the frost.

His Honor Judge Slosson instructed the Jury substantially as follows:

Railroad Companies are common carriers—They are bound to take passengers, and as respects them, they are bound to take the greatest possible care and diligence. The distinction between gross negligence and simple negligence is not applicable to such cases. The dangers are so great that public policy requires strict adherence to this rule. The rights of a passenger rest upon a contract with the Company for a consideration; but a passenger is not the only one entitled to rights—any party lawfully on board is equally entitled, unless there be something to take his case especially out of the rule. He is lawfully on board, though not a passenger, if he is there by virtue of a special contract or by permission of the Company. Such a contract may limit the liability of the Company; and the permission, if it be a case of permission, must be taken in reference to the case itself, the character of the party to whom it is given, and the circumstances under which it was given. Giving a party on the cars permission to go thereon, would not give greater rights than he would have had without such permission, except that it would put him there lawfully.

If he sustained a peculiar position or relation or office, and was in the cars in such capacity, but for the time without such evidence as the rules of the Company might require, then giving the permission removes the latter objection, but leaves the party subject to whatever restrictions or disabilities, if any, he might have been under before such permission was given. Thus the verbal permission to remain in the present case removed the objection that the plaintiff was without a pass, but leaves him in the same position in other respects as he would have been if he had had a pass. There is no evidence that the plaintiff was on board the train as a passenger. The questions then are:

1. Was the plaintiff there by virtue of a contract made by the defendants with himself; if so, what were the terms of the contract?

2. If not, did he sustain a relation to the Company which would limit his rights against them? Such a relation may be created by virtue of a special agreement between the parties.

If then, the Jury should be of opinion that there was a special contract with the plaintiff himself, or that he sustained a relation to the Company which would limit their liability, the plaintiff's rights must be determined by such special contract or by the nature and condition of such relation between the parties. If they should be of opinion that there was no such special contract between the plaintiff and defendants, nor any such special relation between them, then, it being conceded that the plaintiff was permitted by the conductor to remain on board the cars, which makes the question whether he had a pass or not immaterial, another question will arise, viz:

3. Was the disaster the result of the defendants' negligence? and if so.

1. What is the proper amount of damages to compensate the plaintiff for the injuries sustained?

The two first questions may be considered together, since, in effect, the decision of one will determine that of the other. There is no pretence of any special contract with the plaintiff himself. The only contract alleged is one with Skelly. Neither Skelly nor the plaintiff had any right to sell papers in the cars, except by virtue of a contract with the Company. The contract with Skelly, if you are satisfied from the evidence that any such contract was made, must content the rights of the plaintiff. The plaintiff claims to have been in the cars as a newsboy, by virtue of a pass from

Skelly, in his capacity of a principal news-agent privileged to carry on that occupation in the cars; and this could only be by an agreement with the Company, as already stated. Was there any such agreement, and, if so, what were its terms?

After reviewing the evidence on this subject, his Honor proceeded as follows:

If, from the evidence, you think that it was agreed that the Company should not be liable for injuries caused to Skelly or his newsboys, there is an end of the case, for the plaintiff can have no greater rights than Skelly, whether his right to be in the cars depended upon the pass, or upon the permission of the conductor. In either case he is under a restriction of rights as against the Company. If, however, you find no such special contract to have in fact been made, it being conceded that the plaintiff was permitted, notwithstanding he had no pass to remain in the cars, then the next question will be, was the disaster the result of the defendants' negligence.

While it is true that railroad companies are held to a high standard, they are not liable for every casualty. To render them accountable, the accident must have occurred through their default. They are not responsible for inevitable accidents. And it is for the Jury to determine what was the cause of the casualty in the present case. The learned Judge then briefly reviewed the evidence in the case, and then left it to the Jury, who returned a verdict for the plaintiff for \$3,000.

For the plaintiff, L. E. Bulkeley; for the defendants, D. B. Eaton and Jas. Kent.

Morris and Essex Railroad.

The stockholders of the Morris and Essex Railroad Company met at Hackettstown on the 14th inst. The annual report states the receipts of the year to be \$190,241 46, viz:

From Pass. \$113,391 06 | Mails. \$2,869 32
Freight. 73,842 39 | Rents & sund. 138 69

The expenses were \$94,281 68—the following being the items,

The balance after paying expenses is..\$95,959 78
Paid two semi-annual dividends.....\$43,402 97

Paid interest upon debt of
Company..... 7,593 46—50,996 43

Balance clear profits during the year \$44,963 35

The number of passengers carried during the year, exclusive of commuters and free, was 245,925. Two engines, costing \$24,485, and 18 cars, costing \$16,545, have been added to the equipment of the road. The following gentlemen were chosen Directors for the ensuing year: William Wright, Joel W. Condit, Beach Vanderpool, J. C. Garthwaite, Stephen D. Day, Daniel Babbitt, Jona. Parkhurst, William N. Wood, Aaron Robertson.

Land Grant to Railroads.

We publish in another column, an eloquent memorial addressed by the Alabama and Tennessee Railroad Company to Congress, praying for a Grant of Land to aid in the construction of their road. We readily endorse the opinion expressed as to the value and importance of the above line, and would be glad to see it aided in every legitimate way. The land asked for lies upon the line of the road. We admit that the road will be built without the aid asked for; and this we regard as one of the strongest arguments in favor of a grant, as indicating clearly, that the road should be built. Certainly those engaged upon a meritorious project are much more deserving of encouragement, than those who are pushing forward a bogus one.

Strike on the Erie Railroad.

We learn that the Engineers on the Erie Railroad, have complied with the rules of the Company, and have gone to work again.

Great Western Railroad of Canada.

The receipts of this Road for the week ending

June 23, were..... £4,031 12
Passengers, Freight, &c..... 1,233 00

Total..... £5,264 12

Receipts for the year to June 23 118,155 8

Total..... £123,420 0

Grand Trunk.

The receipts of the Grand Trunk for the week ending June 3d, were—

4792 Passengers, First Class, \$4,406 69½
1134½ " Second " 727 43
4020½ Tons Merchandise, 9,917 68
595,128 Feet of Lumber, 1898 74
438 Cords of Fire Wood, 514 59
Mails, &c. 779 27

\$18,244 40½

For the week ending June 10—

4,760 Passengers, First Class, \$5105 12½
1,165½ " Second " 675 08½
3,690½ Tons Merchandise, 9,882 68
436,861 Feet of Lumber, 1,727 82
350 Cords of Fire Wood, 406 90
Mails, &c. 779 27

\$18,576 83

United States Mint.

The coinage of the Mint for May was—

Gold.....\$3,270,330.00
Silver..... 210,100.00
Copper..... 8,175.96

\$3,988,605.96

The gold bullion deposited in May, was:

From California,....\$3,400,000
From other sources..... 196,000

Total.....\$3,596,000

Silver bullion deposited..... 134,000

The deposits of precious metals for the first 5 months of the year were:

1853.

	Gold.	Silver.
January.....	\$4,962,097	\$14,000
February.....	3,548,523	13,560
March.....	7,533,752	70,000
April.....	4,766,000	2,550,006
May.....	4,425,000	1,447,000

Total.....\$25,235,372 \$4,094,500

1854.

	Gold.	Silver.
January.....	\$4,215,579	\$108,000
February.....	2,515,000	1,166,000
March.....	3,982,000	147,500
April.....	3,442,000	129,000
May.....	3,596,000	196,000

Total.....\$17,749,579 \$1,746,560

Showing for the four months of this year a decrease of \$7,485,792 in the deposits of gold, and of \$2,348,060 in the deposits of silver, making a total decrease of \$9,833,852.

Taunton Branch Railroad.

The earnings of the Taunton Branch Railroad for the year ending May 31st, 1854, were:

Passengers.....\$100,089 55
Freight..... 66,659 74
Mail..... 1,151 99
Interest..... 1,052 03

\$168,953 31

Expenses..... 150,478 79

Net profits..... \$18,474 52

A semi-annual dividend of 4 per cent. was declared.

Car Ventilation.

In the *Journal* to-day, we present an illustrated description of another mode of Car Ventilation, designed also to exclude dust and other objectionable matter. The same theory is followed in the application of this method of Messrs. WATERBURY and ARWOOD, denoted in our remarks upon the plan of Mr. LANCASTER, some weeks since; but the whole mode of operation in the reception of the air, and its conduct throughout the train is entirely different.

It will be observed that Mr. WATERBURY's Ventilation has been successfully tried on the Naugatuck Road in Connecticut, for more than a year past. The Railroad Commissioners in their late report to the Legislature of that State speak of its operation in the following words:—

"The Commissioners found in use on the passenger trains of this Road, 'Atwood & Waterbury's Rail Road Car Ventilator' by whose operation all dust and smoke is excluded from the cars, and a current of fresh air, of more or less volume, according to the will of the regulator, is continually passing through them when the train is in motion."

Within the last two weeks one of the Way trains of the New Jersey Railroad and Transportation Company, has been fitted up with this plan of ventilation, and we have had the pleasure of witnessing its operation. As represented in the Cut, by this method the Cars of the train are connected by the enclosure of the space between them with flexible materials; the air is received in channels formed by placing outer casings on both sides of the tender, and thence carried over the baggage cars and through the doors of all the passenger cars which must remain open, the side windows being closed.

The experiment, so far as we could see, was entirely successful. The day was very warm and close; scarcely any motion of the air being perceptible. Although the passage of the train raised a heavy cloud of dust, none of it came into the car, through which there was an agreeable circulation. We do not, however, regard this test as by any means, a severe one. The train was short, five cars only, no baggage car. We should have preferred a long passenger train, as a better test, for the reason that the forward cars of a long train are always much less dusty than the rear ones.

As to the baggage cars, we should like to have seen it demonstrated whether the passing of the air up over the baggage cars and then precipitating it down into the doors of the passenger cars is any obstruction to its passage, or causes any decrease of its volume. However, these are points which we presume have been settled on other roads where it has been tested.

The testimony of Mr. HURD is competent, we suppose, and we certainly think it strong, and to the point. There is no longer any use of breathing dust while travelling in cars. This point is settled. The annoyance can be avoided, and it can be done at a low cost. There are two methods before the public and between the two, competition will be likely to reduce the cost of ventilation to such an amount that expense will constitute no valid excuse to Companies for longer compelling their passengers to inhale a dusty, smoky, and fetid atmosphere.

The expense of this plan it is thought, will not amount to over forty or fifty dollars the car.—

This is a mere nothing, and should not deter Companies from adopting it, one moment after they become satisfied of its utility. The proprietors, we understand, are now ready to fit up trains at once, upon application.

Vessel Tonnage of the U. S.

The tonnage of the United States on the 30th of June, 1853, amounted to 4,407,010 tons, and the amount of tonnage lost at sea, and condemned as un-seaworthy in the year ending at the same period, was 55,278 tons, or about 12-10 per cent only of the whole. The number of vessels built in the United States in the fiscal year of 1853, is given at 295 Ships, 271 Steamers, 95 Brigs, 681 Schooners, and 394 Sloops, showing an aggregate of 1710 vessels, amounting to 425,572 tons. Of this amount, the States producing them were as follows:

	Vessels.	Tons.
Maine.....	351	118,916
New York.....	289	83,224
Massachusetts.....	205	83,015
Pennsylvania.....	191	31,539
Ohio.....	90	21,203
Maryland.....	122	16,901
Connecticut.....	67	9,422
New Hampshire.....	10	8,666
Kentucky.....	30	8,592
New Jersey.....	58	7,107
Virginia.....	40	6,599
Delaware.....	33	4,435
Michigan.....	35	3,304
Missouri.....	22	3,583
Indiana.....	9	3,455
Rhode Island.....	11	3,170
District of Columbia.....	42	2,743
Wisconsin.....	14	2,422
South Carolina.....	38	1,993
North Carolina.....	22	1,746
Louisiana.....	17	1,346
Illinois.....	9	1,158
Vermont.....	4	218
California.....	2	140
Tennessee.....	1	45
Total.....	1710	425,572

Milwaukee and Watertown Railroad.

We have received and read, with much satisfaction the first Annual Report of the Directors of the Milwaukee and Watertown Railroad Company, bringing up the record of their transactions to the first day of May last past. This company was duly organized on the 4th day of January, 1853, by the election of thirteen Directors, under a very liberal charter, granting them the right to locate and construct a single or double track from the Milwaukee and Mississippi Railroad, in the county of Waukesha, to the city of Watertown, and subsequently to extend the same to Portage city, Columbia county, and to La Crosse, on the Mississippi River. In June, 1853, the contract for building the road as far as Watertown was let to Messrs. Bishop, Stewart & Co. Under this contract, according to the report of the Chief Engineer, E. H. Broadhead, two-thirds of the grading is finished, the bridging and masonry completed, eight-ninths of the cross-ties delivered, and all the iron, chairs and spikes purchased and in course of delivery. There is nothing in the way, therefore, says the same officer, of "having the road in operation as early as the first of September next."

The cost of the road, complete, at cash prices, is estimated at \$740,000, or \$23,870 per mile, including 6 locomotives, 4 passenger, 4 baggage, and 100 freight cars. The business of the road, calculated upon the actual returns of the business of the plank road for 1853, is put at \$162,500.—Deducting expenses of operating, interest on bonds and rent to the Milwaukee and Mississippi Railroad Company for use of track and depot grounds, there remains \$33,900, applicable to dividends on stock, which gives about 12 per cent. But this, be it remembered, is founded on last year's business of the plank road; and the chief engineer

well says that he thinks it safe to estimate the increase of the present year at one-third. Mr. Broadhead is proverbially close and cautious in all his estimates, as well of the cost as of the business of railroads, and we have no doubt that the result will abundantly verify his very favorable opinion of the Milwaukee and Watertown Railroad as an investment.—*Milwaukee Sentinel*.

Relative Strength of Iron.

Prof R. W. JOHNSON and others, having instituted experiments as to the strength of the different manufactures of iron in various Countries put forth the results contained in the annexed table. The fig. repre sent the number of pounds pressure per square inch endured by each "make" at the yielding point.

Missouri Bar Iron, lbs. per sq. inch.....	47,909
Fourchambault (French).....	47,904
Ste. Chambaud.....	49,000
Tennessee Iron.....	50,000
Superior English.....	52,823
English Iron.....	45,842
Welsh.....	57,976
Salisbury.....	58,000
Swedish Bar.....	53,185
Centre Co. (Penn.).....	58,400
Lancaster Co., (Penn.).....	58,661
Essex Co., (N. Y.).....	58,105
English Cable.....	59,912
Staffordshire, (Eng.).....	59,472
Swedish, (2d).....	60,928
English Cable, hammered.....	71,000
Best English.....	72,352
Russia Bar.....	76,069
Phillipsburg, wire drawn.....	89,162
Jackson Company's.....	89,582

Fort Wayne and Chicago Railroad.

We understand that the directors of this road have thought it prudent under existing circumstances, to change the plan of operations, and instead of working as heretofore along its whole length, with a view to a simultaneous opening, to concentrate the forces mainly on the eastern portion reaching to Columbia, Whitley county, in order that the road may be completed in divisions connecting with the finished roads from the East. At an early date in September next it is designed to commence track laying from the Summit City to the West, and to open twenty miles by November to run in connection with the Ohio and Indiana.

In the mean time the heaviest sections on the Western Division, requiring the longest time, will continue to progress.

The iron for the whole road to Chicago has been purchased, and its delivery is soon to be commenced.

A large portion of the cross ties has already been delivered for the Western as well as the Eastern division, and a fair portion of the grading done.—

Fort Wayne Times.

Grand Rapids & Indiana Railroad Company.

The following are the officers and directors of this newly organized company: Joseph Lomax, President; Wm. H. Cambell, Secretary; Sylvester R. Shelton, Treasurer; Josiah D. Cook, Chief Engineer; Geo. Walker, Resident Engineer.

Josiah C. Cook, Joseph Lomax, of Marion, Indiana; Joseph G. Van Horn, of Grant Co., Ambrose W. Henley, Andrew J. Neff, Amos M. Hackney, Lewis Baily, J. E. B. Rose, Abraham Stahl, N. D. Clouser, George S. Howell, Sylvester R. Shelton, and William Henley, of Hartford City Directors.

This company was organized January 18th 1853, with a subscription of 2200 shares at \$25 each. We have spoken of it previously under the name of Indiana, Kalamazoo and Grand Rapids Railroad Company. Though the name at the head of this article is the name under which the company was chartered; the office of the company is at Hartford City, Blackford county, Indiana.

The Buffalo, Brantford and Goderich Railway.

At a meeting of the Stockholders, held at Brantford on Thursday last, the old Board of Directors, with a single exception, was re-elected for the ensuing year. The exception which we have mentioned refers to Fayette Rumsey, Esq., who was chosen by our Common Council to supply the place made vacant by the resignation of Myron P. Bush, Esq.

The Board of Directors now stands as follows:—Messrs. Sherwood, Wadsworth and Rumsey, Buffalo; Mr. Cleghorn, Fort Erie; Mr. Oldfield, Dunville; Messrs. Lewis and Brown, Goderich, and Mr. Hamilton, Stratford.

At a subsequent meeting, the Hon. James Wadsworth, was with great unanimity re-elected President; Mr. Clement, Vice President, Archibald Gilkinson, Secretary and Solicitor, and William Wallace, Chief Engineer. We congratulate the Company upon the strength and influence of their official force, assured that the public will heartily endorse their action.—*Buffalo Commercial Advertiser.*

Ohio and Mississippi Railroad.

ELECTION OF DIRECTORS.—The stockholders of the Ohio and Mississippi Railway Company met at their office in Cincinnati yesterday, and elected the following Directors for the ensuing year: James C. Hall, Charles Stetson, John Baker, Eden B. Reeder, Charles W. West, Thomas Phillips, Richard W. Keys, Charles D. Coffin, Nathaniel Wright, Jethro Mitchell, George W. Cochran, Henry H. Goodman, John Slevin, Thomas Gaff, Abner T. Ellis, Cyrus M. Allen, Meda W. Shields, Richard A. Clements, John Cobb, H. Trept, and John Ross. These gentlemen composed the old Board, and will meet this morning for the election of officers.

The road is now opened to Seymour, on the Jeffersonville railroad, 89 miles from Cincinnati, forming a railroad connection between that city and Louisville, Ky.

Evansville Indianapolis and Cleveland Straight Line Railroad.

We are gratified to understand that the work on this road is going briskly forward. Our indefatigable fellow-citizen, Willard Carpenter, still has his shoulder to the wheel. He is pushing things forward with his usual energy. The work is now going on rapidly between Evansville and White River, and the distance, 45 miles, will be graded at an early day. A large number of men are employed under sub-contractors, and good health prevails among them. The road will be in running order to its connection with the Ohio and Mississippi railroad, 54 miles, within one year from next fall. This is an early day to set for the completion of so great a work as these 54 miles will be, but we have no doubt Mr. Carpenter's calculations will as usual be found correct.—*Evansville Journal.*

Illinois and Wisconsin Railroad.

It is known to most of our readers that the Illinois and Wisconsin Railroad is completed and in operation thirty-one miles to Deer Grove. Two passenger trains leave the city daily, and the road is already doing a large business. The trains leave at 8 o'clock in the morning and at 2 P. M. The road is of the six feet or broad gauge, and will soon be one of the most important and popular roads leading into the city.

The grading to Woodstock, fifty miles from the city, is nearly completed, and it will be finished to that point and in operation by the first of August and sooner if the iron can be brought forward from the East. From Woodstock to the State Line, the grading is in a state of considerable forwardness, and beyond that to Janesville is nearly ready for the superstructure.

We learn from E. F. Johnson, Esq., Chief Engineer, that all the rolling stock necessary to operate the road to the State Line, seventy miles, is already on the track. It is confidently expected that it

will be finished and in operation to Janesville, by the first of October next.—*Chicago Dem. Press.*

Railroad Iron Chairs.

The Lackawanna Iron and Coal Co., are now prepared with increased facilities to contract for Rails and Chairs at their works at Scranton, Penna.
Address S. T. SCRANTON Pres. at Scranton, or at the office of the Company in New York, 72 Beaver St. 26.1f

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

CHAMPLAIN CANAL.

Proposals when and where received:—At the Canal Commissioner's Office in the City of Albany until the 6th day of July, 1854, at 10 o'clock A. M.

Description of the work.	Amount penalty in bond.	When to be completed.
2 Combined Locks.....	\$10,000..	Sept. 1. 1855.
1 Single Lock.....	6,000..	" "
1 Road Bridge, located at Fort Ann.....	500..	July 1, 1855.

ENLARGEMENT OF THE ERIE CANAL—EASTERN DIVISION.

Proposals when and where received:—At Engineer's Office in the City of Utica until the 8th day of July, 1854, at 10 o'clock A. M.

Section No. 13.....	\$1,000	April 1, 1855.
" 14.....	2,000	" 1856.
" 15.....	6,000	" "
" 16.....	7,500	" "
" 17.....	4,000	" "
" 18.....	5,000	" "
" 19.....	1,500	" 1855.
" 125.....	7,000	" 1856.
" 126.....	6,000	" "
" 137.....	7,500	" "
" 128.....	6,000	" "
" 129.....	7,500	" "
" 130.....	7,000	" "
" 134.....	5,500	Sept. 1, 1855.

Waste Weirs on Sections 127 and 134.....	1,600	Sept. 1, 1855.
Bridge Abutments on Sections Nos. 15, 16 and 17..	2,500	July 1, 1855.
Bridge Abutments on Sections Nos. 18 and 19.....	1,200	" "
Bridge Abutments on Sections Nos. 125, 126, 127, and 128.....	1,200	" "
Bridge Abutments on Sections Nos. 129, 130, 134 and at New London.....	1,400	" "
Culverts on Sections Nos. 16 and 17.....	700	" "
Culverts on Sections Nos. 126 to 128.....	2,600	" "
Culverts on Sections Nos. 129, 130 and 134.....	1,250	" "

BLACK RIVER CANAL.

Proposals when and where received:—At Engineer's Office at Lyon's Falls until the 12th day of July, 1854, at 10 o'clock A. M.

Section No. 30.....	\$2,000	July 1, 1855.
" 31.....	6,000	" "
Locks Nos. 99, 100 and 101..	4,000	" "
" 102.....	2,500	" "
" 103 104 and 105..	800	" "
" 106 and 107.....	500	" "
Bridges on Sections No. 31..	300	May 1, 1855
Raising Bridges across Black and Moose Rivers.....	300	Oct. 1, 1854.

ENLARGEMENT OF ERIE CANAL—MIDDLE DIVISION.

Proposals when and where received:—At the Engineer's office in the city of Syracuse, until the 15th day of July, at 10 o'clock, A. M.

Section No. 146.....	\$5,900	April 1, 1856.
" 147.....	5,400	" "
" 148.....	6,100	" "
" 149.....	4,600	" "
" 150.....	15,800	" "
" 151.....	9,600	" "
Aqueduct at Chittenango...	4,400	" "

and Section 202 connected 21,700 Nov. 1, 1855.
Culverts on Sec. 146, 147, 148 and 149..... 1,700 April 1, 1856.

Culverts on Sec. 150 and 151.....	2,200	" "
Culverts on Sec. 200 and 201.....	900	" 1855.
Bridge Abutments on Sections 146, 147 and 148....	1,800	" 1856.
Bridge Abutments on 150 and 151.....	1,000	" "
Bridge Abutments on 201..	900	" 1855.

ENLARGEMENT OF ERIE—WESTERN DIVISION.

Proposals when and where received:—At the Engineer's office in the city of Rochester, on Tuesday, the 18th day of July next, at 10 o'clock, A. M.

Section No. 212.....	\$3,500	April 1, 1856.
" 213.....	3,800	" "
" 214.....	5,100	" "
" 215.....	5,000	" "
" 216.....	3,700	" "
" 217.....	11,000	" "
" 218.....	14,000	" "
" 228.....	5,700	" "
" 229.....	5,300	" "

GENESEE VALLEY CANAL.

Proposals when and where received:—At the Engineer's office in the village of Cuba, on Thursday, the 20th day of July next, at 2 o'clock P. M.

Sections Nos. 82, 83 and 84..	\$2,500	Aug. 1, 1855.
" 91 and Feeder.....	4,000	" "
" 95 and 96.....	3,200	" "
" 97.....	3,000	" "
" 98 and Feeder.....	3,400	" "
Ischua Feeder.....	6,500	" "
Ischua Aqueduct.....	1,000	" "
Culvert on Section No. 65...	100	April 1, 1855.
Valve Gates.....	1,500	Aug. 1, 1855.
Lock Houses.....	700	" "

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus defined will be received or acted upon.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the Country Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a con-

tract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, June 9, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT,
CORNELIUS GARDINIER,
JAMES M. COOK, Comptroller,
JOHN T. CLARK, State Eng. and Surveyor.

To Railroad Companies and Contractors.

FOR SALE—Fifteen second hand Locomotive Engines of various sizes and descriptions and in good running order suitable for all kinds of work. For particulars apply to

CLARK & JESUP,
General Railroad Agents,
38 Exchange Place.

Also Railroad supplies of all kinds, 4125

Prosser's Patent Lap-Welded Iron Boiler Tubes.

Tubes screwed together, flush on both sides, for Artesian Wells, &c. Free-joint Tubes, for Core Bars, Avining Frames, Railings, Leaders, &c.

Patent Wrought Iron Blacksmiths' WATER-TUBES, WATER-BACKS, Etc.

Agents for KRUPP'S celebrated CAST STEEL for SHAFTS, RAILWAY AXLES, TIRES, PLATTERS' ROLLERS, &c.

P. S.—All Tools necessary for the construction or keeping in order of Tubular Boilers

2417 THOS. PROSSER & SON, 28 Plat street, N. Y.

SHANAHAN & LOEBER,
181 William-st,
(1st floor—Up Stairs.)
NEW-YORK.
MANUFACTURERS OF
THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
Chains, Scales, Levelling Rods, &c. 1y10

Sewall & Crehore
CIVIL ENGINEERS,
ST. PAUL MINESOTA.
JOSEPH S. SEWALL. CHAS. FRED. CREHORE.

N. York and N. Haven R. R. NOTICE OF SUMMER ARRANGEMENTS,

Commencing Monday, May 9, 1854.

TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A.M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A.M.—Commutation from New Haven.
9.10 A.M.—Special for Port Chester.	6.15 A.M.—Accommodation from New Haven.
11.30 A.M.—Accommodation for New Haven.	8.15 A.M.—Accommodation from New Haven.
3.00 P.M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	9.35 A.M.—Express from New Haven, Stopping at Bridgeport, Norwalk and Stamford.
4.00 P.M.—Accommodation for New Haven.	1.07 P.M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
5.00 P.M.—Express for Boston, stopping at N. Haven.	4.00 P.M.—Special, from Port Chester.
5.35 P.M.—Commutation for N. Haven.	4.00 P.M.—Accommodation from New Haven.
6.30 P.M.—Special for Port Chester.	9.30 P.M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Sup't.
New Haven, May, 1854.

New York and Erie R. R. PASSENGER TRAINS leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.

Dunkirk Express, at 7 a. m. for Dunkirk.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations.

WAY EXPRESS, at 12½ p. m. for Dunkirk.

Rockland Passenger, at 3.30 p. m., (from foot of Chambers Street) via Piermont, for Sullivan and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

Emigrant at 6 p. m.

On Sundays only one Express Train—at 6 p.m.

These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

D. C. McCALLUM, General Sup't.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17 tf

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—special red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

G. PARISH, 15,3m*
Ogdensburg, N. Y., April, 1853.

SEYMOUR, MORTON & CO. GENERAL R. R. AGENCY, Office, Metropolitan Bank Building. No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

MONTREAL & NEW YORK AND Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6.30 a.m. and 5 p.m., arrive at 8 a.m. and 7.30 p.m.

Leave Plattsburgh for Montreal 7.30 a.m. and 4 p.m., arrive at 10 a.m. and 6.50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate stations.

Trains connect at Moores Junction with Northern (Ogdensburg) Railroad for Ogdensburg and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequalled for comfort and dispatch, and attended with less fatigue and delay than any other. It possesses moreover the advantage of a short Ferriage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.
For particulars see Freight and Passenger Tariff.
BAGGAGE checked through.

H. W. NELSON, Superintendent.

Old Railroad Iron For Sale.

ABOUT 250 TONS, mostly whole bars, flat iron of superior quality. Deliverable at Portsmouth Va. as fast as it can be hauled. Immediate offers are invited, addressed to

L. O. B. BRANCH, President R. & G. R. R.
Releigh N. Carolina.

None but the accepted offer will be applied to.
3t.22

May 4th, 1854.

MINOR MERIWETHER,
Chief Engineer.

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio,) issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburg, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Mouday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot gauge, 22 tons weight, 16 + 20 inch cylinders, and 5½ and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.
Dec. 24.

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Lyon's Tables of Cubic Contents, Etc.

These valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1 gives correct mean heights of cross sections with either two or three cuttings taken. Table 2 finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise.—
Price \$1.50. 21.1f

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN, Chief Eng.
Huntingdon, May 6, 1854.

EXTENSION OF TIME.

THE period for receiving proposals for the Superstructure of Bridges and Trestle work on the Huntingdon and Broad Top Railroad, has been extended, by order of the Board of Directors, to Saturday evening, June 24th.

S. W. MIFFLIN Chief Eng.
Huntingdon, Pa., June 7, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 300 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N.Y. 19f

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of

Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York.

19 ff

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors' Compasses Manufactured on the most improved principle and of the Best Quality

by THOMAS HUNT,
No. 63 Fulton Street,
New York.

1910*

N. A. Boynton's VENTILATING HEATER.

PATENTED, 1853.



BRICK.

FOUR SIZES FOR BRICK WORK.

FIVE SIZES PORTABLE.



PORTABLE.

An entirely new Article, possessing advantages worthy the attention of those in want of a Powerful and Economical Heater.

SIMPLE in construction, compact in form, and easily managed and cleaned.

Is entirely of CAST IRON; has but two joints, and those so arranged, as to prevent the escape of Gases and Smoke.

The FIRE POT is lined, the RADIATING SURFACE located above the fire, and equally exposed on all sides to the action of the cold air.

Can be set in LOW CELLARS, and, by the attachment of a SELF-CLEARING RADIATOR is especially fitted for the use of Bituminous Coal.

Of the above pattern we have four sizes, to be enclosed in brick-work, and five sizes of portables, adapted to all classes of buildings, and can be furnished at a less price than any other heaters of equal capacity in present use.

Manufactured and for Sale, Wholesale and Retail,

By CHILSON, RICHARDSON & CO.,
374 Broadway, New York,
Also 101 and 103 Blackstone-St. Boston.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to
September, 1850.

THOS. CHAMBERS,
President.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 27.]

SATURDAY, JULY 8, 1854.

[WHOLE No. 951, VOL. XXVII.]

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

PRINCIPAL CONTENTS.

Mobile and Ohio Railroad.....	417
Curves in Railroad Tracks.....	418
Journal of Railroad Law.....	419
Buffalo and Cincinnati Routes Difficulty.....	421
New Albany and Sandusky Railroad.....	422
Working Railroads by Contract.....	422
Anthracite Coal for Locomotives.....	423
Chicago St. Charles and Mississippi Air Line.....	423
Railroad.....	423
Stock and Money Market.....	424
Logansport and Northern Indiana Railroad.....	426
Louisville and Nashville Railroad.....	426
Covington and Ohio Railroad.....	427
Lexington and Danville Railroad.....	427
Kentucky and Tennessee Railroad.....	427
Terre Haute and Alton Railroad.....	427
Mobile and Girard Railroad.....	427
Crawfordsville Frankfort and Fort Wayne Railroad.....	428
Ohio and Mississippi Railroad.....	428
New York and New Haven Railroad.....	429
Brooklyn City Railroads.....	429

American Railroad Journal.

Saturday, July 8, 1854.

Mobile and Ohio Railroad.

Statement showing the leading features of this road, the progress of work upon its line, and its financial condition on the first day of July, 1854.

Length of line from Mobile to mouth of Ohio River.....	494 miles.
" of branch to Columbus, Miss.,... 12 "	
" of branch to Tennessee river,... 23 1/2 "	
" of branch to Columbus, Ky.,... 5 "	

Total length of main line and branches 534 1/2 "	
Maximum grade towards tide water, per mile 30 ft. from " " 40	
Highest point of road above tide water,.... 505	
Shortest radius of curvature,.... 1432	
There is no hard rock excavation on the line.	
Total cost of local work to prepare the road for the rails,..... \$5,101,576	
Or average per mile of..... 9,544	
Total amount of local means now secured by solvent subscriptions..... 5,108,000	

Which are sufficient for local work of the entire line from Mobile to the Ohio River at Paducah, including the branches above named. Seventy-

eight miles of the road at the Mobile end of the line are now completed and in operation, and sixty-six more (making one hundred and forty-four) will be completed by January next. Also fifteen miles at Paducah, and fourteen miles at Columbus, Miss.

Up to the first of June, inst., there had been collected from stockholders, and expended in graduation, masonry and bridging, and for 33 miles of rails, \$1,970,000. The loan of the State of Alabama of \$400,000, has paid for 66 miles of rails, making a total expenditure to this time of \$2,370,000. Rails for 74 miles more of the road are now arriving at Mobile and New Orleans, which, with previous purchases, supply 173 miles of the road, all of which can be laid this year.

The local work being all executed by the people of the county from local subscriptions, all monies borrowed are to be applied to the iron and equipment of the entire road and branches, equal with 10 per cent. of second track, to 594 miles of single track, and requiring 68,000 tons of rails, of which 3,600 tons have been delivered, at cost of \$180,000

7,000 "	"	"	"	400,000
8,100 "	"	"	"	567,000

Leaving 49,200 tons to be delivered, at cost of about..... 3,253,000
Add for distribution and fastenings..... 600,000

Total for rails, &c.,..... \$5,000,000
For 90 first class locomotives, 60 passenger cars, and 1500 freight cars of 8 wheels each, at cost of \$1500..... 2,018,000

Making total required by loan..... \$7,018,000
To be made up as follows, viz :

From loan granted by State of Tennessee in 6 per cent. bonds of that State, equal to \$10,000 per mile for 118 1/2 miles of the road in that State \$1,185,000

From proposed Company loan, 6 per cent. bonds, to run 30 years..... 6,000,000

Total \$7,185,000
For security the State of Tennessee will hold a statutory lien upon 118 1/2 miles of the road within that State; and the railway company give to their bondholders a first and only mortgage, in trust, upon the remaining 375 1/2 miles of the main road, and 40 miles of branches, including the termini

of the main line and branches, with all properties, rights and immunities of every kind held and enjoyed under their perpetual charters. And also, upon 1,156,000 acres of public lands donated by Congress by Act of Sept. 20th, 1850, and now in possession of the Company. The aggregate value of all these securities when the road is completed will not be less than 9,000,000 dollars, or, including the loan, not less than 15,000,000 dollars. As per following statement :

Cos of local work of 415 1/2 miles (exclusive of 118 1/2 in Tennessee,) is.... \$4,223,400
6,400 acres of right of way and station grounds donated to the Company, including 49 acres in the city of Mobile, 66 acres for repair shops 5 miles out of Mobile, 100 acres at the mouth of the Ohio, and one undivided half of 1000 acres at each of the latter points, worth 500,000

Donated Lands.

100,000 acres town sites and first quality land, worth an average of \$12 per acre..... 1,200,000
1,056,000 acres of other lands, various qualities, heavily timbered, and worth when the road is completed not less than \$3 per acre..... 3,168,000

Total present security..... \$9,091,400
To which add amount of the Company loan..... 6,000,000

Making a total security of..... \$15,091,400
Pledged for the redemption of six millions of stock.

The bonds of the State of Tennessee are receivable on the completion of the grading through that State within 12 months from the present time. But the whole loan of seven millions will be required in instalments, through two years, to complete the road, during which time the running portions of the road will earn more than enough to pay the interest on all bonds issued, thus obviating the necessity of paying interest out of capital.

The trustees appointed to hold, under a deed of trust, the road lands, properties and franchises of the Company, for the benefit of the land holders, are John J. Palmer and Morris Ketchum of New York, and William R. Hallett of Mobile. The proceeds of the sale of the Company's lands to be invested by said Trustees in a sinking fund for the redemption of the bonds.

The Mobile and Ohio Railway will be ninety-

four miles shorter than any other road that can be built from the Ohio river to a shipping port of the Gulf of Mexico; and, at least, 150 miles shorter than any other route likely to be built in the next 30 years. The distance by it from the Mouth of the Ohio river to the open Gulf is 527 miles against 1160 miles by the Mississippi river. Its average distance from this river is 100 miles, $20\frac{3}{4}$ feet water at mean low tide (as per Government surveys) is found on the bar at Mobile Bay, against 15½ feet on the bar at the mouth of the Mississippi river. It is the intention of the railway Company to extend their road to the deep water, 23 miles below Mobile.

This road, chartered to and owned by one Company (with power to build branches 30 miles laterally in three of the States, and 50 miles in the fourth,) traverses four States from which the staple products of cotton and tobacco are all exported, while bread stuffs, horses, cattle, mules, and foreign supplies are imported; and as it is a longitudinal road connected with three long lines leading from the Ohio river to the Northern lakes, centrally through the States of Tennessee, Kentucky, Ohio, Indiana, and Illinois, it must have a very large traffic in exchanging the various products of twelve degrees of latitude between Mobile and Chicago, Toledo, Cincinnati and Cleveland. Which traffic will be greatly increased by steamship connections with Lake Superior on the north, and with the West India Islands on the South.

From these favorable relations of the Mobile road to other lines now built and building, to the great rivers of the country and to the Gulf of Mexico, an appropriate estimate has been made of the income to be derived from it the first year after its completion, which will be not less than \$3,026,000, as per the following statement:

Estimate of Mobile and Ohio Railway traffic for the first year after completion.

300,000 bs. of cotton, Av. \$1¼ per bale,	\$525,000
20,000 cks. tobacco, 8 per cask,	60,000
300,000 bbls. flour, 50 cts. per bbl.	150,000
100,000 " prk & beef 80 " "	80,000
20,000 tierces of hams and bacon, \$2 per tierce	40,000
1,500,000 bushels of corn, 10 cts. p. bush.	150,000
30,000 live hogs, \$1 each	30,000
35,000 head of cattle, horses & mules, \$3 each	105,000
5,000 tons of iron, \$4	20,000
100,000 kgs of lard, 30 cts.	30,000
100,000 casks of lime, 55 cts.	55,000
30,000 cords of wood, for Mobile, 70 c.	21,000
16,000,000 feet bd. meas. timber and lumber, \$2½ per M.	40,000
50,000 tons of merchandize and miscellaneous prods, \$4 p. ton	200,000
100,000 through 1st class passengers, less than one-fourth now passing between Cairo and New Orleans, at \$10 each,	1,000,000
20,000 second class ditto, at 6 "	120,000
130,000 first class way passengers, av. \$2 each	260,000
30,000 second ditto ditto, \$1 each	30,000
Express service	110,000
Mail "	100,000

Total estimated gross income.....\$3,026,000
Estimated expenses of operating & maintaining the road for the above amount of traffic is.....\$1,502,000

Leaving net income of.....\$1,524,000

To be appropriated as follows:

Interest, 6 per cent. on loans, say \$7,000,-

000,.....	\$420,000
For exchange.....	42,000
Five per cent. on \$2,018,000, for depreciation of cars and engines,.....	109,000
For additional structures, side tracks, &c.	100,000
Twelve and a half per cent. on 52,000 shares of stock, = \$5,200,000,.....	650,000
Two and a half per cent. on \$5,200,000, for depreciation of rails, &c., beyond annual repairs.....	130,000

Leaving a surplus of.....\$1,451,005
73,000

Guided by the increase of traffic upon other prominent railroads of the country which are far less favorably situated, there are the strongest reasons to believe that the above estimated income for the first year, will be doubled on the fourth or fifth year after completion.

The above road, in connection with the Illinois Central, forms a line of 860 miles, cutting the parallels of latitude at right angles, and traverses a region in which is produced nearly all the important articles entering into commerce. It unites the tropics with the high northern latitude. It connects the Gulf and the great interior water line formed by the great Lakes. It occupies the natural route of a commerce which consists of an interchange of dissimilar products. Its direction, then, could not be improved. In a political point of view, it connects extremes equally marked as are the physical ones already noticed. It may be regarded as a great international work, whose influences will be felt beyond its mere locality; a work in which every portion of the country is interested, and toward the support of which every portion must contribute.

It is a work, too, which possesses unusual financial strength. The local means of the country are sufficient to prepare the road for the iron.—The Company will be compelled to borrow only what is necessary for the superstructure and equipment. The lands of the Company are quite equal to the cost of these items. These, with the cost of the road, will give the creditor of the road nearly a three fold security for his money.

Curves in Railroad Tracks.

We gave, in a recent number, a consideration of the effects of grades, and the mode adopted by celebrated engineers for estimating their effects. The resistance of a grade can be as certainly measured as its inclination. The following is the invariable rule, which is as correct in practice as simple in its application. Multiply the rise in feet per mile by .3787, the product is the resistance of gravity in pounds for each ton of 2000 lbs. Or, multiply the rise in feet per mile by .4242, and the product is the gravity in pounds for each ton of 2240 pounds.

In dealing with curves, however, we have no such certain means of knowing their resistance.—It depends upon many elements, out of which no mathematical expression can be had, of service to the engineer. A knowledge of their effects must therefore be entirely experimental.

The resistance of curves comes, to a great extent, from two conditions which exist in opposition to each other, and which under a certain amount of curvature and velocity may be equalized.

One cause of resistance is in the obliquity of the line of traction to that of the natural direction of the carriage. A train, in slow motion upon a

curve, would naturally be strained in the direction of the chord of the arc of curvature. This would strain the inner rail of the track. But upon gaining a certain velocity, the opposite element of centrifugal force arises, relieving the strain upon the inner rail, and, at a higher speed, not only extinguishing it entirely, but producing a great strain upon the outer rail. It may be inferred that, at an intermediate speed, the obliquity of the line of draught and the action of centrifugal force neutralize each other, so that the entire resistance encountered is such as proceeds from other causes.

It is seen, almost without demonstration, that the resistance of curves depends not only upon their radii and length, but also upon the velocity, length of train, position of axles, lateral play of wheels, condition of rails, elevation of outer rail, and other causes, many of which preclude the possibility of exact estimation.

It is certain that the action of centrifugal force is one of the principal elements in the resistance of curves, passed at high speeds. This action increases as the square of the velocity and is a great resistance upon roads working a large express passenger traffic. But, as it cannot be correctly estimated it must be left for experiment to determine, if possible, its extent.

Such experiments as have been made upon this subject were made at low speeds, and are therefore of comparatively little service.

Gillespie's "treatise on Roads and Railroads" contains some notes relative to curves which exhibit some of their effects, and may therefore be transcribed in this place.

"In the experiments of Dr. Lardner, the resistance to railroad trains moving at ordinary speed, produced by curves of a mile radius, was found to be too small to be appreciable.

"It has been inferred, from experiments made on the Baltimore and Ohio Railroad, that a change in direction equal to an entire circle, or 360°, produced a resistance equivalent in its effects on the cost of transportation, to 23-100, or nearly a quarter of a mile in distance.

"Another authority states that a curve of 700 feet radius (8 1-5) at a speed of twelve miles per hour, is found in actual practice to cause a loss of power about equal to an acclivity of 18 feet per mile.

"On the Utica and Schenectady Railroad, an ascent of 20 feet per mile is followed by a level curve of 700 feet radius; and the cars at 15 miles per hour, on reaching this level curve, increase their speed, showing the curve to offer less resistance than the grade.

"The amount of mechanical power absorbed in passing around a curve is a together independent of the radius of the curve, and depends only on the amount of the entire angular change in the direction of the line. When the curve has been run by "angles of deflection," its length in chains multiplied by its angle of deflection, equals the entire angular change. Thus a curve of 1=, 30 chains long, offers the same resistance as arc of 3= 10 chains long. Sharp curves are therefore not objectionable on the score of loss of power, though highly so from their wear and tear of engines and cars, displacement of rails, danger, etc.

"The angle of deflection of any curve may be found by dividing 5730= by its radius in feet."

The disposition of curves has a great bearing upon their effects. Reversed curves, having no intermediate straight line, and curves in steep grades, are among the most wasteful of power.—Curves in deep cuts and curves terminating upon high bridges are also very dangerous applications.

We will conclude this article with a table of the curves of the Northern (New York) Railroad, as furnished us by Florentin Pelletier, Esqr. the engineer in charge, which with the table of grades, published in the Journal for June 24th, completes the exhibit of the physical features of that line.

TABLE OF CURVES.

Ogdensburg Railroad (Northern N. Y. R. R.)

From Ogdensburg 46.38 miles, to foot of summit grades.

Radius, feet.	Length Feet.	Angle of deflection.	Total curvature, degrees.
2,000	736	2.864°	21.08°
10,000	21,839	.573°	125.13°
	22,575		146.21°
Straight.....	222,325	feet or	42.107 miles
Curved.....	22,575	"	4.275 "
Average...	34.2°	per mile for	4.275 miles.

The next 34.016 miles to the summit.

Radius in Feet.	Length, feet.	Angle of deflection.	Total curvature.
15,000	7,676	.381°	29.24°
14,147	200	.405°	.81°
12,810	1,800	.447°	8.04°
10,587	2,600	.541°	14.06°
10,000	4,078	.573°	23.36°
7,463	2,880	.767°	22.08°
7,322	2,643	.782°	20.66°
7,000	1,806	.818°	14.77°
5,000	21,060	1.146°	241.34°
4,562	900	1.277°	11.49°
7,640	1,200	0.749°	8.98°
3,903	360	1.468°	5.28°
3,000	3,230	1.909°	61.66°
2,844	700	2.014°	14.09°
2,600	.652	2.203°	14.36°
2,315	710	2.475°	17.57°
2,000	1,197	2.864°	34.28°
	53,693		542.07°

Straight.....	125,913	feet or	22.847 miles.
Curved.....	53,693	"	10.168 "

Average curvature 5.33° per mile for 10.168 miles.

The last 37.082 miles to Rouses Point.

Radius, Feet.	Length feet.	Angle of deflection.	Total curvature.
6,000	6,090	.955°	58.15°
5,730	2,900	1.000°	29.00°
5,000	22,585	1.146°	258.82°
3,144	918	1.822°	16.72°
3,000	42,593	1.909°	813.10°
2,727	970	2.101°	20.38°
1,637	1,000	3.500°	35.00°
	77,056		1,231.17°

Straight.....	118,744	feet or	22.489 miles.
Curved.....	77,056	"	14.593 "

Average curvature 84.36° per mile for 14,593 miles.

RESUME.

Miles.	Straight.	Curved.	Curvature.
First 46.38	42.107	4.275	146.21°
Next 34.016	23.847	10.168	542.07°
Last 37.082	22.489	14.593	1,231.17°
	117.478	88.443	29.336
			1,919.46°

29.036 miles curved, average 66° 6' per mile.

FLORENTIN PELLETIER,
Engineer in Charge.

Corrections.

In the table of grades of the Northern Railroad, published in the Journal of June 24th, one table was printed without headings, which omission impaired its perspicuity and value. We therefore reprint it as below.

Resume of Grades.

	Miles.	Level.	Ascending	Descending.
First	46.38	16.610	18.664	11.184
Next	34.016	1.169	31.482	1.363
Last	37.082	3.155	3.219	30.708
	117.478	20.934	53.365	43.255

As the table given us by Mr. Pelletier is a model of accuracy and system we wish to give it as correct as possible.

Journal of Railroad Law.
CITY RAILROADS.

The following decision of Judge Hoffman, will no doubt occasion abundant comment and criticism, during such litigations as may hereafter arise concerning Railroads in our city.

It will be seen that Judge Hoffman regards the celebrated *Broadway Railroad case*, as simply deciding that a grant by the Common Council of the City of New York, of a right to construct a Railroad, is void when the grant originated in corruption and a spirit of reckless disregard of the interests of the public; and also, that such a grant is invalid when it is a perpetual one, or when it is any thing beyond a mere license, revocable at the will of the Corporation or upon just and reasonable terms. And without impugning this doctrine, the Judge is very decided in his opinion that our Corporation are fully authorised to establish City Railroads, under proper regulations, without Legislative aid.

Thomas Hope vs. The Sixth-avenue Railroad.

SUPERIOR COURT—SPECIAL TERM—JUNE 23.

Thomas Hope and David D. Acker, on behalf, &c., against The Sixth-avenue Railroad, Jas. Libby and others, and George Law, Edmund R. Sherman and John Pettigrew and others, doing business under the name and style of the Eighth-avenue Railroad Company.

This was a motion for an injunction, made by Messrs. Hope & Co., grocers, on the corner of College-place and Chambers-streets, to prevent the defendants from running any cars, and to compel them to remove the rails which they have already laid down, on the ground that the resolutions of the Common Council, under which the companies are formed, are illegal and void, and because the running of cars through College-place interferes with their business, by rendering it impossible for them to leave their wagons there, or to keep them there for the purpose of loading and unloading.—For the plaintiffs, Mr. Galbraith and Mr. Edward Sandford; for the Sixth-avenue Railroad company, Mr. J. and Mr. W. H. Anthon; for the Eighth-avenue Railroad Company, Mr. Chas. O'Connor.

HOFFMAN J.—Under the complaint originally framed, and the injunction then granted, the defendants were only prohibited from laying down the easterly track in College-place, and connecting the same with the easterly track of the road in West Broadway.

The complaint questioned merely the legality of certain ordinances or resolutions of the Common Council, so far as they authorised the Eastern track. These resolutions were not set forth at length. Upon an application at Special Term, amendments were allowed which introduced them, and which extended the prayer for an injunction so as to prohibit the use of the Railroads at all in the streets named; which I understand to comprise all the streets through which they respectively run.

The amendments are made with a view to raise the question of the entire illegality of the acts of the Corporation as to these roads, and upon the ground that the decision in the Broadway Railroad case determines such illegality.

An act of the Legislature, passed the 4th of April, 1854, has been produced upon the argument of the motion, which is considered of great importance, and is afterwards fully noticed.

1. The subject of consideration is the situation of the Sixth-avenue Railroad Company upon the case as now presented. The next is that of the Eighth-avenue Association.

Prior to the late decision in this Court, and in the Supreme Court upon the subject, and after the case of *Drake vs. The Hudson River Railroad*, I should have considered the following propositions as incontestible:

1. That the establishment of railroads in the City of New York, by the authority having title in the streets, and to the control of them, was an incident to that title and authority, and not in itself an invalid use of the public streets.

2. That the body vested with such title and control was the Common Council. In my judgment, this power was in the Common Council without the aid of any statute of the Legislature, although there might be a power to restrict it by express enactment. When and to what extent the Legislature could restrict it was an open question. But the great principle was, that the power existed without legislative grant, and it must be shown, to be abridged, and at any rate, that the Legislature never could empower others to construct roads without the approbation of the Corporation.

3. That the Corporation of New York held the naked fee of the streets of the City, but held the same as trustees; and were trustees upon the tenure of holding and keeping them as open public streets; and that the parties for whom they were trustees, were first and principally the citizens and inhabitants, and next, travellers generally.

4. In executing this trust, the Corporation was amenable; like all other trustees, for the faithful, legal and honest discharge of its duty; and corruption, fraud or violation of law would not only render its contracts and acts invalid, but would justify the interference of a Court, by provisional remedies, to prevent their consummation.

5. That the right to apply for such relief, as the law stood upon several decisions of the Supreme Court, was vested in any persons injured individually, or as inhabitants of the City, and tax-payers. This rule has been disputed—perhaps overruled in our Court; and the individuals sustaining injury must unite the Attorney General with them wherever the question is either one of a public nuisance, or regards the violation of its charter by an incorporated company, or perhaps where corporate property is sought to be applied illegally to any other than the public purposes to which it has been by law devoted. (12 Legal Observer.)

But every lawyer will understand the pervading influence upon every point which may arise of the solution of the question, whether the Corporation of New York has an original chartered right to establish railroads in the streets, or derives that right from acts of the Legislature. In the former case, they who contest its power must show a restriction in the latter; the Corporation must show where and to what extent it has been vested.

In my judgment, the Legislature has no more power to establish a railroad in a street in the City of New York, without the assent of the Corporation, than to run it through the house of an individual owner without his consent. They may do it in the case, as in the other, upon the ground of public necessity, and upon making proper compensation. But they must, in their legislative capacity, declare the public exigency which demands the appropriation, and must provide the mode of compensation for a surrender of a right in property. Otherwise they invade the right of the Corporation of New York in the streets as much as if they enacted that my house should be torn down, without public necessity and adequate remuneration.

But, again, I hold that the Corporation of the City possess the power of establishing railroads, and that it is incumbent upon those contesting its exercise, in any case, to show either that they have violated their trust, or plainly violated a statute of the State, which it was competent to pass, or have broken in upon a fundamental rule of law controlling the power of the Corporation.

It is now my duty to ascertain how far these propositions have been overthrown or modified by the decisions referred to.

1. I do not find it yet decided by either the court of Appeals or the General Term of this court, that the Corporation of New York can not make any grant to others of the right of constructing a railroad in the streets of the City, without a specific act of the Legislature, whatever may be the terms or conditions of the permission. I do not mean to say but that this may be logically reasoned out, from some propositions of some learned Judges, but I do not find that it has been judicially pronounced, or that it necessarily results from anything which has been judicially decided.

On the contrary, we find it declared by Justice Edwards, in his able opinion, after a careful review of *Drake vs. The Hudson River Railroad Company*, and the other authorities, that the power vests in the Corporation, and we find this sanctioned by Justice Strong and by Justice Morris. (15 Barbour.)

2. Next, the question as to where the fee of the streets resides does not arise in this case, for the complaint states that the title to the lands in the streets named was vested in the Mayor, Aldermen, &c., in trust, that the same should be appropriated and kept open forever as public streets, for the free and common use of the citizens. I need not, therefore, attempt to support my individual views upon the subject.

3. The decisions in the Broadway Railroad case depend upon two great principles.

In the first place, there was a violation of the trust reposed in the Corporation. They were acting in a reckless or profligate disregard of the interests and rights of those of whom they were the agents. In the next place, the grant was not a mere license, revocable at the will of the Corporation, or upon prescribed and reasonable terms. It was a contract which must remain perpetually in force, unless the Company broke the conditions. The Corporation could not bind themselves by an inviolable compact, the effect of which was to surrender practically and perpetually the management and regulation of the streets. It was a trust which they could not part with.

With this view, Justice Strong, Justice Harris, Justice Duer, and the General Term of this Court, consisting of Justices Oakley, Bosworth and Slosson, have concurred. These points are settled by authority and rest upon incontestible principles.

But if the license to use the streets for a railroad is not an irrevocable contract, if it is not an attempt to divest the Corporation of an inalienable control, and to confer vested rights upon others which may not be abridged, then I see no necessity for an enabling statute of the Legislature; but I find the power of the Corporation is in itself sufficient.

In the case before me, the Common Council have reserved the power to cause the road, or any part thereof, to be taken up at any time they shall see fit; have provided that the road shall be transferred to them whenever they demand it, upon payment of the cost and ten per cent. added; and that the parties on being required at any time by the Corporation, and to such extent as the Common Council shall determine, shall take up, at their own expense, said rails, or such part thereof as they shall be required, and upon failure so to do, the same may be done at their expense by the Street Commissioner.

In words, then, the power to purchase for the use of the city, and thus to extinguish a monopoly in others, the power to remove such portions as may be found injurious to public convenience, and the absolute power to annul the license, is reserved. When the companies accepted the per-

mission thus conferred, they were bound to know that the law was, as it is now pronounced to be, that the Corporation could not give them an irrevocable right; and hence that the power to take up the rails was not an unmeaning or contradictory reservation, but a declaration of the legal rights and position of the parties.

I take, then, the four first propositions at the close of the opinion delivered by Justice Bosworth at the General Term, in *Davis v. Sharpe and others*, as concentrating the conclusions to which so many Judges have arrived. Now I do not understand those propositions as involving more than this: that the grant in question was such a grant of a franchise as the Corporation had no power to make, because by its legal import it might be perpetual; because it was a contract which restricted the Corporation in the future exercise of its power over the streets; and because it conferred upon the grantees exclusive privileges to a partial use of Broadway, which might be of perpetual duration.

If the observations before made possess the weight I suppose they have, the grant to the Sixth Avenue Railroad is not liable to any of these objections.

Next. The next source of restriction upon the powers of the Corporation to which I adverted, were acts of the Legislature apparently inconsistent with the exercise of that power in authorizing a railroad. I do not know of any such acts except those which were referred to in the Broadway railroad case.

1. The statute of April 9, 1813, section 198, (2 R. S. 421,) regulates the meeting of carriages in the streets, and directs that they are to be driven to the right respectively under a penalty. It was considered that as the cars could not be run so as to comply with this provision, the statute would in effect be abrogated by a mere Municipal Act. (Justice Bosworth's opinion at General Term.) I shall consider this when the effect of the Incorporation, under the Act of 1850, is considered.

2. The statute authorizing the Common Council to pass By-laws from time to time for regulating hackney coaches or carriages, and their rates of fare or carriage, was deemed violated in the Broadway Railroad case. (Justice Harris, 9 Leg. Obs. 108.) The Corporation had empowered the associates to receive from any person they might carry, five cents. This was deemed an unlawful restriction of their authority to regulate the rate of fare from time to time.

But the general power of passing all regulations deemed necessary for the management of the road was expressly reserved;—and as to the rate of fare, the following acts took place:

By the resolution approved of July, 1851, the rate of passage for the entire length of the road was not to exceed a greater sum than five cents. I think there was no violation here of the Act of 1813.

By the ninth subdivision of the 28th section of the Statute of 1850, the compensation was not to exceed three cents a mile; and under the resolution of November, 1852, the Company might charge any passenger for any distance upon any part of the road below forty-third street, five cents.

The result appears to me to be this: The provision as it stood in the resolution of July, 1851, was not in itself void, as being without power in the Corporation. If it was affected by the statute after the associates chose to avail themselves of it, (as I think it was,) then the statute controlled, but the latter was not inconsistent with the resolution. Five cents for the whole distance did not involve the result that over three cents a mile was charged.

But the resolution of November was inconsistent, and to that extent, it may be deemed void as to this Company. It could go no further.

Again, the Act of 1854 may sanction the resolution of 18th of November, a point more particularly examined hereafter.

The difficulty adverted to by the learned Judge, that the right of the Mayor to license was in-

fringed, does not arise here. One clause of the resolution is, that each passenger ~~or~~ to be used on such road, shall be annually licensed by the Mayor; and there shall be paid annually such sum for a license as the Common Council shall hereafter determine.

3. It was again objected that by the 9th Section of the Amended Charter of 1849, (Laws p. 280,) the Executive power of the Corporation was vested in the Mayor and heads of departments, and such other officers as might be created by law; and that the Common Council shall not perform any executive duties, except such as might be specially imposed by the terms of the statute. That the 14th section enacted that there should be a department, called The Department of Streets and Lamps, which should have cognizance of cleaning the public streets, and collecting the revenue from a sale of the manure. And that by the 10th article of the grant in question, the grantees were to sweep and clean so much of Broadway as lay south of 14th street, &c. This was inconsistent with the provision of the Amended Charter referred to.

There is no such provision in the resolutions now in question. The statute in this particular is left in force.

4. Another line of argument pursued in the Broadway Railroad case to show the invalidity of the grant was this: That the Associates were not incorporated at the date of the grant;—but the 15th article anticipated and attempted to meet the difficulty by providing that "the Associates might incorporate themselves under the General Railroad Act, whenever two-thirds should require it." That the General Act did not authorize the creation of a corporation to operate a railroad not constructed at the time it took effect. (Laws 1850, p. 211.) Other provisions in the act are adverted to. The prescribed weight of the rail, the running of freight as well as passenger cars, the duty of keeping up fences on each side of the road of a prescribed height.

Again, that the act required that not less than twenty-five persons should unite in forming a company. By the Articles of Association, two-thirds—viz., twenty—might form the incorporation, or two-thirds in interest, which might be a smaller number of persons. And all these matters tended to show that if the clause was valid, these Associates might have become incorporated professedly under the act; but either violating or not complying with many of its regulations. These objections had great force in the case of the Broadway Railroad.

To judge of their applicability to the Sixth-avenue Railroad, some facts must first be noticed. On the 30th of July, 1851, the first set of resolutions was approved by the Mayor, and these gave the privilege to certain persons, by name, viz.: Libby, Howell, and others, twelve in number, including two firms.

On the 27th of December 1851, certain persons, 26 in number, (among them the parties named in the resolutions of July, or most of them,) incorporated themselves under the Act of 1850. The certificate is set forth in the complaint, fol. 66, and appears regular. It is also stated that on the 30th of December 1851, certain persons, Libby, &c., in whom by mesne conveyance the whole right and title of the Associates was vested, executed an assignment of the same to the company named in the certificate of incorporation.

In the first place it is not shown that the Railroad was commenced before the act of incorporation. On the contrary it might be deduced from the complaint that it was not begun until after the resolution of June 1852. This is so stated as to the Eighth-avenue Road.

Again, this motion is a continuation of the former motion under the order to amend, and the answer of Libby and others is before me. It is there stated that the said company (meaning the Association) did not make such Road, but conveyed away all their right, and title, &c., "and further that such Road was afterwards built, by the said Corporation, &c."

But again, it does not appear to me so clear, that no company could be incorporated to carry on the construction of the Road unless it had been commenced prior to the time when the Act went into effect, which was its date April 2, 1850. The section is, that any number of persons not less than 25, may form a company for the purpose of constructing, or operating a Railroad, or for maintaining and operating any incorporated Railroad already constructed.

The phrase "already constructed," may, I apprehend, be referred to a road built at the time when the company is formed as well as before it. The phrase admits of this construction, and I presume it was more probably within the intent of the Legislature that it should extend to such, than otherwise.

5. I proceed to consider the effect of the incorporation by this company under the Act of 1850.

I have before stated the proceedings of the Associates to incorporate themselves. I understand the Statute to empower so far as the State can do it, the formation of Railroads in the streets of cities. (See subd. 5 of §28, §39, §40. Also the Act of 29th March 1853, Sess. Laws p. 86.)

The subdivision of the 29th section referred to, provides that it shall not be constructed to authorize the construction of any Railroad not already located in, upon or across any streets in any city, without the assent of the Corporation of such city.

Two leading objections have been before noticed, viz.: the Statutory regulations directing carriages to pass to the right, and the provisions of the Charter as to contracts being made by the Executive Departments. It appears to me a decisive answer to these and similar objections, to say that when the Legislature authorize an incorporation to run a Railroad in a city, it virtually repeals every statutory provision apparently inconsistent with the enjoyment of the right.

There are some provisions of that Act which were noticed in the Broadway case, and may be averted to. By one of them, (§44,) fences of a certain height are to be constructed, with openings, or bars and gates, and farm crossings of the road, for use of the proprietors of the adjoining lands. It might be sufficient to say here, that it does not appear in the record that this was not done. But the neglect of it cannot be treated as a forfeiture of the Charter. The Act may be viewed as not requiring that to be done in a city which is inconsistent with custom and convenience. The fences and cattle guards mentioned are applicable to roads in the country, and would at once be understood as applying to them alone.

The carrying of freight is again a privilege which may be waived. It appears to me that the Sixth-avenue Railroad company have an unquestionable right to the enjoyment of the privilege granted by the Corporation of New York to them in the resolutions before stated.

II. I now come to the consideration of the case of the Eighth-avenue Railroad. The associates have not availed themselves of the Acts of incorporation of 1850, but their rights and interests are to be examined, and governed by the resolutions of the Corporation, with any aid they may receive from the Statute of 1854.

The views submitted in relation to the Sixth-avenue Railroad apply here; and the result is, that the grant or license to the Eighth-avenue company is free from objections, except such as arise from an inconsistency with some Acts of the Legislature; and in reality these inconsistent Statutes are only that one regulating the passage of carriages to the right, and that prescribing the making of the contracts through departments. If these objections possess the whole force attributed to them, and are sufficient to render void these important licenses, still the fundamental principles upon which I have proceeded will remove them. The Statutes amount only to restrictions upon the exercise of an admitted power, and these restrictions are of a formal, or merely police character. Such acts are repealable at the

will of the Legislature, or by the concurrence of that will, with the assent of the Corporation. The latter body when it gave a license to the use of the streets for a railroad, gave its assent to such repeal, and the Legislature in the Statute of 1854 declared its own. The third section is as follows. This Act shall not be held to prevent the construction, extension, or use of any Railroad in any of the cities of the State, which have been already constructed in part, but the respective parties and companies, by whom such roads have been in part constructed, and their assigns, are hereby authorized to construct, complete, extend, and use such roads, in and through the streets and avenues designated in the respective grants, licenses, resolutions or contracts, under which the same have been so in part constructed; and to that end the grants, licenses, and resolutions aforesaid are hereby confirmed.

With respect to that Statute, I should feel great difficulty in holding, that it could retroact so as to establish as valid what was absolutely void from the beginning. But where it is regarded as the consent of the Legislature to the removal of mere municipal and police regulation, when the power to accomplish the important purposes of travel in a great city was undoubted, and the trammels upon the exercise are of so slight a nature, then the repealing act so far confirms the grant from the beginning as to prevent the public questioning its validity. I presume that the Attorney General would not be justified in informing against the Corporation after this Statute, even if his right to do so before it was undoubted.

In this point of view, some cases upon the usurpation of a franchise are applicable. On an information for usurping an office, from the time of the usurpation to the time of the information in Hilary term, the defendant confessed a usurpation from the 20th of August to the 29th of September, and plead a sufficient election on that day. It was held that there could not be judgment of ouster, but the party was punished by a fine.—(Rex. vs. Bidall, 2 Strange 295, S. C. 7 Modern 177.)

Again, it is settled in this Court that where the public, within the corporate jurisdiction, or the State are concerned, as where an usurpation or abuse of a corporate franchise is made or attempted, the Attorney-General must be a party. An individual upon the ground of a special personal injury may question any act of the corporation; but it is upon the individual injury, and the relief is confined to the redress or that injury. For example, in this case, if the plaintiff, Hope, has sustained a damage by an unauthorized encroachment of the eastern track through College-place, upon rights nor possession vested in him, he may be redressed, and to attain it, may question the power of the Corporation and the extent of the rights of the Railroad Company.

This leads me to the last point in the cause.

The resolution of November, 1852 gave permission to extend their rail through College place to Barclay-street, &c. This was supposed to authorize a double track, which was partially laid down.

The resolution of December, 1852, changed this, and allowed only a western track to be laid down. But in December, 1853, this resolution was rescinded, so far, at least, as it prohibited a double track through College-place.

The original complaint, as before observed, sought to restrain the company from laying this eastern track, and a case was sought to be made out of an individual special injury to the plaintiff Hope, arising from the locality of such track with his own premises. The deliberate declaration of the Common Council has been made in the last resolution, that the connections should be made and sanctioning this eastern track.

It is not clear upon the case as now made, that a private injury, arising from invasion of a right of use, has been done to this plaintiff. And such cases as Radcliff's Executors vs. The Mayor of Brooklyn, (4 Comstock; 195,) may probably apply. However, what is now decided could not

operate to prevent a new action, if he is advised to bring one, founded upon such personal damage and violation simply.

Buffalo and Cincinnati Routes Difficulty.

STATEMENT OF CONTROVERSY.

We have a pamphlet from S. S. L'HOMMEDIEU, Esq., President of the Cincinnati, Hamilton and Dayton Railroad Company, entitled a "Statement of the Existing Controversy between the two lines of Railroads from Cincinnati to Lake Erie."

The following is a synopsis of it, which we clip from the Cincinnati Gazette:

It seems that under the contract entered into on the 21st of April, 1853, the Cincinnati, Hamilton and Dayton Railroad, the Mad River and Lake Erie Railroad, and the Junction Railroad, the latter terminating on the east at Ohio city, now included within the corporate limits of Cleveland, composed what was called the West Line, and was one contracting party; the Little Miami Railroad, the Columbus and Xenia Railroad, and the Cleveland, Columbus and Cincinnati Railroad Companies, forming another route to Cleveland, constituted the East line, another contracting party.

These two lines entered into an agreement respecting the through freight and passenger business, on specified terms, and under this agreement the business of last year was transacted—the steamboats connecting with the East Line, running from Cleveland; and, as the junction road between Sandusky and Cleveland, forming a part of the West line was not completed, the boats connecting with the West line running from Sandusky. From aught that appears in the pamphlet, the business between the two lines was conducted harmoniously the first year, except that the West line mistrusted that the agents for the united lines, on points on the river below, were rather partial to the East line. At a meeting of the officers of the West line, held in Buffalo in March last, a different mode of appointing their agents was suggested to the East line, but that line paid no attention to the matter.

At the opening of business this season, the West line—their route being now completed to Cleveland—advertized that their boats would run from that city, instead of from Sandusky, as last year. The general agent of the united lines, in this city, acting under instructions of the superintendent of the Little Miami road, refused to sell tickets for this route, and has been sustained, subsequently, by the Superintendents and Presidents of all the roads forming the East line. The reason given is, that the West line, by running boats from Cleveland, instead of Sandusky, have violated the contract.

The pamphlet emphatically denies that this is any violation of the contract. It says:

"The contract no where limits the right of the West line, in running their boats, as to the point of departure. It no where requires the West line to start them from Sandusky. There is not a word in the contract, out of which such an implication can be extorted. This, of itself, determines the question, for it leaves the whole matter entirely within the discretion of the West line."

It is also urged, that as the contract speaks of boats running in connection with the West line, and as this line terminated at Cleveland, the natural presumption would be, that the boats should run from Cleveland.

The correspondence between the two parties, in order to adjust the present difficulties, is published in the pamphlet, and also the propositions on each side. The following extract of the result of a meeting held at Columbus, June 1st, contains the charges made by the West on the East line:

Each of the six Companies composing the two lines was fully represented. The right of the West line to run their steamers to and from Cleveland was urged upon the grounds heretofore stated, as being plainly secured by the contract. It was also charged upon the East line, that its present reason for denying this right, was because since the contract was made, it had become pecuniarily

interested in the profits of the Lake Shore railroad and in the ownership of a line of steamboats running between Cleveland and Buffalo; and that it was insisting on the protection of these new interests, at the expense of the just rights of the West line, and the sacrifice of good faith towards it. It was also urged by the West line, that the contract was intended to secure to both lines the equal enjoyment of facilities for business with other roads and lines of transportation, and that the stipulation inserted in the contract to the effect that the West line should be entitled to enjoy all the privileges granted to the East line by the Lake Shore road, was for the purpose of connecting the West line with the New York roads. It was claimed that the East line had violated the contract by entering into an arrangement with the New York Central and New York and Erie roads, to proscribe the West line. On the part of the East line, the right of the West line to run their boats to and from Cleveland was denied, and its representatives declined to make any arrangement unless the boats were withdrawn.

A proposition was made by the East line to annul the contract, which was assented to on the part of the West line, with the proviso, that whatever might be found due under it to the first of June should be paid, to which the East line refused to accede.

Other propositions were made by each party, but not accepted, and the difficulty is yet unsettled.

The above seems a fair and impartial statement of the difficulties in controversy between the contracting parties. What the East line may have to say in reply we cannot tell. We have little sympathy with combinations generally. We are inclined to the opinion that there is ample business afforded by the travel and transportation between Cincinnati and Buffalo to remunerate both lines, at fair rates of charge to the traveller; that the best mode of adjusting the difficulties is, for the stockholders and Directors in all the roads concerned to insist that their managing officers place their tariff of charges at such a point as will be expected to return a fair interest on their investments, under economical management, keep their roads in good order for high speeds, treat the traveling public well, and then run the risk of the discrimination of the traveler for future favors. By this means, and a reasonable amount of advertising, each line will get its proper share of patronage. The through business will go by the route which can be relied upon to take it the *quickest, cheapest*, and with the greatest regard for safety and comfort. These are the points for the Companies to look to. Business men must go by the routes over which their business calls them. Pleasure seekers, and those who have no business at way places will be attracted by good, smooth roads, freedom from accidents, clean cars, obliging officers, high speed, promptness in running, and arriving at the time advertised, making promised connections, and low fares.

We suppose both the East and West lines can make their advertised connections, and that they do make them generally. This is all the speed required, and thus far the lines may be said to rest upon an equality. The next thing should be for each to see that their roads are in the best condition to deserve public favor. Let the competition be in this department of railroading, and having done this, let them not forget to advertise far, and near the facilities they offer to the travelling community, always adhering to the truth, and promising no more than they can perform, and there will be no

question about each road getting its proper share of business.

As to the connecting roads, there is little danger of any line long continuing to refuse business because it comes to it by any *particular* route. The Stockholders will soon attend to, and remedy such management. We know of very few Railway Companies that are in a condition to *select* a certain amount of the business offering, and *reject* the balance. The New York Central and the Lake Shore lines are certainly not the ones that can *long* do it with impunity.

New Albany and Sandusky Railroad.

The president, secretary and principal engineer of the New Albany and Sandusky Railroad Company have just returned from Sandusky, where, as we learn, on Thursday last, they completed a contract for the construction of the whole line of road on very favorable terms. The work is to be commenced in the vicinity of New Albany, between the 1st and 15th of August next, and the whole is to be completed on or before the first of November, 1856. The contractors are Messrs. S. and C. Howard.

That portion of the Sandusky and Louisville Company's road from Eaton to the State line is also let to the same contractors. The part of the road from Eaton to Piqua was put under contract last year, and a great part of the grading is done. From Piqua to Huntsville the road has been let to Mr. DeGraff, who is working upon it with a large force. From Huntsville to Lake Erie the Mad River road forms a part of the line.

We are informed, however, that our Company has not yet fully made up the amount of cash subscription it engages to procure. But the sum yet to be raised is so small that it is not doubted it will be made up before the work is commenced.

Working R. R. by Contract.

The plan of working railroads by contract is attracting much attention in England. The following report upon working engines by contract, has been furnished to Mr. McConnell, locomotive superintendent of the Northern division of the London and North-western Railway, by one of his subordinates:—

"WOLVERTON, June 5, 1854.

"In reply to your letter of the 3d inst., requesting me to report upon the working of the contract system of engine driving, as it bears upon the several points therein mentioned, I have to thank you for the opportunity of expressing my matured and fully decided opinion thereon, viz., whether the stock of the Company would suffer during a course of years in value by contract, as compared with day work, and to what extent.

"The contract system of working as you design to carry it out tends in every respect to maintain the stock in the highest possible state of efficiency, and therefore to reduce all irregularity of working, involving risk of accident, to a minimum, because, as the shop repairs are not included in driver's contract, he must be greatly interested in having the highest possible efficiency of engine maintained at the cost of the company.

"Whether the repairs by day work are, more or less, by undisputed wear and tear, or by neglect?

"The greatest proportion of repairs required under the day-work system can, without doubt, be traced to neglect alone, and which could in most part be entirely removed by the care required under and inseparable from the contract system. To illustrate this I will instance 'a dirty boiler,' causing rapid destruction of tubes and fire-box, and diminished evaporative power, these being lost to the company; 'priming' involving loss of time, risk of burning the metals, explosion, and public safety; loss of large quantities of hot water, upon which much fuel has been wasted, which would be the driver's loss under contract,

but not under day work; pistons and valves ground away, involving loss of time, waste of steam, and rapid destruction of costly machinery. Under the contract system there would be no dirty boilers, no rapidly worn, burnt, and burst tubes, no burnt and exploded fire-boxes, no cut pistons, no bad journals, involving risk of broken axles, and waste of driver's oil, tallow, and fuel, from increased friction. If the contract system be generally introduced, I believe the greater number of so-called railway accidents to machinery will entirely disappear; that the drivers will become in every respect a better class of men; that they will make better use of their intervals between trips; go to bed at proper hours, and make better use of their increased earnings. I believe we could, in the cost of repairs at Wolverton works alone, save more than £15,000 per annum, and corresponding proportions to present cost at the other stations. This, in addition to saving in fuel, oil, &c., would be upwards of £20,000 per annum upon our present mileage. Additional work could be done with the present stock of engines, and greater earnings worked for without increasing the capital for additional plant.—Perhaps—and I believe—the greatest advantage of the system would be that a driver contracting for a particular train would have regularly recurring intervals of rest and labor, and thereby be much better fitted to do his duty to himself, the public, and his employers than he now is, while obtaining irregular intervals of rest and labor, involved in the present system of working round.—No man need try to persuade me that regularity in rest and food is not better for my health than an opposite state of things. I have tried both, and know the difference.

"I am satisfied that upon this division alone, considering punctuality, freedom from accident, improved condition of drivers and of engines, reduced cost of working and of repairs, which would at the same time be better done under the contract system, would benefit the company from \$35,000 to £45,000 per annum on this division, increase the earnings of the driver, and tend to secure the public safety.

"I am one of those who believe from the more than 20 years' experience I have had, that with proper care nearly all railway accidents can be prevented, and that nothing will tend more towards that most desirable state of things than a careful application of the 'contract' system. In a great many so-called accidents, which it has been my duty to investigate, I am convinced that nearly all of them could be traced to a cause which might have been prevented by care and vigilance on the part of the drivers. To show that I am in earnest I should be most happy to forego the receipt of any more salary if the Directors will generally introduce the contract system, and pay me a percentage upon the reduced cost and improved working consequent upon it."

Finding how well this worked, some of the London and North Western men applied to Mr. McConnell, the locomotive superintendent of that railway, to let them try it on the London and North Western, to which he assented. His plan was, to let them have all the materials they required for their use at the price they cost the company, for the men to do all the repairs, except those which could not be done out of the shop, at 3-4 to 4-1-4d. per mile run for passenger trains, and 6d. to 1-2-2d. per mile for goods, the men being secured their then wages should their profit not equal it. By the experiment, therefore, the men could not, under any circumstances, be losers, while they might realise a considerable profit and the company would benefit from 1d. to 1-1-2d. per mile. On one month's trial, it was found that an engine-driver and his assistants cleared nearly £3 a week [£2 17s.] among them over and above their usual wages. No doubt therefore existed on the benefits of the plan to both men and company, but it required care and skill—items not to be found in all. Those, therefore, who had not those qualities, grew jealous of those that had, and have threatened a strike unless their wages are

raised, so that they may be more on a par with those who possess more brains and more experience. Those that were conscious of their deficiency were fearful of the plan becoming general, and, of course, their being displaced by more efficient hands. To shield their fears, therefore, they demanded higher wages, and threatened to stop the trains if their demands were not complied with.

Could the above system of working on R. R. be carried out, there is no doubt but that a vast saving might be effected. On the present system the locomotive driver has no interest in the consequences of his acts. He is therefore without the strongest of all motives to faithful service. Could he be made to be interested in the results of his labors, every act would have direct reference to the good of the company. Is not a similar experiment worth trying upon our own roads?

Anthracite Coal for Locomotives.

We copy from the Journal of the Franklin Institute, the following article upon the use of Anthracite Coal for Locomotives, furnished by A. PARDEE, Esq., Chief of the North Pennsylvania Railroad.

"The use of anthracite coal as fuel, was commenced on the Beaver Meadow Railroad in 1836, in engines built by Eastwick & Harrison, and has been continued to the present time in a portion of their engines.

"On the Hazleton road we commenced its use in 1838, in the 'Lehigh' engine, built by Eastwick & Harrison, and in 1839, in the 'Hercules,' by the same makers. Both engines have been in constant use during the season of navigation, say eight months per year, up to and including 1852, when the 'Lehigh' was taken into the shop to be rebuilt. The 'Hercules' is still in use.

"Both engines had originally copper flues, which were replaced by iron ones, after about two years' use, the copper having been worn out at the end next to the fire-box, by the particles of coals drawn in by the draft.

"Both engines have now the same fire-boxes with which they were turned out of the maker's shop, excepting about one foot of the lower part, which has been once renewed. The iron flues now in use are those put in to replace the copper—never having been renewed either in whole or in part. Altogether, we have in use eight locomotive engines, three built by Eastwick & Harrison, one by M. W. Baldwin, and four in our own shops at Hazleton.

"We have never used other fuel than anthracite coal, excepting for the purpose of kindling fires. The engines have been in use during the season of navigation from two years ago, (when the last were built,) up to the time of the oldest engines named above, and we have never renewed a fire-box or set of flues, except the repairs to the two engines named. As far, therefore, as our experience goes, anthracite coal for fuel is not so destructive to fire-boxes and flues as has been generally argued and supposed. We wear out two sets of grate bars in the same season's use of an engine.

"THE CHARACTER OF THE ROAD.—In starting from the Lehigh at Penn Haven, we have had, while using a part of the Beaver Meadow Road, an ascending grade averaging 80 feet per mile for five miles, then 140 feet per mile for 1½ miles; then 60 feet for 3¼ miles, and then a grade of 12 feet per mile for 3¼ miles to the intersection of the various branches to the mines. In descending, as you will perceive, mostly by gravity, the coal fire remained entirely inactive, having no artificial draft by fans or otherwise, except that caused by the exhaust steam; while in the ascending with a load of empty cars, equal to the whole power of the engine, the fire to generate the necessary steam must be stimulated to the most intense activity; thus making, apparently, a far more unfavorable state of things for the use of coal than on a road

where the grades are more uniform, and in consequence, the fire acted upon by a more uniform draft.

"I am aware that it has been said that coal might do for short roads, but that on long roads the continuous intense action of the heat would destroy the fire-box and flues.

Now, it strikes me as absurd, to suppose that on a road of any length a fire need be made more intensely hot, or that any part of the boiler could be more heated, than is necessary to drive an engine and full train up ten miles of such grades as are specified above, or that a continuous equable heat for eight or ten hours can be worse than continuing the same heat for an hour, than a moderate fire for an hour, and so on alternately, with the consequent expansion and contraction, and this continued day after day for eight months annually during fifteen years.

"I have entered on this subject, perhaps to a somewhat tedious length, my object being to satisfy yourself and others, that anthracite coal has been used successfully for a series of years in this region, as fuel for locomotive engines, not differing materially from the ordinary mode of construction."

Chicago, St. Charles and Mississippi Air Line Railroad Company.

A meeting of the Stockholders of this company was held in St. Charles, on Wednesday of last week. From the reports of Ira Minard, Esq., President, S. S. Jones, Secretary, and Geo. W. Waite, Chief Engineer, we gather the following facts:

The stock of the company amounts to \$1,190,600, one-fourth of which is payable yearly in assessments of five per cent. On the 30th of May, 1853, the company entered into a contract with E. C. & E. B. Litchfield, of New York, highly responsible railroad contractors, for the construction and equipment of the entire road. The cost is to be \$24,500 per mile. The equipment embraces twelve first class locomotives, two hundred eight wheel freight cars, one-third of which are to be rack and the balance covered cars. The contractors are also to erect good and sufficient water stations along the line wherever the necessities of the company may require. The rails are to weigh from fifty-six to sixty pounds to the yard.

Messrs. Collins & Co., of Brooklyn, N. Y., have the sub-contract for constructing the road from this city to Fox River. The grading for this distance, forty miles, is nearly completed. The stone work of the Fox River bridge is finished—and that over the O'Plain is completed, the iron is laid to that point, and a construction train is running upon the road from the Company's depot grounds opposite the depot of the Michigan Southern road.

The cost of the depot grounds in this city and the right of way east of Fox River is about \$180,000. The depot grounds at Savannah and Galena have also been secured and the cost of these and the right of way to the Mississippi beyond Fox River will be comparatively light.

It has been the policy of the Company not to offer any bonds in the market until the road was completed and fully equipped, and in operation to Fox River. Owing to a variety of circumstances this has not been accomplished as soon as it was expected. It is now in a condition that will secure its completion to St. Charles at an early day.

The report speaks of the extension of this road into Iowa and across the State by the Iowa Central Air Line, and from a point opposite to Galena to the South bend of the Minnesota, and argues with entire certainty the great productiveness of the road. Iowa is one of the finest States in the Union, and it is settling with a hardy, enterprising and highly intelligent population. All the roads leading to that rich and soon to be populous State are bound to pay handsome dividends.

At the meeting of the stockholders last Wednesday, the following gentlemen were elected Directors of the Road:—

Ira Minard, St. Charles; Elisha C. Litchfield, Cazanovia, N. Y.; John Styker, Rome, N. Y.; Ed-

win C. Litchfield, N. Y.; Alvah Hunt, N. Y.; Gurdon S. Hubbard, Chicago; Amos G. Throop, Chicago; William Savage, Adrian, Mich.; Henry Ten Eyck, Cazanovia, N. Y.; Herry A. Mix, Oregon, Ill.; Daniel A. Barrows, Galena, Ill.; Ralph S. Norris, Galena, Ill.; Stevens S. Jones, St. Charles.

The Board subsequently elected:

President—Ira Minard; Vice President—G. S. Hubbard; Secretary—S. S. Jones; Treasurer—Alvah Hunt, New York; Assistant Treasurer—G. S. Hubbard.

The names of the gentlemen who have in charge the interests of the Road, are a sure guarantee of entire success.—Chicago Dem. Press.

Brunswick and Florida Railroad.

At the Railroad meeting, in Thomasville, the 19th inst., on motion of Gen. Knight, a committee of 13 was appointed to procure business for the meeting. The committee made the following report which was unanimously adopted:

The Board of Directors of the Brunswick and Florida Railroad Company, having submitted to the stockholders for their approval, the resolutions voted by said Board in the city of New York, on the 18th of May last, and those resolutions having been laid before the meeting of Georgia conditional stockholders, it is Resolved,

1st. That it is presumable that the Board of Directors of the Brunswick and Florida Railroad Company have the best interests of the Company at heart, and would take no steps which would be adverse to its interests, and as we are not sufficiently advised to act definitely either in the approval or rejection of their propositions, we leave the responsibility of making all legitimate financial arrangements, where the power to do so is vested by the charter—in the Board of Directors.

2d. That in the event such bonds are issued as contemplated by the resolutions of the Board, that we believe that such of the Georgia stockholders as desire it are equitably entitled to the privilege of taking bonds upon the same terms as other purchasers, and paying in those bonds in discharge of their notes given for stock.

3d. That the very great importance of this road both to the Company and the country, becomes daily more and more apparent, and that in order to insure harmony among ourselves, and the ultimate success of the enterprise, immediate action is absolutely necessary.

On motion of Gen. Knight the meeting adjourned, subject to the call of the Chairman at Troupville, should further developments make another meeting necessary.

A proposition to send delegates to New York, to inquire into the condition of the Company was lost.

Against New Road Projects.

The West is still in need of a great many roads, and we do not pretend to say, and certainly it not our desire, that the progress of roads in new countries, or in directions not already within the reach of Railway facilities, will or should be checked; but we do not think this is the time for projecting or building parallel roads, even though they run on an "air line." This may do hereafter, when the roads already constructed or in course of construction are paid for; and when money may be obtained on Railways collaterals for less than 2 or 3 per cent. per month it should be borne in mind that the interest of the country at large need protection, as much as Railway projects need support and encouragement and it is very clear that the former are now suffering severely in consequence of the unreasonable extent to which the latter have been carried. The same cause is depressing the interest of companies, the immediate extension of whose roads is much to be desired. In a word, the imprudent action of overly anxious and impatient Railroad projectors has frustrated their own plans, while it has prostrated the entire railway interest of the country. For conclusive evidence on this point it is only necessary to refer to the current quotations of the entire list of Railway shares. The stock of the Little Miami Railroad is now at par, while a year ago it was

worth 125. Next to the Little Miami is the Cincinnati, Hamilton and Dayton, which is 95. This stock has sold as high as 115. —Cincinnati Gazette.

American Railroad Journal.

Saturday, July 8, 1854.

Agents for the Journal.

To prevent imposition we feel constrained to state that we have no regularly authorised agents in this Country. To persons in the commission agency business or book trade who remit us names of new subscribers with the price of subscription, we allow the usual commission and send the paper as desired, but we hold ourselves responsible for the acts or contracts of no man not connected with this office and regularly authorised by us to do business in our name.

Persons desiring the Journal should send their address directly to us by mail and may also remit their subscription to this office in bank notes current in their own State, unless they can conveniently procure funds of this State. All such remittances will be duly acknowledged by mail on their receipt. Persons receiving accounts of their indebtedness to this office, will oblige us by remitting as above, at their earliest convenience.

Stock and Money Market.

The prices of stocks in the New York market, with two or three exceptions, do not differ much from the quotations of the past week. A failure of a well known house in this city, and the over-issues of the stock of the New York and New Haven Company exposed thereby, operated unfavorably upon New York and New Haven, and Harlem; but with these exceptions, nearly the whole list has recovered somewhat from the lowest point of its recent depression. The low prices do not seem to attract buyers. The improvement noticed is consequently exceedingly slight and gradual.

While in New York prices seem to have touched bottom, the *tornado* which caused such a tumble here is sweeping over other parts of the country, the West particularly, where a fall of 10 or 15 per cent. has been sustained by the whole list upon the market. Every portion of the country sympathises with the condition of affairs in the commercial metropolis, and we have no reason to be surprised at the fall of Western securities, after what has taken place under our own eyes.

It is of course very important to consider how far the depreciated value of our stocks is due to accidental causes, and how far to real ones. Railroads in this country have been constructed upon the assumption that they offered a profitable investment for capital. Without going into a discussion of general subjects at the present time, it is certain that the recent fall has not been caused by any new developments controverting the assumption already referred to. The per centage of receipts of our roads upon the cost certainly equals the estimates when those market quotations were at the highest figure. There are much stronger reasons why Erie should sell at 97, as far as the earnings of the road are concerned, than existed at the time the stock commanded that price. Since that time the road has developed a strength which, it was believed by the great masses, not to possess. Its earnings have exceeded general ex-

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for 50.	Price of Shares.
Atlantic and St. Lawrence... Maine.	160	1,538,100	2,973,700	5,973,700	254,748	113,520	none	83
Androscoggin and Kennebec...	55	824,863	1,043,540	2,036,140	177,003	80,053	none	80
Kennebec and Portland.... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,555,500	123,884	1,459,384	208,669	...	6	95
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	...	...	328,782	163,075	5	49
Manchester and Lawrence....	24	717,543	...	...	...	...	6	88
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord....	47	...	...	1,400,000	...	...	none	...
Sullivan	26	...	...	673,500	...	...	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,616	...	...	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,589	none	9
Vermont Central.....	117	8,500,000	3,500,000	12,000,000	...	...	5	...
Vermont and Canada.....	47	1,500,000	...	1,500,000	Leased to the Vt. C.	...	cent.	82
Western Vermont.....	51	392,000	700,000	...	Recently opened.	...	none	...
Vermont Valley	24	...	...	...	...	...	none	...
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	87
Boston and Maine.....	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100
Boston and Providence.....	55	3,160,000	402,326	3,579,041	509,326	226,639	6	77
Boston and Worcester.....	69	4,500,000	590,541	4,850,754	887,219	413,289	7	96
Cape Cod branch.....	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River.....	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern	58	2,850,000	1,192,975	3,120,391	620,810	810,875	6	77
Fall River.....	42	1,050,000	6,208	1,050,000	294,183	126,589	8	90
Fitchburg	67	3,540,000	191,500	3,716,870	626,659	214,633	6	84
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony	45	1,964,070	295,038	2,293,534	374,897	122,866	none	97
Taunton Branch.....	11	250,000	...	307,136	159,738	21,490	8	...
Vermont and Massachusetts.. "	77	2,233,929	1,139,615	3,207,818	244,323	13,144	none	11
Worcester and Nashua.....	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	94
Stonington..... R. I.	50	...	467,700	...	240,572	110,892	...	68
Providence and Worcester...	40	1,457,500	300,000	1,791,999	291,417	120,892	6	97
Canal..... Conn.	45	922,500	500,000	1,400,000	...	...	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	639,529	294,269	10	116
Housatonic.....	110	...	...	2,500,000	329,041	168,902	none	...
Hartford, Prov. and Fishkill..	50	...	...	In progres	69,629	...	none	...
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	...	...	...
New York and New Haven...	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	83
Naugatuck	62	926,000	440,000	...	...	...	8	...
New London and New Haven.	55	750,500	650,000	1,380,610	Recently opened.	...	none	40
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	53
Buffalo and New York City... N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	...	none	...
Buffalo, Corning and N. York.	132	...	...	In progres	...	...	none	65
Buffalo and State Line.....	69	879,636	872,000	1,921,270	Recently opened.	...	...	130
Canandaigua and Niagara F..	50	...	...	In progres	...	...	...	...
Canandaigua and Elmira.....	47	425,509	532,400	987,627	76,760	39,360	none	...
Cayuga and Susquehanna.....	35	687,000	400,000	1,070,786	74,241	23,496	none	...
Erie, (New York and Erie)...	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	62
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	61
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	44
Long Island.....	95	1,875,148	516,246	2,446,891	205,068	44,070	none	28
New York Central.....	504	23,085,600	10,773,823	33,859,423	...	...	...	99
Ogdensburgh (Northern)....	118	1,579,969	2,969,760	5,133,834	480,137	195,847	...	14
Oswego and Syracuse.....	35	350,000	206,000	633,598	92,353	46,072	...	70
Plattsburg and Montreal....	23	174,042	131,000	349,775	Recently opened.	...	none	...
Rensselaer and Saratoga.....	25	610,000	25,000	774,495	213,078	96,737	...	...
Rutland and Washington....	60	850,000	400,000	1,250,000	Recently opened.	...	...	...
Saratoga and Washington....	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	Recently opened.	...	...	33
Troy and Boston.....	39	430,936	700,000	1,043,357	Recently opened.	...	none	...
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	...	4,327,492	1,388,335	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	...
New Jersey.....	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central.....	63	986,106	1,500,000	2,379,880	260,899	124,740	3	...
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	...
Erie and North East.....	20	600,000	...	750,000	Recently opened.	...	...	125
Harrisburgh and Lancaster...	36	880,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading....	95	6,666,332	10,427,800	17,141,987	2,480,626	1,251,987	7	77
Philad., Wilmington and Balt.	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	74

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton....."	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co....."	47	.....	.....	.....	.....	.....	.....	102 1/2
Baltimore and Ohio.....Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch....."	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna....."	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap....."	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh....."	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville....."	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg....."	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....."	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side....."	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central....."	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee....."	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac....."	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.....N.C.	161	1,338,878	1,134,698	2,965,574	610,088	163,898	6	.....
Charlotte and South Carolina.....S.C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia....."	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina....."	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester....."	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central.....Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia....."	211	4,000,000	1,214	.....	934,424	456,468	7 1/2	.....
Macon and Western....."	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee....."	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western....."	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River.....Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston....."	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio....."	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point....."	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern.....Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia.....Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga....."	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.....Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington....."	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort....."	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington....."	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.....Ohio.	100	1,979,100	1,142,200	3,279,908	432,632	267,278	10	70 1/2
Cleveland and Toledo....."	147	2,000,000	1,600,000	.....	.....	.....	.....	88
Cleveland and Erie....."	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus....."	135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Columbus, Piqua and Indiana....."	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie....."	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton....."	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102 1/2
Cincinnati and Marietta....."	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western....."	40	310,000	550,000	925,000	.....	.....	.....	75
Dayton and Michigan....."	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton....."	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami....."	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro....."	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami....."	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky....."	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie....."	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77 1/2
Ohio Central....."	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi....."	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania....."	187	1,750,700	2,450,000	.....	.....	.....	.....	.....
Ohio and Indiana....."	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley....."	44	750,000	300,000	.....	.....	.....	.....	.....
Columbus and Xenia....."	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois.....Ind.	31	.....	.....	In prog.	237,606	.....	.....	77 1/2
Indiana Central....."	.....	.....	.....	.....	.....	.....	.....	.....
Indiana Northern....."	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine....."	83	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Cincinnati....."	90	1,128,486	1,289,000	1,869,932	.....	.....	.....	76
Lafayette and Indianapolis....."	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru....."	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Terre Haute and Indianapolis....."	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.....Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi....."	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central....."	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago....."	92	.....	500,000	In prog.	473,548	286,152	.....	123
Michigan Southern and Ind. N. Mich....."	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	100
Michigan Central....."	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	94 1/2
Pacific.....Mo.	88	.....	non	In progress	.....	.....	.....	.....

pectation. Never, during the history of the road, could so large a dividend be figured as at the present time. It is known that for more than a year past important reforms have been effected in the working economy of the road. Now, without expressing any opinion as to the real value of Erie, we have no doubt it is worth more, and is believed to be worth more by the public, than at any previous period. There can be no doubt of this fact. Yet the stock is some 35 per cent. below its highest point a few years since, for no other reason than that the relative value of money has changed, and with it the public sentiment in reference to railroads. There is no reason why New York and New Haven stock, which recently sold at 115, should be selling at 70. We presume that no one doubts it must be a permanent 7 per cent. stock, as soon as the claims growing out of the Norwalk accident shall be liquidated. The amount paid on account of these should not have caused the fall of over 10 per cent. Notwithstanding the great amount of fictitious stock represented in the capital account, we have no doubt that this stock will touch par within a year. We might instance numerous other cases, to prove that the present depression in the market is owing to no change of opinion as to the productiveness of our railroads, but to other causes which are temporary in their character.

The fall in bonds has been very great, but of course much less than in stock. It has been quite sufficient, however, to show that this fall has nothing to do with the intrinsic value of these bonds, which is equally great as it ever has been, and that their depreciated value is due to accidental causes, which must soon cease to operate.

The semi-annual payments of interest on railroad bonds, which fall due in most cases the first of January and July, were promptly made, we believe, with the exception of Buffalo and New York City, and Maysville and Lexington, defaults which were anticipated for some time past. The failure of the latter Company does not affect the value of the country bonds issued to it, as the interest on these has been and will be promptly met.

The present stringency in the Money Market and the low price of Securities, will have the effect to stop all such schemes and cannot present the strongest claims to public favor. In the mean time such lines as have had any considerable amount expended upon them are rapidly approaching to completion, so that with any state of the market only a very small expenditure will remain unproductive.

Imports at the port of New York during the fiscal year ending June 30, 1854, as compared with previous years:

	1852-'3.	1853-'4.
Ent'd for consumption	\$135,438 663	\$147,929 245
Ent'd for warehousing	15,144 523	27,984 209
Entered free goods	13,357 173	12,781 055
Specie	1,430 106	2,937 048

Total..... \$165,370 465 \$191,631 557

Exports at the port of New York during the fiscal year ending June 30, 1854, as compared with the previous year,

	1852-'3.	1853-'4.
Domestic merchandise	\$43,993 250	\$66,483 750
Foreign dutiable	4,450 027	5,108 162
Foreign free	1,058 209	1,341 473
Specie	21,127 238	33,136 058

Total..... \$70,628 724 \$106,069 443

These figures show an increase of Imports for the fiscal year of \$26,261 092, and an increase of Exports of \$35,440 719. The Domestic produce shows a gain of \$22,500,000. The total value of Imports for fiscal year ending June 30, 1854, exclusive of specie was..... \$188,694 509
 Specie..... 2,937 048
 1853..... \$163,940 859
 Specie..... 1,430 106
 The increase in the Imports all accrued in the first six months of the fiscal year, from June 30, 1853, to Dec. 31, 1854.

DEPOSIT OF GOLD DUST AT PHILADELPHIA MINT.

	1853-'4.	1852-'3.
July.....	\$3,491 000	\$4,200 000
August.....	4,512 000	2,675 000
September.....	3,025 000	4,553 000
October.....	4,452 000	4,140 000
November.....	2,630 000	7,260 000
December.....	4,445 000	3,330 000
January.....	4,101 000	4,962 000
February.....	2,514 000	3,549 000
March.....	3,982 000	7,534 000
April.....	3,469 000	4,766 000
May.....	3,596 000	4,366 000
June.....	4,000 000*	6,689 000

Total, fiscal year.... \$45,317 000 \$58,024 000
 For'n Specie at N. Y. 2,937 000 1,430 000

*Official return not yet published.

EXPORT OF SPECIE FROM NEW YORK.

	1853-'4.	1852-'3.
July.....	\$3,901 000	\$2,971 000
August.....	1,184 000	2,936 000
September.....	1,244 000	2,122 000
October.....	4,753 000	2,452 000
November.....	3,886 000	810,000
December.....	3,132 000	1,200 000
January.....	1,846 000	748,000
February.....	580,000	1,121 000
March.....	1,466 000	592,000
April.....	3,475 000	767,000
May.....	3,651 000	2,162 000
June.....	5,168 000	3,246 000

Total fiscal year.... \$34,291 000 \$21,147 000

The receipts for the first six months of this year are \$21,735 000; the shipments for the same period amount to \$17,228 806, leaving a balance of \$4,506,000 in the country. In addition to this, large sums do not reach the Mint, but are assayed in California and shipped in bars direct from New York. Estimating this amount at \$5,000,000 would make the actual balance in the country nearly \$10,000,000.

The following dividends were paid in Boston on Massachusetts Railroads, July 1.

Stocks.	Capital	Div. July, '54.	Amount July, '54.
Berkshire	\$320,500	\$11	5,600
Boston and Lowell	1,830 000	3	54,900
Boston and Maine	4,155 700	4	166,228
Boston and Prov.	3,160 000	3	94,800
Bost. & Worcester	4,500 000	3½	157,500
Cape Cod (par \$60)	5,000 shares	3	15,000
Eastern	2,850 000	4	In Stock
East'n in N. Hamp.	492,500	4	In Stock
Fall River	1,050,000	4	42,000
Fitchburg	3,540,000	3	106,200
Lex & W Cam (pref)	122,000	3	3,600
Lex & W Cam (old)	120,000	2½	3,000
Man and Lawrence	800,000	3½	28,000
N Bedford & Taunton	500,000	3½	17,500
Pittsfield & N Adams	450,000	3	13,500
Providence & Wor.	1,500,000	4	60,000
Stoughton Branch	85,400	4	3,416
Taunton Branch	2,500,000	4	10,000
Western	5,150,000	3½	180,000
Wor. & Nashua	1,800,000	2½	40,500
Woburn Branch	30,000	3	900

\$1,002,894

There were also paid about an equal amount on various manufacturing Stocks.

Logansport and Northern Indiana Railroad Co.

We are in receipt of the report of the chief engineer of this work, from which we gather a few particulars.

This road is to run from Logansport, Ind., to the Ohio State line, in a north easterly direction, and will connect the City of Logansport with the portion of the Northern Indiana Road now in process of construction, ten miles east of Auburn, Ind., from which place both roads traverse the same line for a distance of four miles to the State line.

The affairs of the company are now under the management of the following officers:

DIRECTORS.—Philip Pollard, James W. Dunn, Stewart B. Kendrick, and Wm. L. Brown, of Logansport, Ind.; John H. Coustant, Wm. Thorn, Abram Shallenberger, Wm. M. Swayze, A. Y. Hooper, Wesley Park, and R. J. Dawson of Ind.; Hamilton B. Bradshaw of Brooklyn, N. Y.; and Henry E. Barrett of Troy, N. Y.

PHILIP POLLARD, *President.*

WESLEY PARK, *Vice President.*

WM. L. BROWN, *Sec. and Treasurer.*

L. S. NASH, *Chief Engineer.*

AZARIAH C. FLAGG, *Trustee.*

Mr. Nash, the engineer, in his report says that delays have been occasioned to the location of the line and the securing of the right of way for the road, by the non compliance on the part of Northern Indiana Railroad company with an arrangement which it had entered into with the L. and N. I. company to aid in the construction of the road of the latter. The consequence was a rupture between the two companies, and the Logansport and N. I. company are now looking towards Detroit as their ultimate eastern terminus, thus forming a link of the great through route from New York to St. Louis, via Detroit, Niagara Falls, and the Canada Railways.

The line in Indiana runs through Cass, Miami, Wabash, Whitley, and De Kalb counties, crossing the Eel River seven times, and passing through many populous villages, and one of the most fertile and best settled portions of the State. No grade exceeds thirty feet to the mile, and of the 91 miles distance, 82 2-3 miles are straight lines.

On the 29th of April, 1853, the whole work from Logansport, Ind., to the junction of the Northern Indiana road was contracted to H. B. Bradshaw, Henry B. Barrett, Alexander Rogers, Clinton B. Fisk, Matthew L. Kendrick, and others, at a gross sum of \$20,000 per mile, which, in consideration of advance of materials, labor, &c., was afterwards increased to about \$25,000 per mile, for construction and equipment. The graduation and bridging are to be completed before August, 1854. It is intended to have 20 miles east of Logansport, and 20 miles west of the junction with the Northern Indiana line in operation in time to take off the fall crops, from which ample business is expected. The cost of right of way and extensive depot grounds will not exceed \$22,500. The terms of the contract provide for a first class single track road, broad road bed, heavily ballasted, large ties of good timber, iron of best quality weighing 60lbs. to the yard, and rolling stock and depot buildings to the amount of \$250,000.

This road connects with the Logansport and Crawfordsville, and through it with the New Al-

bany and Salem and Evansville and Crawfordsville roads, which latter will connect with the Mississippi and Atlantic Railroad, making up a part of the great straight line from New York to St. Louis, said to be 79 miles shorter than any other contemplated route; the Logansport and Pacific R. R., Marion and Logansport, Cincinnati, Logansport and Chicago on the west, and on the east with the Northern Indiana and Southern Michigan, and the road contemplated to run north-easterly to Ypsilanti, Mich., where it connects with the Mich. Central, and through it with the Great Western Canada road. The distance by this line through Canada from Logansport to New York is stated by Mr. Nash as 39 miles shorter than via the south shore route of Lake Erie, and from St. Louis to New York as 79 miles shorter. A very favorable estimate of the prospective business of the road also accompanies the report, for which we have not room.

The finances of the company are thus represented in the report of the treasurer, Mr. Brown.

LIABILITIES.

Road and equipment as per contract.	\$2,300,000
Right of way.....	22,500
Engineering.....	45,000
Incidental and other expenses.....	67,500

Total..... \$2,435,000

AVAILABLE MEANS.

Stock subscriptions.....	1,205,978
1st mortgage and only issue of bonds, payable to contractors.....	1,250,000

Total..... \$2,455,000

The total issue of stock is limited by resolution of the Board of Directors to \$1,250,000. The total issue of stock up to 1st May last was \$145,000. The company have realised from the stockholders to the same date \$187,644. No securities have yet been offered to the public in the market.

Louisville and Nashville Railroad.

There has been, for some time past, a great deal of difficulty between the Directors and stockholders of this road, which at times threatened a serious result. Among other things, the city of Louisville refused to make any other issue of bonds in payment of her subscription of \$1,000,000. As these bonds were the only available means of the Company, the Directors threw up their places. For a while a crisis seemed imminent, but wiser counsels prevailed; the city Councils receded, "voted supplies," and thereupon the Directors recalled their resignations, and the work is now going on as usual.

The above is a very important work, and should and we cannot doubt will speedily be constructed. It is very desirable to know, notwithstanding, what the road is to cost. We never recollect to have seen any estimate for this. We regard detailed estimates of the cost of all proposed roads, as of the highest importance, as such estimate will not be lightly made, while at the same time they serve as excellent checks against future extravagance. Estimates merely general in their character afford no safe guide of the cost of a road, and are not to be relied upon, as they can be got over by an adroit engineer hardly without the sacrifice of his judgment or consistency. The Maysville and Lexington railroad is a notable case in point. This road was estimated to cost in round numbers \$1,400,000. The means provided

were stated to exceed this amount. The estimate was relied upon by the purchasers of the Company's securities as correct. It is found, however, that although the whole estimated cost has been expended, a further sum of \$800,000 is still required to complete the road. Without this further sum, the \$1,400,000 already expended is valueless. A great wrong, to use no harsher word, is the result. Had it been supposed that the road would cost \$2,200,000, its construction would not have been thought of. No one would have touched the Company's securities. For these reasons we want to know what the Louisville and Nashville railroad is to cost. We must have an estimate in such detail as to leave no room for mistake; otherwise we shall feel bound to warn the public against the project. We do not wish to see the Maysville and Lexington blunder repeated. Another such blunder would ruin the credit of Kentucky roads. What has happened has given them a severe blow. You must show your hands, gentlemen, if you wish to get money outside the State.

Virginia.—Covington and Ohio Railroad.

The Richmond *Enquirer* has a long article in opposition to the extending of the State aid to the above work. It argues that because the New York Central, Erie, Pennsylvania, and Baltimore and Ohio Railroads, have been constructed by private companies, the Covington and Ohio Railroad can be built in a similar manner. We do not presume to interfere. It is fair however, to state, that the premises assumed by the *Enquirer* are entirely incorrect, and that these properly stated, shew the efficient aid of the State to be indispensable to the success of the above project.

The New York Central, was constructed by private companies. The construction of the Erie Canal, a State work, however, had demonstrated the value of the route, otherwise the construction of the road would have been indefinitely delayed. The route occupied by this road is one of the most favorable in the country. The road when constructed, traversed a constant succession of villages, possessing abundant wealth and means for the work. The case was entirely different with all the other enterprises named. All their lines traversed exceedingly difficult regions, which were consequently sparsely populated, and which could render no aid in their construction. Important State or Municipal aid, was therefore secured to each, as conditions precedent to the commencement of the work of construction. The State gave to the Erie Railroad \$3,000,000, and individuals in New York city, about \$1,000,000; equal to \$4,000,000 in the whole, or one-half the original estimated cost of the road. The first blow would not have been struck either upon the Pennsylvania, nor Baltimore and Ohio Railroads, without the aid guaranteed by the cities of Philadelphia and Baltimore. Neither of these roads have been built without such aid, whether it was wisely or unwisely given is not the question. If neither the Erie, Pennsylvania, Baltimore and Ohio, and Northwestern Railroads, each favorite projects, with the four first cities of the Union, and each having the same general direction and objects with the Covington and Ohio, and each traversing routes affording vastly more local strength, could not be built, without important State or Municipal aid; we should like to know how the Covington and Ohio, which has no great

city to lean upon, no local strength, is to succeed, without aid from the State. It cannot. To argue against the giving of such aid, is to oppose the construction of the road. To be consistent, the *Examiner* should change its tactics. The very premises it assumes, correctly stated, disproves its conclusions. The State must build the Covington and Ohio Railroad, if it ever is to be constructed at all. Private enterprise cannot, will not. Whether the State should build it is quite another affair. But to say it can be built in any other manner, is to talk ignorantly or dishonestly.

Lexington and Danville Railroad.

We gather the following facts in reference to the progress of this road, from the recent report of the Chief Engineer of the Company:

It appears from the report, that 14 miles of the road north of the river and 1 mile south of it, are graded, including some heavy rock cuts and all the slope wall. The tunnel, 512 feet long, through solid rock, is completed. The masonry of the Jesamine creek bridge is completed; and the remainder of the material and workmanship contracted for, as also that for the bridging over Wall's branch. The engine sheds, passenger and freight houses, repair shops, &c., at Lexington are now being constructed. Cross ties and timber for 20 miles of road have been delivered; iron rails, chairs and spikes are on hand; two engines, built for this road, at the East, are finished, and the cars are under construction at Maysville. The Kentucky river bridge is advancing well. The towers on the north side are completed, and in the best manner; the towers on the south side are being built, and the Engineer seems to have no doubt of the completion of the bridge in good time.—Other work on the bridge, relating to the anchorage, is also finished, and a large part of the timber and iron delivered. The road is expected to be completed and in use from Lexington to Nicholasville, if not to the river, some time before the connection is made through. The efforts of the Company are more particularly directed to the work north of the Kentucky river. The length of the road has been reduced from 36 to 34 miles, differing but 1½ miles from a straight line. The Engineer's estimate of the cost of the road, equipped, is one million three hundred and fourteen thousand dollars.

Kentucky and Tennessee Railroads.

The latest intelligence we have received, indicate a settled determination on the part of Cincinnati to monopolize the benefits arising from railroad transportation to her own individual use and advantage. While we are bound to admire that enterprising spirit which is rapidly concentrating the whole wealth of the West into her control and keeping, we must at the same time, feel a degree of mortification at seeing the chief city of our own State comparatively indifferent to the consequences which must inevitably arise from the present state of proceeding.

If Cincinnati build a road to the Tennessee line, it will there be met by a continuation of numerous Southern roads, which will take all the immense agricultural and mineral productions of Tennessee and other States, directly to Cincinnati, all the time passing by Louisville. The former city has already roads running in almost every direction. One penetrates into the heart of Kentucky. And when it is in full running order, it must necessarily take an immense amount of trade from Louisville. That city knows this very well, or ought to be aware of the fact, but still she is not doing what she might to secure advantages to herself. In case that Cincinnati completes her Southern railroads, where is Louisville? It is bound to be a fine city at all times, but it will be dwarfed in the comparison with Cincinnati. But she must adopt that course of procedure which she conceives most conducive to her interests. We feel compelled to remark that we believe that anything ever

done, it must be without any great delay. A beginning should be made immediately, and the work should be prosecuted with the utmost vigor; in any other state of the case, the advantages, we anticipate, will accrue to others, and a rich and valuable section of the country will be cut off from participating in the general prosperity.

The above from a Southern Kentucky paper, has, we seen, attracted the attention of the Louisville Press, which is making vigorous efforts to incite the people of that city to action to ward off the threatened loss of their trade. These appeals would appear to have little effect, as the tendency of the road which Louisville is now building, will be to throw business into the hands of their rival, instead of attracting it themselves. The Gauge of the Cincinnati lines is wisely adapted to that of the region traversed, while that of the Louisville roads, 5 feet, differs from that of all connecting roads. Louisville is not only doing little, but this little will be lost for want of being well done, unless the public should interfere, and compel the Louisville and Nashville company to change the gauge of their road, as it unboundedly will, when that company comes before it to sell their securities.

Terre Haute and Alton Railroad.

We are gratified to report that the work of construction upon this end of the Terre Haute and Alton Railroad is progressing rapidly to completion. The construction train now makes regular trips a mile and-a-half beyond Bethalto, a distance of more than ten miles from town. The track-layers, comprising a force of seventy-five men, average about half a mile per day, and it is expected that the rails will be laid as far out as Bunker Hill by the Fourth of July. Should this be accomplished, it is understood that the Fourth will be duly celebrated by an excursion to that place, in which our citizens generally will participate.

We understand that the first freight over the road, comprising a lot of lumber and groceries, will be taken out upon the train this morning, consigned to Bethalto. It is an earnest of what will go out from town in that direction as soon as the road is finished. Large amounts of corn and other produce are already awaiting at different stations on the road for running stock, to be brought into market. We tell our dealers to prepare in time for the immense trade which will flow in upon them from that quarter.—*Alton Telegraph*.

Mobile and Girard Railroad.

We are pleased to hear that this vast enterprise is progressing rapidly; those who have heretofore expressed much doubt upon the timely completion of the project, are now its most sanguine supporters, and with the renewed exertions that are being made by the directors and its many advocates, we may expect the completion of the road within the coming three years. This, we understand, is the intention of the company; they intend, upon the final location of the road, to place the balance of the line, unprovided for, under contract to responsible contractors, who will give ample security for its completion within the specified time. The general course of the company is marked out, and, if pursued, success will crown their efforts.

The laying the first 22 1-2 miles to Colberts, has been let to Bailey & Co., railroad contractors of Ohio; their agent, Col. Pillsbury, has arrived with a force to commence operations on the 12th. The engineer intends that the cars shall be running to Colberts by the first of October. This can be accomplished, provided the iron lost by the "ship Sterling is replaced in season, (of which there is little doubt.) The company then intend to open the road that distance, and, upon a fixed day, extend a general invitation to the citizens of Columbus and its many friends, to join and participate in a jollification. Thus we perceive a fixed

determination upon the part of the company to put the work through. In twelve months from October, the cars will run to Union Spring, and at the same time some 40 miles out of Mobile. This we are assured is the intention of the officers. It therefore devolves upon every one to put his shoulder to the wheel, and expedite the completion of the remaining link that will unite the Atlantic with the Gulf.

Crawfordsville, Frankfort, Kokomo, and Fort Wayne Railroad.

About a year since we gave a short notice of this company since when we have not heard anything of it, until we received a copy of the First Annual Report of the President and Engineer, from which we learn that the work has been going on quietly yet effectively.

The Board met at Frankfort on the 8th inst., when the report was read, and the following Board and officers elected, viz:

A. M. Puett, Rockville; A. Thompson, Crawfordsville; S. Kenworthy, Darlington; John Majors, J. Douglas, R. Frazier, N. Bell, M. Burton, Clinton county; J. McClure, Grant county; J. D. Pulse, Huntington county; Hon. Sam'l Hanna and J. L. Williams, Fort Wayne; A. M. Puett was elected President; John W. Blake, of Frankfort, Vice President; Jackson Douglas, Secretary; Wm. P. Dunn, Treasurer.

The entire line was put under contract some six months since, to Messrs. Brown, Bagg, Jackson & Co., and a large amount of work has already been done upon the south-western end of the line, between Russiaville and Crawfordsville, where it will unite with the Evansville and Crawfordsville road, a large portion of which is now running. By the terms of the contract the entire line is to be completed in 1856, at \$23,000 per mile.

The means of the company, reported as available are—

Subscriptions,	\$490,000
Of which there is cash,	\$163,000
N. A. & Salem R. R. Co.	35,000
	\$198,000

Total length of the road is 51 miles, of which 40.52 are a straight line. The maximum grade is 40 feet per mile, and nearly one half of the entire distance is level.

This line has numerous and valuable connections and intersections with other lines throughout the Wabash Valley. It will also form a very direct line between Fort Wayne and St. Louis, by way of Terre Haute and the Atlantic and Mississippi, or Brough's Road.

The work upon the line is being pressed vigorously by the Executive Committee and will doubtless be completed within the contract time.—*Railroad Record.*

Ohio and Mississippi Railroad.

This road is now completed to the point of junction with the Jeffersonville road. So that a continuous line of railroad exists between Cincinnati and Louisville, barring the crossing of the river at the latter place. The distance between the two cities by the above route is 138 miles, and the time required for the passage about 6 hours—against 150 miles and 17 hours by the river. The above connection will bring the portions of both of the lines run over into profitable use. The value of the connection would be much greater, were both lines of the same gauge, so as to allow freights to pass from one to the other without transshipment. As it is, all this kind of business will keep on the river. We think before a month has elapsed, the above company will have paid such a penalty for their folly as to heartily repent it. We very much fear that they will go on repeating it till it is too late to back out, though it may be fatal to proceed. There are a class of men who are so much wiser than their generation that they ought to be placed where they can enact

their fooleries, without involving others in the consequences.

Illinois River Railroad.

The corps of Engineers of the Bureau Valley Railroad were here on Monday last, and started on a survey of the route from here to Jacksonville, by way of Havana, Bath, &c.

The object now is by those interested to bring the Bureau Valley road down on the opposite side of the river and cross at this point, and run to Jacksonville, on the route of the Illinois River road.

This project is now the most feasible one we have for getting a railroad through our place, and should it succeed (as we have no doubt it may if our citizens take a proper interest in it) it needs no argument to show that it would be one of immense interest to our city, and now that the Mississippi and Wabash Valley road, or the construction of it will be deferred for a time, we hope to see this taken hold of with vigor, and an effort made to have it put under contract as soon as possible, as a very strong influence can be brought to bear in favor of this, which was strongly opposed to the other.—*Tazewell Mirror.*

Dust in Railway Cars.

A correspondent of the Cincinnati *Gazette* thus describes this annoyance, which all travelers by railway have experienced:—He says the clouds of dust between Columbus and Cleveland reminded him of an "Ohio River fog," which forces the steamers to tie up and wait till the sun dispels the vapor. But in this case the excessive heat of the sun helps to aggravate the sufferings of the passenger, who finds the atmosphere, that "invisible and elastic fluid," heated to the boiling point, and thickened with dust till it assumes the consistency of *gruel*—and breathes it only because it is the best he can get, though the process is one fraught with the dangers of suffocation. Besides, the dust insinuates itself into every opening in the clothing, and covers him as with a garment—thus he is lined on the inside, as well as enveloped on the out.

Little Rock and Fort Smith Railroad.

Capt. Barney has completed the survey of the Little Rock and Fort Smith Branch Railroad, to its intersection with the survey of the Cairo and Fulton road in the valley of Cypress creek, somewhere near the Oakland Grove, about 20 or 25 miles north-east of Little Rock. This point is about half-way between the direct lines of Memphis and Helena to Little Rock, which will shorten the distance between either of the first named points and Fort Smith by 40 miles, a considerable item in railroad building and travelling.

Capt. Barney is now engaged in surveying a line direct from Little Rock to an intersection of his line at or near the gap through which he passed the Cadron mountain. We learn that the whole route from Fort Smith to the survey of the Cairo and Fulton road, is an excellent railroad route, and especially that part of the line from Point Remove which presents no difficulties whatever.—*Van Buren Int.*

Bellefontaine and Indianapolis.

The Indianapolis and Bellefontaine Railroad Company have declared a semi-annual dividend of 5 per cent., payable Aug. 1, leaving a surplus of more than 1 per cent. of the net earnings. On Thursday the annual election for Directors was held, which resulted in the choice of the following gentlemen:

John Brough, Stillman, Witt, James H. Godman, William A. Otis, Parker Handy, Robert Hilliard, David Kilgore, Samuel P. Anthony, Allen Makepeace, William Parks, Samuel V. B. Noef, Daniel Yande, Douglass Maguire, Alfred Harrison and Richard H. Winslow.

Mr. John Brough was elected President; Mr. James H. Godman, Vice-President, and Thomas H. Sharpe and Oscar F. Thompson, were continued as Treasurer and Secretary.

Public Revenue for 1854.

The *Courier and Enquirer* gives the following as an approximation to the total receipts of the United States for the fiscal year, ending June 30, 1854:

	1st quarter.	2d quarter.
From Customs.....	\$19,713,822	\$13,587,821
From Lands.....	1,489,562	2,223,076
Incidentals.....	147,994	101,963
Loans.....	1,650	350

Total.....\$21,357,028 \$15,913,211

	3d quarter.	4th qr. est.
From Customs.....	\$16,896,724	\$15,600,000
From Lands.....	2,012,908	2,000,000
Incidentals.....	486,091	400,000
Loans.....	300	.....

Total.....\$19,395,025 \$18,000,000

Total receipts for the fiscal year 1854, \$74,766,264
" " " " 1853, 61,000,000

Increase of rec's for the present year \$13,766,264
The balance in the Treasury last year on the 1st July was.....\$21,942,892
It may be estimated at the same date this year at.....32,000,000

Increase of means at the beginning of the fiscal year 1855.....\$10,057,108

The amount of public debt paid off will have been about \$20,000,000. The revenue collected has been, therefore, about \$30,000,000 more than the current wants of Government have required. Of this entire revenue, the existing tariff has produced \$68,000,000, and the public land \$7,000,000. The tariff might be reduced so as to yield only \$40,000,000, instead of \$68,000,000.

New Albany and Lake Michigan Railroad Completed.

It gives us pleasure to announce the completion of the greatest Railroad enterprise in which our people have yet engaged—the Railroad from New Albany on the Ohio, to Michigan City, on Lake Michigan. The last bar of iron was laid on last Saturday, and the first train of cars will pass the whole length of the road, filled with passengers, on next Tuesday.

The rapid and successful completion of such enterprises depend greatly upon those to whom they are entrusted by the stockholders. It was a fortunate day for this Company when prevailed on Mr. JAMES BROOKS, an active and energetic business man of New Albany, to accept the position of President. Although without experience, he entered on the discharge of his duties, and the result of his unceasing labors is now seen.

Great praise is also due S. B. WILSON, Esq., the Chief Engineer, who has had charge of that department since the organization of the Company to the present time.

The country through which the road passes is rich in all the elements of greatness and now that an outlet has been gained, we may look for their rapid development. Coal, iron and stone, in great quantities, are to be found on the line of this road.

The Company is now engaged in building a branch of their road from Gosport to this city, which will make the coal and iron accessible to us. The grading on this branch has been completed from Gosport to Mooresville, and a good deal of work has been done on the line between that point and this city. The right of way almost the entire extent has been secured, and we understand that GEORGE G. DUNN, Esq. is now engaged in securing the remainder. This whole country is much benefitted by the construction of these roads, as well as individuals through whose lands they pass that we need not urge those interested to give right of way on liberal terms. In most instances, we understand, it has been done on the most liberal and reasonable terms.

The iron has been purchased for this branch and it will, no doubt, be completed early next spring.

We understand that an arrangement has been made, by which the Indianapolis, Vincennes and Paducah road, is to join this branch in the construction and occupancy of the road, bed so as to cheapen it to each Company.

The excursion from the banks of the Ohio to the shores of Lake Michigan on next Tuesday 4th of July, a delightful ride, and hundreds of our citizens many of whom for the first time on a Railroad will enjoy it.—*Ind. State Journal*.

Brooklyn City Railroads.

True to the letter of his contract Mr. O'BRIEN, had these roads in readiness for the cars on the 29th June. They commenced running this week and are now in full operation so far as the present equipment of cars will admit. The fare is four cents and the length of line something over two and a half miles, making in all ten and a half miles of double track. This length of track has been laid in a trifle over two months through the superior energy and skill of Mr. W. J. O'BRIEN the contractor, who has had to contend with much bad weather and other obstructions, but has nevertheless succeeded.

The cars are something smaller than those on the New York avenues but will comfortably seat twenty five to thirty passengers each and are running crowded to overflowing.

The lines of the Brooklyn Railroad Company radiate from Fulton ferry to Greenwood, through Court st., Fulton Avenue to Bedford; Myrtle Avenue to East Brooklyn and Sand st., and Flushing Avenue to Bushwick, with the privilege of ultimately extending them farther into the suburbs of the City. The stock of this company under good management must prove a good investment.

New York and New Haven Railroad Company—Over-issue of stock.

The failure of the house of R. & G. L. SCHUYLER of this city, was known at the close of the last week, but the full scope of the financial management of the affairs of the firm by Mr. R. SCHUYLER, who was also President and Transfer Agent of the New York and New Haven Railroad Company, was not made known till after the 4th inst., when the announcement came upon the Share market like an electric shock. When men who, like Mr. R. Schuyler, possessing the full confidence of the financial public in their honesty, integrity and ability, are instantaneously disrobed of that confidence through their own acts, and covered with shame, the whole community is paralyzed, and all interests with which they are largely connected must suffer great depreciation till the full extent of the mischief is known. We deprecate this sad occurrence especially at this time, for its effect on Railroad interests generally, aside from its influence upon parties immediately interested. Mr. S. was largely and peculiarly identified with the great Railway interests of the country and the result must be detrimental, at least for the present, to those interests.

We shall venture no farther comment on this affair to-day. After the investigation, alluded to in the annexed card, we shall have something more to offer.

"NEW YORK AND NEW HAVEN RAILROAD COMPANY.—At a meeting of the Board of Directors of this Company held this morning, it has been made apparent on a hasty examination of the Stock Book which has been kept by the late President,

Robert Schuyler, as Transfer Agent, in New York, that by means of false entries, erasures, and other similar practices, an issue of illegal and fraudulent stock has been made within a few months past to the amount, as nearly as can now be ascertained, of nearly twenty thousand shares, or two millions of dollars.

A rigid examination will be immediately made by order of the Directors, of the books and papers; and the results, when accurately ascertained, will be made public.

"In the meantime the transfer books are closed, by order of the Board.

"By order of the Board of Directors,

"W. W. BOARDMAN, President, *pro tem*.

"New York, July 5, 1854.

Dividends and Interest on Bonds.

This is the season of the year when those who have their earnings invested in Stocks and Bonds are looking for semi-annual dividends, and the redemption of coupons. By the advertisement of Messrs WINSLOW & LANIER, it will be noticed that they are ready to pay all such demands upon the parties for whom they act as agents. From the length and character of the list, we should judge that large amounts would be added to the business circulation of our city from these sources.

Extension of the Orange and Alexandria Railroad to Lynchburgh.

With the lines now in progress or operation, a link of only about 60 miles from Gordonsville, on the Central (Virginia) Railroad to Lynchburgh, is wanting, to form a great interior line of Road from New York to the Gulf of Mexico, traversing Central and Western Virginia, and Eastern Tennessee.

The construction of this "link" is now attracting unusual attention in Virginia, and vigorous efforts are being made to raise to raise the necessary means. We notice that the Hon. Wm. C. Rives is devoting himself to this enterprise, and is canvassing such portions of the State as are most immediately interested. Among all the schemes proposed, there is hardly one in the country in which the public are more concerned, or which promises a better return upon its cost. We trust, and do not doubt, that immediate steps will be taken to commence its construction.

New Albany and Salem Railroad.

This important line of road, extending from the Ohio River at New Albany to Lake Michigan, a distance of 288 miles has been completed, and was formally opened to the public on the 4th instant. It is the longest road in Indiana, and is one of the longest lines in the west, under one company. The manner in which the work upon this road in the face of numerous obstacles has been achieved, reflects high credit upon the President of the Company, Jas. Brooks, Esq., who has from the first been its chief manager. The work will prove a valuable one to the State, and to the public, and will, we hope, be sufficiently remunerative to its Stockholders, most of whom are to be found upon its line.

La Crosse and Milwaukee Railroad

Iron enough for 36 miles of this road is now on hand, and the Company have commenced laying the track; hoping to have it ready for use as far as Horicon, 50 miles from this city, by fall. Their first locomotive, the Westward Ho, is to be put on the track in a few days, and its paces shove off on the Fourth of July. The construction of the depot in the second Ward is making rapid progress, and the grading up the valley of the Milwaukee for some distance is ready for the superstructure.—*Milwaukee Sentinel*.

New Locomotives.

A splendid new locomotive, says the *Kennebec Journal*, called the Portland, has been placed upon the Kennebec and Portland Railroad, and arrived in this city on Tuesday evening. It surpasses any thing of the kind we ever saw, for power, finish, and the many new improvements for convenience and safety. It was built at the works of the Portland Locomotive Company, weighs twenty tons, and cost \$8,100. The Portland is intended for the early passenger train to Portland.

The New York Express train, drawn by the new engine, Chedell, of the New York Central Railroad, ran from Syracuse to Rochester, a distance of eighty-one miles in *ninety-six minutes*, on Friday. This, says the *Albany Evening Journal*, is the fastest running on record, for so great a distance. The above locomotive was built at the Schenectady Locomotive Works, and is the first of a class of the following dimensions:—Inside connected cylinders 16 inches diameter—22 inches stroke; driving wheels 6 feet diameter. Her boiler has about one thousand feet of heating surface.

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE SOUTH AND WEST.



Trains will leave the Southern and Western Station, corner of Broad and Pine streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$15 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 00
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	8 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	10 00

An extra charge will be made for meals and state rooms on board the boats. L. S. SPAFFORD, General Su't

Engine Driver.

WANTED—A Situation by a Man of Great Experience in Engine Driving in England—Can produce first rate Testimonials—address, post paid, Box 1833, N.Y. Postoffice. 20tf

GROVE CAR WORKS, HARTFORD, CONN.

MANUFACTURERS OF

Railroad Coaches, City Cars, Freight, Coal, Gravel, and all other descriptions of Railroad Cars.

The above establishment has as great facilities, and turns out as large an amount of work, as any other factory in the Union. 27tf FALES & GRAY, Proprietors.

FOR SALE.

AN ALLIGATOR SQUEEZER, complete, entirely new, and in perfect order, to be put up at once.

It is of the most approved construction, with cam, cam shaft and pedestal, and with heavy driving gearing if required by the purchaser; and will be sold at a bargain.

For further particulars address

ROBERT BRIGGS, Jr.,

Supt. Rensselaer Iron Works, Troy, N. Y.

Also, for sale 7 Dimple Patent Fans, 2ft. X 9in. second hand. Apply as above.

Railroad Iron and Chairs.

The Lackawanna Iron and Coal Co., are now prepared with increased facilities to contract for Rails and Chairs at their works at Scranton, Penna. Address S. T. SCRANTON Pres't, at Scranton, or at the office of the Company in New York, 72 Beaver St. 26tf

DIVIDEND NOTICE.—THE SEMI-ANNUAL Interest, falling due in this city on the First Day of July, on the following named Securities, will be paid on and after that day at the office of the undersigned on presentation of the proper Coupons, viz.:

Bonds of the State of Indiana, for Banking purposes, issued in 1884, being the \$1,300,000 loan 5 per cent.

Bonds of the City of Pittsburgh, (Penn.), issued to the Ohio and Pennsylvania Railroad Company, 6 per cents.

Bonds of the City of Pittsburgh, (Penn.), issued to the Pittsburgh and Connellsville Railroad Company, 6 per cents.

Bonds of the City of Allegheny (Penn.), issued to the Ohio and Pennsylvania Railroad Company, 6 per cents.

Bonds of the City of Chillicothe, (Ohio), issued to the Marietta and Cincinnati Railroad Company, 7 per cents.

Bonds of the City of Marietta, (Ohio), issued to the Marietta and Cincinnati Railroad Company, 7 per cents.

Bonds of the City of Covington, (Kentucky), issued to the Covington and Lexington Railroad Co., 6 per cents.

Bonds of the City of New-Albany, (Indiana), issued to the New-Albany and Salem Railroad Company, 7 per cents.

Bonds of the City of Wheeling, (Va.), issued to the Marietta and Cincinnati Railroad Company, 6 per cents.

Bonds of the Town of Harmer, (Ohio), issued to the Marietta and Cincinnati Railroad Co., 7 per cents.

Bonds of the Franklin County (Ohio), issued to the Columbus and Xenia Railroad Company, 7 per cents.

Bonds of Franklin County, (Ohio), issued to the Cleveland, Columbus and Cincinnati Railroad Co., 7 per cents.

Bonds of Green County, (Ohio), issued to the Columbus and Xenia Railroad Company, 7 per cents.

Bonds of Stark County, (Ohio), issued to the Ohio and Pennsylvania Railroad Company, 6 per cents.

Bonds of Richland County, (Ohio), issued to the Ohio and Pennsylvania Railroad company, 6 per cents.

Bonds of the County of Allegheny, (Penn.), Special Loan of \$75,000, 6 per cents.

Bonds of Allegheny County, (Penn.), issued to the Pittsburgh and Connellsville Railroad company, 6 per cents.

Ross county (Ohio) Bonds, issued to Marietta and Cincinnati Railroad company, 7 per cents.

Athens county (Ohio) Bonds, issued to the Marietta and Cincinnati Railroad company, 7 per cents.

Washington county (Ohio) Bonds, issued to the Marietta and Cincinnati Railroad company, 7 per cents.

Bonds of Van Wert county, (Ohio), issued to the Ohio and Indiana Railroad company, 7 per cents.

Bonds of Allen county, (Ohio), issued to the Ohio and Indiana Railroad company, 7 per cents.

The Bonds of Allen county (Indiana), issued to the Ohio and Indiana Railroad company, 7 per cents.

Bonds of Crawford county, (Ohio), issued to the Ohio and Indiana Railroad company, 7 per cents.

Ohio and Pennsylvania Railroad Co.'s Mortgage Bonds, 7 per cents.

Bellefontaine and Indiana Railroad company's Real Estate Special Mortgage Bonds, 7 per cents.

Indianapolis and Bellefontaine Railroad company's Mortgage Bonds, 7 per cents.

Marietta and Cincinnati Railroad company's Mortgage Bonds, 7 per cents.

Dayton and Michigan Railroad company's mortgage bonds, 7 per cents.

Peru and Indianapolis Railroad company's mortgage bonds, 7 per cents.

Fort Wayne and Chicago Railroad company's mortgage bonds, 7 per cents.

Indiana Central Railroad company's Income Bonds, 10 per cents.

WINSLOW, LANIER & Co., No. 52, Wall-st.
New York, June 26, 1884.

To Contractors.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

CHAMPLAIN CANAL.

Proposals when and where received:—At the Canal Commissioner's Office in the City of Albany until the 6th day of July, 1884, at 10 o'clock A. M.

Description of the work.	Amount penalty in bond.	When to be completed.
2 Combined Locks.....	\$10,000..	Sept. 1. 1885.
1 Single Lock.....	6,000..	" "
1 Road Bridge, located at Fort Ann.....	500..	July 1, 1885.

ENLARGEMENT OF THE ERIE CANAL—EASTERN DIVISION.

Proposals when and where received:—At Engineer's Office in the City of Utica until the 8th day of July, 1884, at 10 o'clock A. M.

Section No. 13.....	\$1,000	April 1, 1885.
" 14.....	2,000	" " 1886.
" 15.....	6,000	" "
" 16.....	7,500	" "
" 17.....	4,000	" "
" 18.....	5,000	" "
" 19.....	1,500	" 1885.
" 125.....	7,000	" 1886.
" 126.....	6,000	" "
" 137.....	7,500	" "
" 128.....	6,000	" "
" 129.....	7,500	" "
" 130.....	7,000	" "
" 134.....	5,500	Sept. 1, 1885.

Waste Weirs on Sections 127 and 134..... 1,600 Sept. 1, 1885.

Bridge Abutments on Sections Nos. 15, 16 and 17.. 2,500 July 1, 1885.

Bridge Abutments on Sections Nos. 18 and 19..... 1,200 " "

Bridge Abutments on Sections Nos. 125, 126, 127, and 128..... 1,200 " "

Bridge Abutments on Sections Nos. 129, 130, 134 and at New London..... 1,400 " "

Culverts on Sections Nos. 16 and 17..... 700 " "

Culverts on Sections Nos. 126 to 128..... 2,600 " "

Culverts on Sections Nos. 129, 130 and 134..... 1,250 " "

BLACK RIVER CANAL.

Proposals when and where received:—At Engineer's Office at Lyon's Falls until the 12th day of July, 1884, at 10 o'clock A. M.

Section No. 30.....	\$2,000	July 1, 1885.
" 31.....	6,000	" "
Locks Nos. 99, 100 and 101..	4,000	" "
" 102.....	2,500	" "
" 103 104 and 105..	800	" "
" 106 and 107.....	500	" "
Bridges on Sections No. 31..	300	May 1, 1885

Raising Bridges across Black and Moose Rivers..... 300 Oct. 1, 1884.

ENLARGEMENT OF ERIE CANAL—MIDDLE DIVISION.

Proposals when and where received:—At the Engineer's office in the city of Syracuse, until the 15th day of July, at 10 o'clock, A. M.

Section No. 146.....	\$5,900	April 1, 1886.
" 147.....	5,400	" "
" 148.....	6,100	" "
" 149.....	4,600	" "
" 150.....	15,800	" "
" 151.....	9,600	" "

Aqueduct at Chittenango..... 4,400 " "

Seneca River and Section 202 connected 21,700 Nov. 1, 1855.

Culverts on Sec. 146, 147, 148 and 149..... 1,700 April 1, 1856.

Culverts on Sec. 150 and 151..... 2,200 " "

Culverts on Sec. 200 and 201..... 900 " 1855.

Bridge Abutments on Sections 146, 147 and 148.... 1,800 " 1856.

Bridge Abutments on 150 and 151..... 1,000 " "

Bridge Abutments on 201.. 900 " 1855.

ENLARGEMENT OF ERIE—WESTERN DIVISION.

Proposals when and where received:—At the Engineer's office in the city of Rochester, on Tuesday, the 18th day of July next, at 10 o'clock, A. M.

Section No. 212.....	\$3,500	April 1, 1886.
" 213.....	3,800	" "
" 214.....	5,100	" "
" 215.....	5,000	" "
" 216.....	3,700	" "
" 217.....	11,000	" "
" 218.....	14,000	" "
" 228.....	5,700	" "
" 229.....	5,300	" "

GENESEE VALLEY CANAL.

Proposals when and where received:—At the Engineer's office in the village of Cuba, on Thursday, the 20th day of July next, at 2 o'clock P. M.

Sections Nos. 82, 83 and 84.. \$2,500 Aug. 1, 1855.

" 91 and Feeder. 4,000 " "

" 95 and 96.... 3,200 " "

" 97..... 3,000 " "

" 98 and Feeder. 3,400 " "

Ischua Feeder..... 6,500 " "

Ischua Aqueduct..... 1,000 " "

Culvert on Section No. 65... 100 April 1, 1855.

Valve Gates..... 1,500 Aug. 1, 1855.

Lock Houses..... 700 " "

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus defined will be received or acted upon.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties. The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a con-

tract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, June 9, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT,
CORNELIUS GARDINIER,
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

To Railroad Companies and Contractors.

FOR SALE—Fifteen second hand Locomotive Engines of various sizes and descriptions and in good running order suitable for all kinds of work. For particulars apply to

CLARK & JESUP,
General Railroad Agents,
38 Exchange Place.

Also Railroad supplies of all kinds, 4125

Prosser's Patent Lap-Welded Iron Boiler Tubes.

Tubes screwed together, flush on both sides, for Artesian Wells, &c. Free-joint Tubes, for Core Bars, Ayring Frames, Railings, Leaders, &c.

Patent Wrought Iron Blacksmiths' WATER-TUBES, WATER-BOILERS, &c.

Agents for KRUPP'S celebrated CAST STEEL for SHAFTS, RAILWAY Axles, Tires, Platters' Rollers, &c.

P. S.—All Tools necessary for the construction or keeping in order of Tubular Boilers

2411 THOS. PROSSER & SON, 28 Plat street, N. Y.

SHANAHAN & LOEBER,
181 William-st,
(1st floor-Up Stairs.)
NEW-YORK.
MANUFACTURERS OF
THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
Chains, Levelling Rods, &c. 1y10

Sewall & Crehore
CIVIL ENGINEERS,
ST. PAUL, MINNESOTA.
JOSEPH S. SEWALL. CHAS. FRED. CREHORE.

N. York and N. Haven R. R. NOTICE OF SUMMER ARRANGEMENTS,

Commencing Monday, May 9, 1854.

TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A. M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A. M.—Commutation from New Haven.
9.10 A. M.—Special for Port Chester.	6.15 A. M.—Accommodation to New Haven.
11.30 A. M.—Accommodation for New Haven.	8.15 A. M.—Accommodation to New Haven.
3.00 P. M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	9.35 A. M.—Express from New Haven, Stopping at Bridgeport, Norwalk and Stamford.
4.00 P. M.—Accommodation for New Haven.	1.07 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
5.00 P. M.—Express for Boston, stopping at N. Haven.	4.00 P. M.—Special, from Port Chester.
5.35 P. M.—Commutation for N. Haven.	4.00 P. M.—Accommodation to New Haven.
6.30 P. M.—Special for Port Chester.	9.30 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Supt.
New Haven, May, 1854.

New York and Erie R. R.

PASSENGER TRAINS
leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.
Dunkirk Express, at 7 a. m. for Dunkirk.
MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations.
WAY EXPRESS, at 12½ p. m. for Dunkirk.
Rockland Passengers, at 3.30 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.
NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.
Emigrant at 6 p. m.
On Sundays only one Express Train—at 6 p. m.
These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, &c.

D. C. McCALLUM, General Supt.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment. Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,
European, American Employment Office,
287 Broadway, corner Reade-st.
3m*10 Under the Irving House, New York.
And 102 Greenwich st.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to
EDW. BECH & KUNHARDT, 62 Beaver St.,
Or, A. TOWAR, Agent Pokeepsie Iron Works,
231r Pokeepsie, N. Y.

Notice to Contractors.

PROPOSALS FOR THE ENTIRE CONSTRUCTION and equipment, or the graduation, bridging and masonry, separately, either in whole or in part, of the Mississippi and Tennessee Railroad, (extending from Memphis to Grenada, Mississippi, about 97 miles,) will be received at the office of the Company, in Memphis, till the 20th of July next. Proposals for the entire construction and equipment, and otherwise as favorable, will have preference. Profiles and estimates of the first 60 miles may be seen on application at the Engineer's Office in Memphis. Bidders must furnish satisfactory evidence of their ability to complete the work.

MINOR MERIWETHER,
Chief Engineer.

May 4th, 1854.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent yield from ores—specular red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

G. PARISH,
15,3m*

Ogdensburg, N. Y., April, 1853.

SEYMOUR, MORTON & CO. GENERAL R. R. AGENCY, Office, Metropolitan Bank Building. No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 80 years
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.
MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.
MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.
LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

MONTREAL & NEW YORK AND Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6.30 a.m. and 5 p.m., arrive at 8 a.m. and 7.30 p.m.

Leave Plattsburgh for Montreal 7.30 a.m. and 4 p.m., arrive at 10 a.m. and 6.50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate station.

Trains connect at Mooers Junction with Northern (Ogdensburg) Railroad for Ogdensburg and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequalled for comfort and dispatch, and attended with least fatigue and delay than any other. It possesses moreover the advantage of a short Ferrage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.
For particulars see Freight and Passenger Tariff.
BAGGAGE checked through.

H. W. NELSON, Superintendent.

Old Railroad Iron For Sale.

ABOUT 250 TONS, mostly whole bars, flat iron of superior quality. Deliverable at Portsmouth Va. as fast as it can be hauled. Immediate offers are invited, addressed to

L. O. B. BRANCH, President R. & G. R. R.
Releigh N. Carolina.
None but the accepted offer will be applied to,
81.22

DIVIDEND NOTICE.—The SEMI-ANNUAL INTEREST falling due in this city on the first day of May next, on the following named securities, will be paid on and after that date at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the City of Cleveland, (Ohio) issued to the Cleveland and Pittsburgh Railroad Company 7 per cents.

The Bonds of the City of Cleveland, (Ohio), issued to the Cleveland, Painesville and Ashtabula Railroad Company 7 per cents.

The Bonds of the City of Madison, (Indiana) 6 and 7 per cents.

The Bonds of the City of Pittsburg, (Penn.) issued to the Allegheny Valley Railroad Company (payable on the first Monday of May next,) 6 per cent.

The Madison and Indianapolis Railroad Company First Mortgage Bonds, 7 per cent.

The Sciota and Hocking Valley Railroad Company First Mortgage Bonds, 7 per cents.

The Indiana Central Railroad Company Mortgage Bonds, 7 per cents.

The Wilmington and Manchester Railroad Company Second Mortgage Bonds, seven per cents.

New York, April 29, 1854.

WINSLOW, LANIER & Co., No. 52 Wall-st.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Locomotive Engines for Sale.

TWO first class engines, adapted to a 5 foot gauge, 22 tons weight, 16 + 20 inch Cylinders, and 5½ and 6 feet drivers, built by one of the best makers in the country. New, and offered for sale because not required by those ordering them. Enquire at the office of American Railroad Journal, 9 Spruce-st., up stairs.

Dec. 24

Passenger Cars for Sale.

TWO first class Passenger Cars, built by one of the best car builders in the country, for the Baltimore and Ohio Railroad.

The above presents a rare opportunity to any Railroad Company wishing first class cars for immediate use.

They will be sold at a bargain for cash or good paper. Enquire at the office of Bridges & Brothers, 64 Courtland Street.

New York, Feb. 21st, 1854.

Lyon's Tables of Cubic Contents, Etc.

These valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1. gives correct mean heights of cross sections with either two or three cuttings taken. Table 2. finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages, in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise.—Price \$1.50.

21.1f

Notice to Bridge Builders.

Proposals will be received until Monday June 3 at the Engineers Office, Huntingdon Pa. for the superstructure of Bridges on Trestle Works, of the Huntingdon and Broad Top Railroad.—Plans and specifications will be exhibited at the office, or Contractors may present their own plans with their bids.

S. W. MIFFLIN, Chief Eng.
Huntingdon, May 6, 1854.

EXTENSION OF TIME.

THE period for receiving proposals for the Superstructure of Bridges and Trestle work on the Huntingdon and Broad Top Railroad, has been extended, by order of the Board of Directors, to Saturday evening, June 24th.

S. W. MIFFLIN Chief Eng.
Huntingdon, Pa., June 7, 1854.

To Locomotive Engine Builders and Engineers.

THE Proprietors offer for rent for a term of years, with immediate possession, the splendid property, known as the BELLEVILLE IRON WORKS, situated on the Mississippi, directly opposite the City of New Orleans, and within 300 feet of the River, with which it is connected by fine wharves and landings.

The buildings are of brick, with slated roofs, and were erected in 1848 at a very heavy expense; are of a most substantial and durable character and admirably fitted for a Foundry and Machine Shops, or almost any mechanical business. They now contain a new and powerful Engine and Boiler and sufficient machinery, say, planing machines—lathes—boring machines, blacksmith's tools, &c., &c., to employ 100 mechanics, and could be put in working order in a few days. The Buildings cover a lot 300 feet square and are amply large to receive the necessary machinery for the use of 800 to 1000 workmen.

The terminus and depot of the New Orleans, Opelousas and Great Western Railroad is situated about 800 yards from the above property, which could be availed of to great advantage for the manufacture of Locomotives and Railroad work, generally as well as Steam Engines, Sugar Mills, and other descriptions of Machinery.

There are no Shops in New Orleans for the manufacture of Railroad Machinery, and as the Railroad Companies now organized in that city contemplate the construction of over 1000 miles of road,—a large part of which is already under contract,—the property now offered for lease offers a most eligible opportunity for parties desiring to contract to furnish the Engines and Machinery,—for those roads. Responsible contractors with their works on the spot would have an advantage over Northern Workshops in contracting for the Work of the Railroads terminating in New Orleans.

The Establishment and prospect of remunerating work to be secured immediately are worthy the attention of manufacturers and Engineers generally.

Applications from responsible parties will be promptly attended to, and to satisfactory parties the proprietors of the Works can offer favorable terms and arrangements.

Letters may be addressed to

R. B. SUMNER,
No. 61 Camp Street,
New Orleans;

and further information may be had by applying to Messrs. BARSTOW & POPE, Pine Street, New York.

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N.Y. 19f

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of
Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York,

19.1f

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality by THOMAS HUNT,

19.10*

No. 53 Fulton Street,
New York.

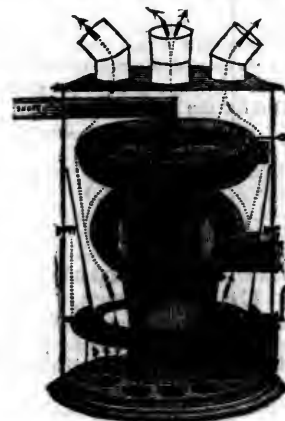
N. A. Boynton's VENTILATING HEATER.

PATENTED, 1853.



BRICK.

FOUR SIZES FOR BRICK WORK.
FIVE SIZES PORTABLE.



PORTABLE.

An entirely new Article, possessing advantages worthy the attention of those in want of a Powerful and Economical Heater.

SIMPLE in construction, compact in form, and easily managed and cleaned.

Is entirely of CAST IRON; has but two joints, and those so arranged, as to prevent the escape of Gases and Smoke.

The FIRE POT is lined, the RADIATING SURFACE located above the fire, and equally exposed on all sides to the action of the cold air.

Can be set in LOW CELLARS, and, by the attachment of a SELF-CLEARING RADIATOR is especially fitted for the use of Bituminous Coal.

Of the above pattern we have four sizes, to be enclosed in brick-work, and five sizes of portables, adapted to all classes of buildings, and can be furnished at a less price than any other heaters of equal capacity in present use.

Manufactured and for Sale, Wholesale and Retail, By CHILSON, RICHARDSON & CO.,

374 Broadway, New York, Also 101 and 103 Blackstone-St. Boston.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to
September, 1850.

THOS. CHAMBERS,
President.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 28]

SATURDAY, JULY 15, 1854.

[WHOLE No. 952, Vol. XXVII.]

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

Over-issue of New York and New Haven Stocks.....	433
Sault Ste. Marrie Canal.....	434
Railway Abcidents in the United Kingdom.....	435
Production of the Precious Metals.....	437
Journal of Railroad Law.....	437
New Haven Railroad Fraud in Coun.....	438
Louisville and Nashville Railroad.....	438
Car Ventilation.....	439
Terre Haute and Alton Railroad.....	439
Lexington and Big Sandy Railroad.....	439
Canandaigua and Niagara Falls Railroad.....	439
Staubenville Railroad.....	439
Stock and Money Market.....	440
Liability of the New Haven Railroad for Fraudulent Stock.....	441
Physical Geography of the State of New York.....	442
Grand Rapids and Northern Indiana Railroad.....	445
New Orleans and Ohio Railroad.....	445
Peoria and Oquawka Railroad.....	445
Buffalo and State Line Railroad.....	445

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, July 15, 1854.

The Over-issue of New Haven Stock—Railroad Management.

The Schuyler fraud continues to be the great topic of conversation throughout the city. The disasters necessarily consequent upon it, the numerous complications which it involves, the loss suffered by the company which is the victim of his frauds, the distrust created in railway investments, the reputation enjoyed by Mr. Schuyler, both as a man of more than ordinary ability and of large means, the confidence placed in his integrity, and his mature age, which probably exceeds sixty years, all conspire to render his offence one of the most remarkable in the annals of crime, and to make a profound impression upon the public mind. Speculation is still busy in conjecturing the seductions that led to the first fatal step, the necessity (not yet apparent,) for the use of so large a sum of money as he must have wrongfully received, the means by which he kept his frauds so concealed, the long consequences

which are yet to follow from his frauds, and his present whereabouts.

Certain it is that the virtue of no man can be affirmed to be superior to temptation till it is put to the test. Mr. Schuyler had reached the age of sixty enjoying the reputation, as the world goes, of being a straightforward, upright, business man. Up to the day of his failure he had been considered as eminently successful. We had, however, always regarded his success as purchased at the expense of other parties. His reputation for possessing business qualities of a high order, the influential circle in which he moved, and the unlimited confidence which he enjoyed, gave him a paramount voice in the management of numerous schemes.— Yet a blight always seemed to rest upon everything he touched, which lead us to suppose that he used all such schemes to promote his private advantage. He has been the ruling spirit in the New York and New Haven, Illinois Central, Harlem, Saratoga and Whitehall, Vermont Valley and other roads; all apparently good projects in themselves, but rendered comparatively worthless by their excessive cost. We have consequently, when we have been appealed to, as has frequently been the case, given his connection with any scheme as a sufficient reason why no one should buy into it as an investment. From what we had seen, we took it for granted that he would rob any project of which he had control of whatever vitality it possessed. In publishing the late report of the New Haven company in the Journal of the 1st instant, we stated that "it has had its life-blood squeezed of it in the same manner as have the Erie and the Central." We consequently supposed him to be rich, though at the sacrifice of those sentiments which regard all public improvements in the light of benefactions, and labors for their construction for the good they accomplish. We did not regard him as most did, as a model man in his particular line, but as an instance where success blinded the public mind as to the means by which it was reached.

But it is useless to dwell upon considerations like these. The wrong done is past correction.— It only now remains to derive the greatest practical use from its commission.

So long as men can be corrupted, striking examples of human frailty are necessary to put us upon

our guard. There are now more than 300 railroads in the United States completed or in progress, having a length of line of over 25,000 miles, and involving an expenditure of \$600,000,000.— The construction of railroads is comparatively a new business, and the universal diffusion of these works must place them under the management of parties who, however honest they may be, are comparatively destitute of experience. Without some striking illustration, showing the necessity for the adoption of every precaution against fraud or mistake, the opportunities for such might be left open in almost every company, which in time might have produced in a large number of cases, catastrophies which are now confined to one. There is no company in the United States which embraces so large a proportion of shrewd, selfish, and skilful business men as the above, among whom may be named a number whose avarice carries them to the very verge of the line which separates honest from dishonest dealing. Under the eyes of such men, possessing a very large interest in the road, has this stupendous fraud been committed. If such a thing has been done in high places, what may be done in low. If the shrewdest directors in New York have been deceived, what might not have been done in more credulous communities, where an equally adroit villain would enjoy still greater immunity for fraud? A thunderbolt, therefore, that awakens the whole country to a sense of danger, which discovers an abyss into which any company may be liable to be precipitated, cannot be without a most salutary influence. In this view of the case the New Haven fraud, even as much as it is calculated to create distrust and embarrass the operations of railroad companies, may have its compensations, and save us more in the end than its present cost.

It is not to be denied that the tone of railroad management in New York city has been very low. This is one and the principal reason why we have never spoken in terms of higher commendation of railroads terminating here. Certainly the profits of the roads running into New York, which is the commercial emporium of the country, ought to increase in proportion to the increased volume of business and travel, as they approach that emporium. The New Haven road is the sole trunk to

this city for three thousand miles of railway in New England, and in addition to a local business adequate to support a first class road, has a larger *through* business probably, than any road in the country, if we except the lines between New York and Philadelphia. The Hudson river is the main stem for an extensive system of roads radiating from Albany, among which is the Great New York Central, one of the most profitable works of the kind in the country. The Erie forms the most direct route with the West, and has a traffic commensurate with the assumed importance of its line. Yet the value of all three of these roads has been seriously reduced by incompetent or corrupt management. The New Haven tells its own tale. It has been an instrument of fraud from its inception. The late president of the road, Mr. Schuyler, was one of the contractors for construction, though president of the company at the time, and was believed to have made a very large sum by the operation. The line of the road is a favorable one. By an arrangement with the Harlem company, the New Haven was saved the heavy expense which an independent line into the city would have rendered necessary. Yet with all these favorable circumstances the road, previous to the Schuyler fraud, had cost \$5,150,000 or, \$80,000 per mile, or nearly double the sum the road might have been built for. The balance has gone into commission, profits, &c. From the commencement the management of the road has been one of unscrupulous public robbery, shielded from public reprobation, because believed to be successful. No one of the directors but Mr. Schuyler appears to have interfered in the slightest degree in the direction of the company's affairs.—They were all intent upon schemes of their own, leaving to him the New Haven, an undisputed field in which to carry on his financiering forays. They have been either criminally neglectful of their trust, or are grossly incompetent for the places they fill. What custodians have they been of a great public trust! They very likely consented to serve *only* on condition that their places should be *sinecures* as far as any *labor* or *care* was concerned. Theirs are names in which the public have been accustomed to put confidence, and were selected as a means of inspiring a similar confidence in the road. Under the shadow of this confidence, which disarmed suspicion and quieted all investigation, the president of the road had full scope for his villainy. Had they entertained any proper sense of their own responsibility, or any fitness for their places, they would never have placed him in a position where he could perpetrate his frauds with impunity; a position in which, by the single dash of his pen, he could transfer millions from the company or public into his own pocket.

The Harlem has suffered in the same manner as the New Haven, by exorbitant contracts for construction, in which managers of the road were interested, and by similar over issues of stock. Economically constructed, it would have been one of the most profitable roads in the country. Whatever strength it possessed Schuyler and his clique robbed it long ago. He had the same swing in this that he had in the New Haven, and the only use the other directors served was to make up the number required by the charter. The Erie road has been victimised to the tune of \$10,000,000 by incom-

petent or corrupt management. We have, however, the gratification of expressing our belief that a great improvement has been effected in the management of this company within a year past.—A speculating, and we believe an unscrupulous treasurer, and a superintendent in whom the *rowdy* shone more conspicuously than any useful quality, have given place to better men. No one believes that the former treasurer had any higher object in view than to fill his own pockets, and events that have recently transpired render it probable that the company were, on many accounts, very fortunate in getting rid of him when they did. We can claim a little merit in being instrumental in the wholesome reforms that have been effected. No one now, not even the warmest friend of the company, questions the propriety or expediency of our strictures upon its management, however harsh they may have appeared at the time. Had our intimations or reference to the Harlem and New Haven railroads been similarly heeded, a great good might have been the result. Had the attention of the stockholders, as in the case of the Erie, been directed towards their management, the recent fraud never could have been committed.

While the Hudson River railroad has suffered less from *corrupt* management than any other, and while, with some few exceptions, the directors have acted with a single eye to the best interests of the company, yet it has suffered hardly less than any from unwise and incompetent management. From the commencement of this enterprise there has been a continual *row* in the internal administration of its affairs. Through the influence of one man, presidents, engineers, superintendents and other important officers have appeared and disappeared with all the rapidity and regularity of the actors in a drama. Men who acquired an honorable reputation upon *other* works have been sacrificed on this to mere caprice or whim, or because they became obnoxious to "a power behind the throne." It is no use to tell us that the constant changes that have been going on in this road have been either necessary or proper, or that the company have not suffered seriously in consequence. We freely admit the merits of this work. We believe in its ultimate success. We do not reproach the general good faith of its managers, but like all other *New York* projects, *bad* management has been the great drawback to its success.

In no part of the country are found a class of men who take better care of their own affairs than New Yorkers; while there are none so indifferent to what does not immediately concern them. Just consider how the city is plundered without a hand being lifted to arrest abuses which are as palpable as the noon-day sun. The New York merchant is generally a successful one. He is always too much oppressed with his own business to have any energy, disposition or time left to attend to outside matters. Believing New York to be the point to which *all* the trade of the country must flow, he is entirely insensible to those appeals to his public spirit, which consists in an immediate sacrifice for a greater ultimate good, which secures contributions of time and money, of gratuitous and patient labor for a *common* advantage.—Make an appeal to the public spirit of a New Yorker and he will tell you that he shall get without effort, all that you propose, with. Public spi-

rit is an unknown commodity. The value of a reputation for skill or integrity is what it will sell for. A man's position, reputation, influence, are all regular articles of merchandise. There are exceptions, we admit; but the rule is as we have stated. It is notorious that for three years past the city government has been regularly up for sale to the highest bidder. Just look at the myriads of *bogus* Companies; Cumberland, Parker Vein, Llangollen, Phoenix; Coal, Copper, Zinc, Gold, Silver and Lead Companies, all hatched up in this city, for the purpose of putting their worthless securities upon the public. The getting up of such Companies, and dealing in their securities, is one of the favorite modes in which our citizens exercise their propensity for gambling, who have too great a regard for their reputations to be seen at a *faro* table, or *bowling* saloon. The standard of morality is not too high to allow the most fastidious to play for stakes, the amount of which are measured by the extent to which the public can be imposed upon. All such speculations are disgraceful alike to the reputation of the city, to the parties engaged, and demoralizing in the highest degree to the general tone of management of *fiduciary* trusts.

All such abuses must be corrected. The tone of management must be raised. Directors must be appointed, *not* for credit attached to their names, or for the purpose of giving currency to a project, but for the qualifications they possess, and the service they will perform. If a proper discharge of the duties of a director will take *time*, let this time be well paid for. Every director in a Company must be made to feel a sense of his responsibility, which is the only way in which a proper degree of accountability can be secured. The Schuyler fraud has disclosed to us our weak spots. If it should produce that degree of reform as to correct existing abuses and deficiencies in Railroad management, it will amply compensate us for all it has cost.

Sault Ste. Marie Canal.

We are glad to learn that the Company engaged in the construction of this work, are still of the opinion that they shall be able to finish the Canal within the time specified in the contract. It should be done, if within the bounds of possibility; for its importance in opening the only barrier to direct access to the mining region, is almost inconceivable. The large amount which will be saved in shipments both ways, says the *Lake Superior Journal*, and the time which is now consumed in re-shipments at this place would *foot up* to the astonishment of every one. Let any one set himself down and figure up the probable difference and he will be convinced.

Every effort is now being made on the part of the Government, as we are informed, to remove every obstruction to the navigation, whereby our largest class of vessels will be enabled to make the entire trip from the head of Lake Superior to Buffalo; and even, if they choose, to the Atlantic Ocean—from thence to any point on the habitable globe accessible by water.

The iron interest is suffering, more than any other, for the want of more direct communication with a market. Thus far the energies of those interested in this important branch of mining business have been checked and almost paralyzed. The time, however, is now at hand when they can see out of the woods.

We look forward with the expectation of seeing a continuous line of vessels, within almost hailing distance of each other, from the head of Lake Superior to the foot of Lake Erie, as soon as the Canal shall be finished.

Railway Accidents.

Report to the Lords of the Committee of Privy Council for Trade, classifying the causes of the principal accidents which have occurred on Railways of the United Kingdom, during the year 1853.

RAILWAY DEPARTMENT, Board of Trade, WHITEHALL, February 28, 1854.

In analysing the reports which the inspecting officers of this department have made upon the accidents which have occurred on railways during the year 1853, I have endeavored to classify the causes which have led to the several accidents in such a manner as to point out what are the influences which the system of management and the discipline on railways have had in causing them.

The total number of persons who have been reported to your lordships as having met their death on railways during the year 1853 is 305, and the total number of injured is 449; and of these the total number of passengers who have suffered from

accidents would appear to be 64 killed, and 300 injured; and of this number 36 have been killed, and 280 injured from causes beyond their own control. The returns of accidents for the half years ending 30th June and 31st December, 1853, respectively, which have been already laid before your lordships, exhibit a detailed account of these accidents. From these reports it would appear that the total number of accidents to trains and engines which have been reported by Railway Companies as having occurred during the year 1853, is 103. Of these 76 have been more especially brought before the notice of your lordships by the reports* of the inspecting officers, or by the correspondence which has taken place upon them. These accidents may be generally classed as

I. Accidents appertaining to the rolling stock and road.

II. Accidents appertaining to the management of railways.

Causes arising from the Rolling Stock on the Road

Under the head of accidents appertaining to the rolling stock and road of railways may be classed the following—

1st. Accidents from engines or carriages leaving the rails.

2nd. Accidents from trains running through facing points into sidings.

3rd. Accidents from persons in trains being struck against works adjacent to the line.

4th. Boiler explosions.

Under the head of accidents appertaining to the management are classed—

1st. Collisions on double lines of railway.

2nd. Collisions between trains at junctions.

3rd. Collisions on single lines between trains meeting in opposite directions.

4th. Miscellaneous.

The accompanying table will show generally the main causes from which these accidents have arisen.

Causes attributable to the Management.

	Neglect of		Defective construction of		Insufficient supply of means for securing safety.		Defective Discipline.									
	Number of accidents.	Purely accidental.	Rolling stock.	Road.	Rolling stock.	Road.	Deficiency of engine power.	Deficiency of breaks.	Want of communication between guard and engine driver.	Want of adequate signals.	Want of time-pieces.	Accidental.	Defect or inadequately enforced system.	Insufficient or inadequately enforced regulations.	Defective system for securing intervals between trains.	Negligence of inferior servants.
1st.—Accidents appertaining to Rolling Stock, or to the Road.....																
Accidents from engines or carriages leaving the rails..	24	10	3	5	5	6	..	2	2	..	2	..	1	4	1	3
Accidents from trains running through facing points..	2	..	..	..	..	1	..	..	..	..	..	..	..	1	..	2
Accidents from persons in trains being struck against works adjacent to the line.....	4	..	..	1	3	..	..	..	..	..	..	..	..	1	..	..
Boiler explosions.....	3	..	2	..	..	..	..	..	..	..	..	..	..	..	..	1
Total of this class.....	33	10	5	6	8	7	..	2	2	..	2	..	1	6	1	6
2ndly.—Accidents appertaining to the Management of Railways.....																
Collisions on double lines of railway from trains following each other.....	30	2	..	..	..	..	3	2	1	10	6	2	12	24	14	19
Collisions at junctions.....	2	..	..	..	..	..	..	1	..	2	1	..	..	1	..	..
Collisions on single lines between trains meeting in opposite directions.....	8	2	..	..	..	..	..	3	1	1	..	..	1	8	..	2
Miscellaneous.....	3	..	1	..	..	2	..	1	..	..	..	..	..	3	..	1
Total of this class.....	43	4	1	..	..	2	3	7	2	13	7	2	13	36	14	22
Total of both classes.....	76	14	6	6	8	9	3	9	4	13	9	2	14	42	15	28

But inasmuch as several of these accidents are classified under more than one head, it is desirable to analyse them further as follows, viz.: Accidents appertaining to the rolling stock and road.

1. *Accidents from Engines or Carriages leaving the rails.*

There are twenty-four cases of accidents to trains where the engines or carriages broke down or left the rails. These may be further divided into—

1. *Accidents beyond the Control of the Management.*—Three accidents may be placed in this division, which were occasioned solely by the neglect of the platelayers who were employed in the repairs of the line. In nine instances the accidents arose from the fracture of machinery, viz. tyres of wheels, axles, or springs, in consequence of internal defects in the material, which could not be detected by external scrutiny. In one instance the cause of the accident could not be ascertained; some of its resulting consequences, however, might have been lessened, had a communication existed between the guard and engine driver.

(1.) *Accidents which might have been guarded against.*—In five instances the accidents were caused by the bad condition of the road; but in one of these instances, the worn condition of parts of the carriage would appear to have had some influence in causing the accident, and in another, the effect

produced by the defective condition of the road appears to have been much increased by its mode of construction. In one instance the accident appears to have arisen from a considerable internal defect of the material, but which might apparently have been traced on the surface by careful examination. In three instances the accidents would appear to have arisen from the construction of the engine and road, or from the neglected condition of parts of the line. And in two cases, the peculiar construction of the engine, carriage and road, combined with the defective regulations of the Company, appear to have caused the accidents. It would appear, that of these twenty-four accidents, thirteen, or little more than half, may be classed as out of the control of the management of the Company, of which three were due to neglect of inferior servants, and nine to fracture of machinery from internal defects; and the cause of one has not been ascertained. The remaining eleven accidents might have been prevented by proper management.

2. *Accidents from Trains running through Facing Points into Sidings.*

Two accidents have occurred from facing points

* In some instances these reports contain more than one case of accident; and in two cases of accident the causes have been obtained from the reports of the companies.

having been wrongly set, which have caused collisions by admitting trains into sidings. The immediate cause of both accidents was the negligence of inferior servants; but in one case the use of facing points at the place highly improper, and in the other, the regulations of the Company were not sufficient for ensuring safety.

3. *Accidents from Persons in trains being struck against Works adjacent to the line.*

There are four cases of accidents, from passengers having been struck against bridges or works adjacent to the line; of these, two were due to the use of improperly constructed carriages; one to the improper use of cattle trucks for conveying passengers; and one to the defective construction of a tunnel.

Accidents from Boiler Explosions.

Three cases of boiler explosion have been reported upon. In one, the accident was due to the negligence of an inferior servant. In another case the boiler was much worn; and in the other case the arrangements of the Company would appear to have had a bearing upon the accident. It would therefore appear, that of the thirty-three accidents considered as appertaining to the rolling stock and road, only fourteen can be assumed to have been due to causes over which the management of the

Companies had no control, whilst the remaining nineteen accidents are all more or less traceable to want of care on the part of the superior officers of the Companies, and in some cases to undue economy.

ACCIDENTS APPERTAINING TO THE MANAGEMENT OF RAILWAYS.

1.—*Collisions between Trains on Double Lines of Railway.*

Thirty accidents are contained in this class, of which six appear to have been occasioned by trains shunting at sidings or at stations. In only two cases were the trains which were run into delayed by purely accidental causes, and in one of these cases the accident was partly due to the negligence of the guard, and partly to unpunctuality caused by an improper system of working. In the other case, which was the one on the Great Southern and Western railway at Straffan, a want of break power, an inadequate supply of signals, inefficient regulations, and a defective system for securing a proper interval between trains, were combined with negligence in the inferior servants, to produce the accident. In one case the accident was partly due to the unpunctuality, over which the management of the Company had no control, but it was also occasioned by the system of working the line not being sufficient for securing a proper interval between trains. Of the remaining twenty-seven cases, the negligence of inferior servants of the Company appears to have partially contributed to cause seventeen accidents, but the other causes which combined with negligence were as follows, viz.:—Sixteen of the accidents were attributable to insufficient or inadequately enforced regulations. In six cases the system for securing proper intervals between trains is stated to have been defective; in seven cases the accidents were attributable to unpunctuality caused by an inefficient system; in one case, deficiency of engine power and of breaks; in five other cases, the insufficiency of signals; in another, the want of time-pieces; and in another, the want of communication between the guard and the engine driver, contributed to cause the accidents. Of the remaining ten cases, three were due to the insufficiency of the regulations of the Company, combined in one case with want of time-pieces among the Company's servants, in another with the want of adequate signals, and in the third case both signals and time-pieces were deficient. In six instances, the accidents were due to the want of a proper system for securing intervals between trains. In five of these, the accidents were also attributable to the insufficiency of the regulations; and in three, the accidents were partly attributable to unpunctuality, not beyond the control of the management. In two instances the want of time-pieces, and in another the want of adequate signals contributed to cause the accidents. One accident was due to unpunctuality, caused by a defective system of working, combined with the inadequacy of the signals. It would thus appear that twenty-seven accidents out of these thirty might have been prevented by the exercise of a proper degree of care on the part of the managers of the Companies; and in the other three cases the serious consequences of the accidents would probably have been averted, had the Companies' regulations and systems of working been well framed, and had proper discipline been maintained.

2.—*Collisions between Trains at Junctions.*

Under this head, two accidents have been reported upon during the year. In both cases the signals were insufficient; but in one case the danger from this cause was aggravated by the driver and fireman of one of the trains being unacquainted with the road, the servants on the line not being supplied with time-pieces, the breaks on the trains being insufficient, and the regulations for working the line defective.

3.—*Collisions from Trains Meeting on a single line*

There are eight cases of accidents from trains meeting on a single line. In two instances the accidents occurred near the junction of a single with

the double line, and were due partly to the want of break power in one of the trains, but chiefly to insufficient regulations. In one of these cases the want of adequate signals, and in the other, the negligence of an inferior servant, was combined with the other causes. The remaining six accidents were attributable to insufficient regulations for ensuring safety, combined in one instance with the negligence of an inferior servant; in another, with want of break power; and in a third, which was the most formidable (viz., the accident near Oxford, on the Buckinghamshire railway), the insufficiency of the regulations was combined with a want of communication between the guards and engine drivers.

4.—*Miscellaneous.*

Under this head may be mentioned three accidents; of which one occurred in consequence of the direct neglect, or rather violation, of the ordinary rules under which the line was worked, by the superior officers of the Company; and another was the result of insufficient regulations, combined with a want of break power and a defective construction of gates at a level crossing. The third accident occurred in consequence of some passengers having got out of a train on the wrong side, and having been run over. This was due to the neglect of the regulations for locking the doors of carriages on the off side, occasioned by the want of proper platforms at many stations.

REVIEW OF THE CAUSES OF THE ACCIDENTS.

Hence it appears that almost all these accidents arose from a combination of several of the causes above enumerated. In only five of the seventy-six cases of accidents to trains which have been mentioned above, did purely accidental circumstances alone cause the accidents; and in only eleven other cases were purely accidental circumstances combined with other causes to create the accidents. In only twenty-eight cases was the direct negligence of inferior servants a contributing cause of the accidents; but in some of these cases the negligence can be traced either to the men having been overworked or to defects in the state of discipline. The other causes which contributed to the accidents were within the control of the managers of the lines, and appear to have been as follows:—

1.—*Cases referable to undue Economy.*

Under this head the insufficient supply of means for securing safety, such as insufficient engine power, breaks, signals, time-pieces, &c., and the absence of a communication between the guards and engine drivers, would appear to have contributed to cause the accidents in thirty-eight instances; and the neglected condition or the defective construction of the rolling stock and the road appear to have contributed to cause the accidents in forty-three instances.

2.—*Cases referable to an Inefficient System and a defective state of Discipline.*

The unpunctuality of trains appears to have contributed to cause accidents in fourteen instances. Insufficient or inadequately enforced regulations contributed in forty-two instances to cause the accidents. And a defective system for securing proper intervals between trains would appear from these reports to have contributed to cause accidents in fifteen instances. It is desirable to point out the principal causes of accidents under these two heads.

(1st.) *Cases referable to undue Economy.*—Under this head may be classed a reduction of the number of servants below what was required for the efficient working of the line, the postponement of the requisite repairs, alterations, or additions to works, &c., and the overworking of the carrying stock. When the servants have been reduced in number below what the efficient working of the line has required, the remaining servants have been overworked. This practice involves considerable danger, because the safe working of a railway depends upon the servants being always on the alert. The signalmen and pointmen must always be on the look out for trains, and attend carefully to their signals and points, whilst the

guards, engine drivers, and firemen should, whilst on the road, have their attention continually directed to the safety of the train—and it is perfectly impossible for men, however strong they may be, to keep a proper look out if their energies are paralysed by fatigue. Yet, amongst the accidents which occurred last year, it will be found that in one case men who came on duty at six A. M., were sent out with a train after having worked to between ten and eleven P. M.; and in another, men who were sent out with a train in the middle of one day were continually on duty till the evening of the next day. The reduction in the number of servants has also contributed to accidents by causing engine drivers and firemen unacquainted with the road to be sent with trains. To this cause was partly attributable a collision which occurred at the Euxton junction on the North Union Railway. Several of the accidents occurred from the permanent way on some lines having been allowed to become very much deteriorated. But the accidents which occurred directly from this cause were not the whole amount of injury which resulted to the Companies and the public from this deteriorated condition of road. For a bad road reacts upon the carrying stock; and it is probable that many cases of broken tyres and axles, which were considered as purely accidental, were due to the blows to which the wheels had been subjected in passing over bad joints. In other cases the accidents were attributable to the insufficiency of the siding accommodation, the inadequacy of the signals at the newly constructed sidings and to the servants of the Company not having been supplied with a means of measuring time. As regards this latter point, it is to be observed that on lines of railway of large traffic, where the trains are worked to carefully regulated time-tables, safety and punctuality must be to a great extent dependent upon a correct knowledge of time being possessed at all times by the Company's servants. In other accidents to which unpunctuality has been a contributing cause, this unpunctuality can be traced to undue economy. In some cases the supply of engines has been limited, and the trains have been worked upon a system which entailed that unpunctuality of a train in one direction affected that of the corresponding train in the opposite direction. In other cases trains have been forwarded with an insufficient supply of guards and of breaks, &c. It has been the practice on some lines to effect a saving in the working expenses, by contracting with engine drivers for working the trains, and in others by giving to engine drivers a direct premium for reducing the consumption of coke, below an average amount. These practices, unless guarded by very carefully framed provisions, contain important elements of danger.

(2nd.) *Cases referable to an Inefficient System and Defective Discipline.*—On some lines of railway in an efficient state of repair, accidents have occurred which were due either to the defective system under which the lines were worked, or to the rules not having been strictly enforced. In some of the cases of accidents, it would appear that the regulations have been such that the inferior servants of the Company have great difficulty in complying with them, under even the ordinary exigencies of the traffic; and other accidents have arisen from a violation of rules, which would appear to have been permitted on previous occasions without rebuke from the superior officers. In many cases the rules have been inoperative from the responsibility of carrying them into effect not being clearly fixed upon particular individuals. In other cases it will be found that accidents have occurred owing to the system of issuing regulations having been loose and negligent. Of the accidents which have been classed as those due to the management of railways, a very large proportion have occurred to trains following each other upon the same line of rails. If the trains had been always punctual, and if no train had been allowed to start without the driver having been furnished with carefully framed time-tables, to be rigidly adhered to, these accidents would probably not have occurred; under such circumstances the use of signals would be

of less importance, and they would occupy the position of being auxiliaries to safety; but the reports on accidents will show that on some railways mineral trains, and even occasional goods trains, have been allowed to run without the engine driver having been furnished with any instructions as to the time at which he was to pass or stop at the several stations, and on other railways where carefully framed time-tables have been published regularly for the mineral and other trains, these time-tables have been allowed to be practically disregarded. In many cases, the punctuality of trains has been much interfered with by the unpunctuality of other trains in connection with them, and trains timed to follow, or to be passed at stations by other trains, have been frequently detained by the unpunctuality of those latter trains—this latter cause of unpunctuality has arisen on lines where the traffic is conveyed in trains at different rates of speed, but its effects might in some cases have been remedied to a considerable extent, had a very much more extended use been made of the electric telegraph in conducting and organising the traffic. It will be found, therefore, that in the ordinary condition of railways at the present time, punctuality is not sufficiently attended to, and that in order to secure a sufficient interval between trains, lines are practically worked to a very great extent by signals. Several of the cases of accidents will show that to ensure the due exhibition of signals, it is the custom to organise as many checks as possible upon the progress of trains; and for this purpose a system is in use on many lines of railway by which guards of trains as well as station masters keep a record of the time at which every train passes every station. This record also shows whether the time of running a train has been properly apportioned over the different parts of the line. It will, however, be found that in nearly one-half of the cases of collisions between trains following each other on the same line of rails, the lines do not appear to have been worked under a proper system for ensuring a sufficient interval between trains; and an examination of the cases of this class of accidents will show that the method which has been adopted on almost all lines of exhibiting at stations a signal for a specified time after the passage of a train, has been in some cases insufficient for the purposes of safety. This subject is a most important one as regards the traffic upon lines of railway where the trains are numerous and travel at different rates of speed. On some lines of railway immunity from this class of accident has been secured by the use of the electric telegraph. According to this system, the line is divided into portions, the length being determined according to the amount of traffic and the frequency of trains; a signalman is placed at the extremity of each portion, with a simple description of telegraphic instrument, and no train is allowed to enter any one of these portions until the preceding train has passed off that portion. A special telegraphic wire must be appointed to this service.† This system is in use on almost all railways for working the traffic through tunnels. Accidents from collision between trains following each other on the same line of rails have been attended in some cases with very serious results, in consequence of the Companies not having enforced the plan of placing a break bar in the rear of the train. This was particularly exemplified in the accident at Straffan, on the Great Southern and Western Railway in Ireland. The accidents on single lines appear to have been numerous during the past year, and to have been due to insufficient regulations. A single line to be worked safely requires to be worked under very special regulations, and those regulations are such as to be incompatible with running a large number of trains. Of the systems in use for working single lines, those which would appear to be best adapted for ensuring absolute safety from collisions are, that either one engine should draw every train moving on the single line, or portion of a single line, or that one particular man should accompany every engine or train moving over it. Several single lines of railway have been worked by the electric

telegraph, but the safety of this system depends upon the responsibility as to the starting of trains being very clearly defined; and one of the causes of the accident which occurred on the Buckinghamshire Railway at Oxford, was the want of a clear responsibility as to the use of the electric telegraph having been fixed upon individuals. A careful consideration of the several accidents will show that many have arisen from the want of individual responsibility. In many cases the responsibility has not been clearly defined in the rules; and in other cases it has not been practically enforced, and hence, in many accidents, evidently due to positive errors, the blame cannot be fixed upon individuals. In the case of two accidents which occurred last year, attended with fatal results, the coroners' juries returned verdicts of "manslaughter" against superior officers of the Companies: but in neither of the cases were these verdicts sustained in the courts of law.

I have the honor to be,
DOUGLAS GALTON, Capt. Royal Engineers.

† This method of working has been adopted on the South Eastern Railway under the direction of Capt. Barlow, the Superintendent of the line.—*Herapath.*

Production of the Precious Metals.

The following will exhibit the annual product of the precious metals at different periods:—

1800.			
Countries.	Gold.	Silver.	Total.
America...	\$9,000,000	\$32,891,521	\$41,891,521
Europe....	1,000,000	4,000,000	5,000,000
Asia.....	3,188,349		3,188,346
Africa, &c.	2,050,000	400,000	2,450,000
Total..	\$15,238,346	\$37,292,521	\$52,529,867
1842.			
America...	\$9,124,653	\$29,847,968	\$38,972,616
Europe....	11,417,598	7,456,218	18,873,816
Asia.....	8,243,429	767,596	9,011,025
Africa, &c.	2,654,387	475,837	3,130,224
Total..	\$31,440,067	\$38,547,614	\$69,987,681
1848.			
America...	\$9,700,000	\$29,120,000	\$38,820,000
Europe....	20,950,000	7,280,000	28,230,000
Asia.....	12,901,060	4,100,000	17,001,060
Africa, &c.	2,610,000		2,610,000
Total..	\$46,161,060	\$40,500,000	\$86,661,060
1851.			
America...	\$94,434,355	\$29,218,467	\$123,652,822
Europe....	21,583,269	7,559,368	29,142,637
Asia.....	14,237,658	4,640,756	18,878,414
Africa, &c.	3,500,000		3,500,000
Australia.	5,000,000		5,000,000
Total..	\$138,755,282	\$41,418,591	\$180,173,873
1853.			
America...	\$109,156,748	\$29,807,456	\$138,964,204
Europe....	22,138,914	8,648,937	30,787,851
Asia.....	19,847,658	5,197,218	25,044,876
Africa...	4,000,000		4,000,000
Australia	96,000,000		96,000,000
Total..	\$251,143,320	\$43,653,611	\$294,796,931

The following will exhibit the annual product of the precious metals at various periods prior to those named above:—

1492....	\$250,000	1600....	\$11,000,000
1500....	3,000,000	1700....	23,000,000

It will be perceived from the above that America, ever since its discovery, has been more productive than any other country in the precious metals. The Russian mines were discovered in 1809, but were not extensively worked until 1843. The California mines were discovered in April 1848, and the Australian in February 1851. California is the largest gold producing country in the world, the amount obtained from that quarter in 1853 being \$99,864,753. Until the discovery

of the California mines the quantity of gold produced in America had become nearly stationary.

It will also be perceived from the above that the annual production of the precious metals has become nearly six-fold of what it was at the commencement of the present century. What it will be at the commencement of the next century he would be a bold man who would venture to predict.

The following statement will exhibit the quantity of the precious metals in existence at various periods:—

800....	\$160,000,000	1700....	\$2,615,000,000
1492....	192,000,000	1800....	3,954,000,000
1550....	320,000,000	1848....	6,488,000,000
1600....	829,000,000	1853....	7,319,240,165

Of the latter amount \$4,600,000,000 is in silver and the remainder in gold. The amount of coin in the world is estimated at \$2,500,000,000, the remainder being absorbed in watches, plate, jewelry, &c., &c. The annual depreciation by wear and tear of coin is estimated at a tenth of one per cent. per annum.

Journal of Railroad Law.

IN CONSEQUENCE OF ISSUING STOCK WITHOUT AUTHORITY.

Much doubt and controversy in regard to this subject prevails at present both in the "street" and in the Chamber of Commerce; nor shall we at present do anything more than to attempt the elucidation of those principles upon which the ultimate solution of the question referred to will depend.

It may first be observed that by the charter of the New York and New Haven Railroad Company, enacted by the Legislature of Connecticut in 1844, it was provided that the capital stock of the company should be two millions of dollars, with the privilege of increasing the same to *three millions*, to be divided into shares of \$100 each,—which shares are to be transferred in such manner as shall be directed by the *by laws* of the company.

It is very doubtful whether restrictions made by a by-law upon the power of the general agents of a corporation is a matter which persons dealing with a company are bound to notice. In the case of *Wild vs. the Bank of Passamaquoddy* (3 Mason, 505,) it was held by Justice Story that a cashier of a bank has *prima facie* authority to endorse, on behalf of the bank, the negotiable securities held by it. If there be any restriction of his authority through the by-laws of the bank, the court held that in order to avail itself of any such restriction the bank was bound to show that the plaintiff in the above-mentioned case had been duly notified concerning such restrictions, and that the law will not presume that strangers to the by-laws of corporations are cognizant of them.

But Corporations, like natural persons, are bound only by the acts and contracts of their agents done, and made within the scope of their authority, as fairly proclaimed to the public or generally understood. In *Cox vs. the Midland County Railway Company* (3 Exchequer R., 268,) it was held that a *station master* or other servant of a railway company could not bind the company by contracts for surgical attendance on injured passengers, the station master having been appointed for the performance of a distinct and limited service. But where the trustees of the Pil-

grim Society of Plymouth were authorised by note to appropriate the funds of the society to the erection of a suitable edifice, and were required by the by-laws to manage the funds of the society, the trustees thereupon entered into a contract for the building, and having exhausted the funds of the society, and there remaining a debt for which they were personally responsible, voted that the treasurer should give a note to one of their number who had paid the debt, without limiting in the vote the time within which such note should be given, it was held that by virtue of their general authority to manage the finances of the society, they had power to give the note at any time during the life of the claim.—Hayward vs. the Pilgrim Society (21 Pick., 270).

In fine, if a corporation entrusts its agent with large discretionary powers, any party dealing with that agent, in good faith, is entitled to a liberal interpretation of his rights, and the corporation will not be easily allowed to repudiate the obligations contracted, however treacherous its officer may have been.

From the Hartford Times.

New-Haven Railroad Fraud—Opinions in Connecticut.

Previous to 1853 Schuyler held simultaneously the office of President of four important Railroad Companies, and the responsible office of Treasurer in as many more; and at one time was in the receipt of annual salaries amounting to more than \$25,000 in the aggregate. In this strange position, which certainly had the appearance of inordinate grasping after office and emolument, it was manifest that with an attention so divided, it was utterly impossible for him to do justice to any of the concerns placed under his charge. The Norwalk accident, which in various ways has damaged the New York and New Haven Railroad Company to an amount exceeding \$500,000 was the first palpable fruit of this unavoidable neglect, and after the evil had been done, the Legislature of Connecticut passed a law virtually restricting the Presidency of Mr. Schuyler to this one road. To meet the requirements of this statute, all his other Presidencies were nominally transferred to the nourishing care of his immediate relatives or subservient tools.

The imputation of the most gross and culpable negligence, to say the least, must rest upon the other Directors of this Company, having permitted the public to be robbed in this outrageous manner. Why was it that they, claiming to be sharp and experienced men, have allowed Robert Schuyler, the President of the road, to issue unlimited amounts of the stock *without the check of any other signature except his own*—they well knowing all the time that he was a Wall-street speculator on an enormous scale, and constantly borrowing large sums of money at high rates of interest? The public will hold them to severe account for this gross neglect of their trust. Two of the false certificates of stock were for 5,000 shares each. Who was the party that took these monster certificates, and where was the vigilant suspicion which every man of common sense must have felt upon seeing them, and having them offered to him either for sale or hypothecation? It is manifest that he must either have been an accomplice in the villainy, or a miracle of simplicity or credulity for a Wall-street man, and the public must decide which. It is stated that Schuyler has practiced the same fraud upon other Companies, but whether upon the Harlem or Illinois Central, or both, has not yet publicly transpired. The crime of Schuyler and the gross negligence of his associate Directors will cause distress and ruin to hundreds who have invested their savings in this road. For a less crime in England, Fauntleroy was hung, and in this country offenders are imprisoned for life for public wrongs of a much

paler dye. It is a reproach to Law that the greatest criminals should so often escape with the least punishment.

The immediate victims of this crime, the stockholders of the New York and New Haven road have been truly unfortunate. No concern in this country has been so victimized and plundered by its managers from the start, by exorbitant shares, salaries, squandering, and fraud. By the lease of the Canal Road, a dead loss of \$40,000 per annum was saddled upon the Company for 20 years; to help a few of them managers out of a ruinous investment. Upon a careful inspection of the successive annual reports, it will be seen that the road has never earned the dividends it has paid; the construction account in stock and bonds being regularly increased from year to year to an amount much greater than the dividends—proving them to have been paid out of the capital. If it has ever really earned anything over its expenses and interest, which is very doubtful, it has been regularly squandered or stolen by the managers. The directors as a body have no interest in the welfare of the concern. At the last annual election, four leading and well-known men were put into the direction, one of whom held only one, another three, another four, and another ten shares of the stock. Schuyler was present at the meeting with spurious stock and proxies and put these men into the Board; not as his tools perhaps, but as his most intimate friends, for the express purpose of sustaining him and making him President of the Company. They made no objections to being used for this purpose. The necessary fruit of this sort of management long continued, we now have not only ripe but rotten ripe and fallen from the tree, in shape of the most astounding fraud of the century. The history of this road and of the other roads which have been in the same hands, affords another illustration of the certain ruin in store for all similar concerns which have the misfortune to fall into the fatal grasp of a family clique or gang of corrupt and dishonest managers.

On the supposition that only \$2,500,000 of spurious stock and \$500,000 of spurious bonds have been issued,—which may prove to be much within the truth—the whole stock and bonds and floating debt of the New York and New Haven Railroad, will stand at the enormous sum of \$8,250,000 for about 60 miles of railroad, with six miles more of double track yet to construct, at a further cost of \$120,000. Under these circumstances, it is of course quite impossible that this unfortunate Company, even with the best management, should be able hereafter to earn anything more than its current expenses and the interest upon its debt. It follows, that the public and the dishonest managers have obtained the whole benefit of this useful undertaking while its stockholders have been stripped clean. It cannot be too much deplored that this moral and honorable State should have been selected as the theatre for the enactment of this stupendous and unparalleled fraud.

From the New-Haven Palladium.

Some of the Wall-street papers appear to have come rather hastily to the conclusion that the holders of the fraudulent stock certificate pledged by the late President and Transfer Agent for his individual liabilities, are entitled to be recognized by the Company as stockholders, thereby increasing the capital of the Company from \$3,000,000 to \$5,000,000.

But the charter of said Company Sec. 2, provided "that the capital stock of said Company shall be \$2,000,000, with the privilege of increasing the same to \$3,000,000, and to be divided into shares of \$100 each, which shares shall be deemed personal property, and be transferred in such manner and at such places as the by-laws of said Company shall direct."

Neither the Directors, or stockholders even, have power to increase the number of shares beyond the prescribed limit. How then can it be claimed that an agent entrusted with the duty simply of attending to the transfer of the shares authorized by the charter, can by a fraudulent

certificate of stock, which has no existence, thereby effect what the President, Directors and Company have no power by their charter to do themselves, or to ratify when done by others?

The charter of this Company is a Connecticut charter, and the supreme Court of Errors have recently decided that the Corporation cannot be estopped from denying the validity of a contract made in its name by the agents of the Company, in pursuance of a known public usage, if the contract was one which the charter did not authorize; even though the consideration for the contract had gone into the Treasury of the Company.

It is understood that the fraudulent certificates of stock hypothecated by the late transfer agent for the liabilities of the firm of which he was a member, being evidenced only by his own signature, were issued in amounts which ought to have put upon his guard any man of ordinary prudence.

A STOCKHOLDER.

From the New-Haven Register.

It seems to be supposed in Wall-street as a matter of course, that the unauthorized certificates of stock issued by the late President of the New York and New Haven Railroad, must be binding on the Company. But the Supreme Court of Connecticut have decided in the late case of Hood vs. this same Company, that they could not be held for any engagement of the Company's officers, not authorized by the charter; no matter whether the person dealing with their officers, knew what their powers are or not. As the charter only authorizes the issue of \$3,000,000 of stock, every certificate beyond that amount, according to the doctrine of Hood vs. the Railroad, is outside the charter, and of course beyond the power of any officer or agent of the Company. Should not the present officers beware how they move in this matter, without consulting those immediately interested?

MANY STOCKHOLDERS.

Louisville and Nashville Railroad.

We have the recent report of this Company, which from its voluminousness, makes up for the lack of previous favors. The greater part of the Pamphlet is devoted to the Report of the Chief Engineer of the Company.

The total length of line of the road is 185½ miles. The total estimated cost for graduation, masonry, and bridges; \$3,436,624; which is at the rate of \$18,526 per mile. The estimated cost for superstructure, equipment, stations, &c., is \$4,070,000, equal to \$22,000 per mile; total cost \$7,506,624, or \$40,526 per mile. With this estimated cost to start with, it will not be extravagant to put the first cost of the road at \$50,000 per mile.

The line, from the profile's annexed to the report, appears to be a fair one, especially for Kentucky; the surface of this State being exceedingly undulating.

The following statement will shew the cost of the leading items:

		Est'd. cost.
Earth excavation, (yards)	3,618,000	1,308,424
Rock " "	963,800	1,010,925
Masonry " (cubic yards)	62,950	530,982
Bridges (feet)	5,275	167,910

These prices appear to us to be very large, but they are probably rendered less, by the kind of pay which the contractors are to get.

Notwithstanding the above estimates, there is no reason why the road may not cost a much larger sum. As the contractors are paid by quantities, these, for aught appears, may be indefinitely increased; so that the above report may furnish no guide as to the eventual cost of the road; the Maysville Road was estimated by the same Engineer to cost \$1,400,000. This amount has been expended, yet it is found that \$800,000 are still wanting to

complete the road, owing to a vast increase of quantities over the first estimate. A similar increase would carry the cost of the Louisville and Nashville Railroad to more than \$11,000,000, or \$60,000 per mile.

The following is a summary of gradients of the Road.

Level.....	43.79 miles
10 feet and under.....	10.62 "
From 10 to 20 feet.....	30.99 "
" 20 to 30 feet.....	23.61 "
" 30 to 40 feet.....	19.18 "
" 40 to 50 feet.....	18.50 "
" 50 to 60 feet.....	26.16 "
" 60 to 70 feet.....	12.65 "

Total.....	185½
Total rise going south.....	2,514 feet
Total rise going north.....	2,554 "

Total rise and fall..... 5,068 feet

The total curvature is 4,127 degrees.

The total means provided are as follows:

Stock sub. by the City of Nashville	\$984,600
" " " County of Hardin, Ky.	300,000
" " " " Warren, "	300,000
" " " " Hart, "	100,000
" " " " Simpson "	100,000
" " " " Davidson, Ten.	300,000
" " " " Sumner, "	300,000
" " " " Individuals,	944,100

Total..... \$3,280,700

The balance to be raised by an issue of mortgage bonds.

The construction of the above is eminently called for, both by the wants of the people upon its line, and of the whole country. There is no new project at whose success we should more rejoice. We cannot help expressing our opinion, however, that the Company have committed two blunders, which will materially interfere with its success—the adoption of the 6 feet Gauge, and the abandonment of the route by way of Glasgow. For the introduction of a new gauge into Kentucky, there is no apology. Though the measure may be a popular one there, it will effectually cut off the project from any assistance from this quarter. The people of New York are not going to put their money into a work, which adopts the most effectual measures possible of driving from, instead of attracting business to itself, and of fostering the construction of rival lines. Whatever effect the *clap-trap* of wide gauge may have in Kentucky, it won't take out of it. If the people of that State are prepared to build their own road, with their own money, they may commit just such follies as suit them; but they must not hope to palm them off upon others.

Another mistake committed is in the location of the road, by which Glasgow is avoided. There is to be a Railroad from Cincinnati to Nashville, as well as from Louisville. The Cincinnati line has already reached Lexington, a distance of 100 miles and is well advanced toward Dausville, some 35 miles further. The prolongation of this line upon the natural and convenient route, is through Glasgow. This place which is 80 miles distant from Nashville, is also on the route of the shortest line from Louisville to Nashville. The profiles of both routes shew the one by way of Glasgow, to be a little less favorable in the matter of grades, than the one adopted by the Louisville Company, but the former is shorter, and we presume, cheaper. We think it altogether probable, many equally

favorable grades might be found. The evidence furnished by the above report, taken in connection with the Cincinnati line, shows that the Glasgow route should have been adopted. One road from Glasgow to Nashville might have been made common to both lines, and the construction of some 80 miles, and the expenditure of over \$3,000,000 might have been saved. The public would then have had one profitable road; instead of two unprofitable ones. As before stated, we do not wish to interfere with Kentucky notions of propriety, but should the Louisville Company ask to make New Yorkers participants of their follies, they will find us objecting most emphatically.

For the American Railroad Journal. Car Ventilator.

I have just been reading in your last issue "Waterbury & Atwood's mode of car ventilation." As an old experimenter in "dusters," I am naturally interested in everything of the kind. As a traveler, passing over six hundred miles of road in a week, and every week, none can appreciate better than myself all improvements in excluding dust from the interior of a train; but I must confess that, in spite of the certificates of the *Nau-gabuck* train to the contrary, the invention of a mode to free cars from dust, and ventilate them at the same time, is yet in the future. As regards Messrs. W. & A.'s mode: suppose you are seated in the 8th car of a train, all the air-currents which pass you are charged with the odors of the seven cars ahead. All the effluvia arising from four hundred and twenty closely packed human bodies will constitute the atmosphere which you breathe. Take a seat in the ventilator of one of our theatres on a crowded night, when all the foul breaths of the audience, and odoriference of boots and feet are passing through, and the comforts of W. & A.'s "healthy respiration" will be appreciated. The true ventilator is a misnomer when applied to such a mode. Experiments made at great expense during the summers of '52 and '53, have established the fact that injectors having a capacity to each car greater than that proposed in the mode under review for the whole train, have proven inadequate to create a pleasing atmosphere, and repel the dust from the least opening of the windows or doors. Even the "Paine system," which turned the whole sides of the cars into exhausters, and emptied and refilled the car thirty times in one minute with fresh air, was condemned because the cars were too hot. So, gentlemen inventors, the field is yet open; but let dear bought experience first whisper to you, never hope to ventilate a car or repel dust from its interior by the introduction of air currents, till you can make them enter with a greater velocity than that of the train's motion.

New York, July 3d, 1864.

P. M. II.

The confessions of "P. M. II." are interesting, as coming from an "old Experimenter" in that line, but he will permit us to suggest, that they would be more to the purpose, if his experiments had been upon the same principle with Messrs. Waterbury & Atwood's plan. He strove to inject the air into each car separately, as we understand it, which is simply impossible, unless he can create a current as strong or a little stronger inside, than that formed outside by the onward motion of the train; while both Waterbury & Atwood, and Mr. Lancaster, by their plans, merely endeavor to ef-

fect a circulation of pure air through the train, as it passes through the atmosphere, by preparing channels for its unobstructed communication. We cannot see therefore, how the reasoning of "P. M. II." applies to these cases at all.

Port Dalhousie and Thorold Railroad.

We learn from the *St. Catharine's Post*, that the work on this important undertaking goes on most energetically. A great number of men with steam excavators, &c., are engaged at the Port Dalhousie terminus, where the deepest cutting will be required. The prospects of the speedy completion of the line are very good. The contractor is of the right stamp, and is pushing things forward with great spirit. We trust the entire road through to Lake Erie will soon be under contract.

Canandaigua and Niagara Falls, R.R.

The following is the new Board of Directors of the Elmira, Canandaigua and Niagara Falls Railroad: Simeon Benjamin, Alex. S. Diven, Chas. C. Sheppard; Henry B. Bennett, Wm. Antis, Amos Jones, Solomon Gillett, Henry Bradley, James Harris, Francis W. Paul, Alfred B. Field, John S. King, J. P. Giraud Foster.

Terre Haute and Alton Railroad.

At the annual meeting of the stockholders of of the Terre Haute and Alton Railroad Company, held in Shelbyville on Saturday, the 24th ult, the following persons were elected Directors of said Company for the ensuing year: viz. Simeon Ryder, Robert Smith D., C. Huggins, Chas. Cruft, Samuel W. Moulton, Edwin C. Litchfield, John Stryker, William H. Russell, Electus B. Litchfield, John C. Durant, John F. A. Sanford, John B. Jervis and Hiram Sanford. At a meeting of the board held subsequently on the same day Simeon Ryder, was reelected President and Col. O. W. Childs was elected Chief Engineer.

Lexington and Big Sandy Railroad.

At a meeting of the stockholders of the Lexington and Big Sandy Railroad, the following persons were elected Directors for the ensuing year: Neal McCan, Fayette. Ben. B. Groom, Clarke. Joseph Bondurant, Montgomery. J. M. Nesbit, Bath. D. K. Weis, Carter. Dr. Z. Cushing, Greenup. Richard Apperson, Esq., was re-elected President of the Board. The report of the President and Chief Engineer shows the road is in a flourishing condition, and rapidly progressing to its completion; there being upwards of 800 laborers employed on the same.

Chesapeake and Delaware Canal.

The Annual Report of the Chesapeake and Delaware Canal Company gives the receipts from tolls for the fiscal year ending May 31, 1864, at \$246,695, 02, and the expenditures at \$200, 131, 43, leaving a surplus applicable for a dividend of \$46,563, 66. In view, however, of the present financial wants of the Company, growing out of the enlargement of its locks it is recommended that no dividend be now declared. The Company also received during the year, from interests, dividends, rents, &c., the further sum of \$15, 429 06, making the total yearly revenue, clear of interest and expenses, \$61, 992.

The Steubenville Railroad.

The Councils of Pittsburgh have passed an ordinance subscribing \$300,000 to the Pittsburgh and Steubenville Railroad Company. This, it is said, will be sufficient to secure the completion of the road, the work on which is in a great state of forwardness. We may therefore expect if the Bonds can be negotiated on reasonable terms, which is very difficult in the present state of the money market, to witness the completion of the work in the shortest possible time. It is very desirable, in a road constructed principally from the proceeds of the sale of county and city funds, that it

should be prosecuted with vigor, in order that it may begin to earn something to pay the interest. If the work is long delayed, the interest account becomes a very formidable item of expense.—*Pittsburg Gazette.*

American Railroad Journal.

Saturday, July 15, 1854.

Agents for the Journal.

To prevent imposition we feel constrained to state that we have no regularly authorised agents in this Country. To persons in the commission agency business or book trade who remit us names of new subscribers with the price of subscription, we allow the usual commission and send the paper as desired, but we hold ourselves responsible for the acts or contracts of no man not connected with this office and regularly authorised by us to do business in our name.

Persons desiring the *Journal* should send their address directly to us by mail and may also remit their subscription to this office in bank notes current in their own State, unless they can conveniently procure funds of this State. All such remittances will be duly acknowledged by mail on their receipt. Persons receiving accounts of their indebtedness to this office, will oblige us by remitting as above, at their earliest convenience.

Stock and Money Market.

The Stock Market is recovering slowly from its recent excessive decline, though it is still very unsettled. There will be no rapid improvement, till the public shall have the results of the investigations which are now being made into the affairs of our Railroad Companies. It is not probable that any new developments will be made, while the recent frauds will lead to the adoption of precautions which will render their recurrence impossible. The lessons that the public have received, will be a valuable one, and will result, we hope and believe in a much higher tone of Railroad management. Transactions of all kinds for a week past have been principally speculative, though the excessive y low prices must soon attract buyers for investment.

The following table will shew the earnings of Railroads for June, as far as received.

	1854.	1853.
Michigan Central.....	171,359	119,433
Michigan Southern.....	185,653	148,946
Macon & Western.....	19,750	15,592
Pennsylvania.....	227,652	156,978
Chicago and Rock Island.....	113,008	new
Cincinnati Hamilton & Dayton	39,975	32,306
New York and New Haven...	70,254	59,738
Ogdensburg.....	63,000	48,000
Milwaukee and Mississippi....	45,087	18,585
Cleveland and Pittsburgh.....	47,729	35,825
Indiana Central.....	27,250	new
Ohio and Pennsylvania.....	82,069	55,350
Hudson River.....	128,073	94,978

The following is the comparative Bank Statement for the week ending July 8.

	July 8.	July 1.
Loans.....	88,347 281	88,601 591
Specie.....	12,269 318	11,180 800
Circulation.....	9,195 757	9,068 283
Deposits.....	72,718 443	71,487 934

Arkansas Midland Railroad Co.

We learn that the Directors of this road, reaching from Helena on the Mississippi to Little Rock have determined to put the first ten miles of their line under contract for immediate execution.

Railway Share List,

Compiled from the latest returns—corrected even Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	88
Androscoggin and Kennebec... "	55	824,863	1,043,540	2,036,140	177,003	80,053	none	80
Kennebec and Portland... "	72	1,073,678	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth... "	51	1,355,500	123,884	1,459,384	208,669	6	95	24
York and Cumberland... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	85
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence....	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan.....	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic... Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central.....	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	54
Vermont and Canada.....	47	1,500,000	.....	1,500,000	Leased to the Vt. Cent.	.....	cent.	82
Western Vermont.....	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	87
Boston and Maine.....	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100
Boston and Providence.....	55	3,160,000	402,326	3,579,041	509,326	226,639	64	77
Boston and Worcester.....	69	4,500,000	590,541	4,850,754	887,219	413,289	7	96
Cape Cod branch.....	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River.....	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	77
Fall River.....	42	1,050,000	6,208	1,050,000	294,133	126,589	8	90
Fitchburg.....	67	3,540,000	191,500	3,716,870	626,659	214,633	6	844
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony	45	1,964,070	295,038	2,293,534	374,897	122,866	none	974
Taunton Branch.....	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts..	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	114
Worcester and Nashua.....	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western	155	5,150,000	5,319,520	9,963,258	1,525,224	746,736	7	944
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	6	68
Providence and Worcester...	40	1,457,500	300,000	1,791,999	291,417	120,892	6	97
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	639,529	294,269	10	116
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill..	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven...	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	83
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	53
Buffalo and New York City... N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progres	.....	.....	none	65
Buffalo and State Line.....	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F..	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira.....	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.....	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)...	464	10,000,000	24,008,865	33,070,863	4,318,962	1,800,181	7	624
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	61
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	444
Long Island	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central.....	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	99
Ogdensburg (Northern).....	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	144
Oswego and Syracuse.....	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal....	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga....	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.....	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.....	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston.....	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,708	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,495	1,388,385	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey.....	81	2,197,840	476,000	3,245,720	608,342	316,259	10	131
New Jersey Central.....	63	986,106	1,500,000	2,879,880	260,899	124,740	8	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	20	800,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster...	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading....	95	6,656,832	10,427,800	17,141,987	2,480,626	1,251,987	7	77
Philad., Wilmington and Balt.	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	744

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn. 250	9,768,155	5,000,000	13,600,000	1,948,827	617,625	....	97
Philadelphia and Trenton....	" 30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	" 47	.....	.....	.....	.....	.....	.....	102 1/2
Baltimore and Ohio.....	Md. 381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	58
Washington branch.....	" 38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..	" 57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....	Va. 65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	" 27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	" 64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	" 73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.....	" 22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	" 76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	" 62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	" 107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	" 73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac....	" 32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.....	N. C. 161	1,338,878	1,134,698	2,965,574	610,088	153,898	6	.....
Charlotte and South Carolina.	S. C. 110	.....	.....	In prog.	.....	.....	.....	.....
Greenville and Columbia.....	" 140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina.....	" 242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester.	" 191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia Central.....	Ga. 211	4,000,000	1,214	.....	934,424	456,468	7 1/2	.....
Georgia.....	" 101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Macon and Western.....	" 71	.....	.....	In prog.	59,590	21,731	.....	.....
Muscogee.....	" 50	586,887	160,000	743,525	129,395	71,535	8	.....
South Western.....	" 55	.....	.....	In prog.	.....	.....	.....	.....
Alabama and Tennessee River	Ala. 93	776,259	400,000	In prog.	.....	.....	.....	.....
Memphis and Charleston.....	" 33	879,888	.....	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	" 88	688,611	.....	1,330,960	173,542	76,079	8	.....
Montgomery and West Point.	" 60	.....	.....	.....	.....	.....	.....	.....
Southern.....	Miss. 80	835,000	541,000	In prog.	.....	.....	.....	.....
East Tennessee and Georgia..	Tenn. 125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..	" 38	1,430,150	900,000	In prog.	.....	.....	.....	.....
Covington and Lexington....	Ky. 29	357,218	.....	584,902	87,421	44,250	.....	63
Frankfort and Lexington.....	" 65	.....	.....	.....	.....	.....	.....	80
Louisville and Frankfort.....	" 100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	70 1/2
Maysville and Lexington.....	Ohio. 147	2,000,000	1,600,000	.....	.....	.....	.....	88
Cleveland and Pittsburgh.....	" 96	.....	.....	.....	.....	.....	.....	.....
Cleveland and Toledo.....	" 135	3,027,000	408,200	3,655,000	777,793	483,454	12	116
Cleveland, and Erie.....	" 46	.....	.....	2,000,000	.....	.....	.....	65
Cleveland and Columbus.....	" 61	.....	.....	.....	.....	.....	.....	.....
Columbus, Piqua and Indiana.	" 60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102 1/2
Columbus and Lake Erie.....	" 40	310,000	550,000	925,000	Recently opened.	.....	.....	62
Cincinnati, Ham. and Dayton	" 20	.....	.....	In prog.	.....	.....	.....	75
Cincinnati and Marietta.....	" 36	.....	.....	.....	.....	.....	.....	56
Dayton and Western.....	" 31	.....	.....	.....	.....	.....	.....	.....
Dayton and Michigan.....	" 37	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	" 84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Greenville and Miami.....	" 167	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Hillsboro.....	" 167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77 1/2
Little Miami.....	" 57	.....	.....	In prog.	.....	.....	.....	79
Mansfield and Sandusky.....	" 187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Mad River and Lake Erie....	" 44	750,000	300,000	In prog.	.....	.....	.....	.....
Ohio Central.....	" 54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Ohio and Mississippi.....	" 31	.....	.....	In prog.	237,506	.....	.....	.....
Ohio and Pennsylvania.....	" 83	.....	.....	.....	.....	.....	.....	77 1/2
Ohio and Indiana.....	" 90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	90
Scioto and Hocking Valley...	" 62	.....	.....	.....	Recently opened.	.....	.....	76
Columbus and Xenia.....	" 159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Evansville and Illinois.....	" 72	632,387	663,100	1,353,019	105,944	71,446	4	108
Indiana Central.....	Ind. 135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Indiana Northern.....	" 92	.....	500,000	In prog.	473,548	286,152	.....	123
Indianapolis and Bellefontaine	" 315	3,741,564	7,276,616	1,200,922	586,929	.....	17	100
Indianapolis and Cincinnati..	" 282	3,977,563	8,618,505	1,145,598	582,816	.....	8	94 1/2
Lafayette and Indianapolis...	" 38	.....	non	In progress	Recently opened.	.....	.....	.....
Madison, Indianapolis & Peru	" 38	.....	.....	.....	.....	.....	.....	.....
Terre Haute and Indianapolis	" 38	.....	.....	.....	.....	.....	.....	.....
Rock Island and Chicago.....	Ill. 135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Chicago and Mississippi.....	" 92	.....	500,000	In prog.	473,548	286,152	.....	123
Illinois Central.....	" 315	3,741,564	7,276,616	1,200,922	586,929	.....	17	100
Galena and Chicago.....	" 282	3,977,563	8,618,505	1,145,598	582,816	.....	8	94 1/2
Michigan Southern and Ind. N. Mich.	" 38	.....	non	In progress	Recently opened.	.....	.....	.....
Michigan Central.....	" 38	.....	non	In progress	Recently opened.	.....	.....	.....
Pacific.....	Mo. 38	.....	non	In progress	Recently opened.	.....	.....	.....

The Harlem and New Haven Frauds.

There has been nothing yet stated to show that the over issues of the New Haven stock exceed \$1,900,000, though this sum may be increased.—It now appears that Mr. Schuyler did not have control of the bonds of the company.

The over issues of Harlem stock by Kyle were 5,000 shares, of a par value of \$50. The bonds of this company misapplied amount to \$80,000. The total loss, estimating the stock and bonds at par, is about \$330,000. It is stated, we know not with what truth, that the Harlem Company will assume the over issue.

Taking Amounts of Stock.

We learn that all our railroad companies are looking into their affairs to see how they stand. We presume the scrutiny will be general and thorough. The Erie company report all right in that quarter. We hope to have equally good news from others.

Michigan Central Railroad.

The receipts at the Michigan Central Railroad show the following result for the past six months:

	1852.	1853.
December.....	\$64,481 40	\$80,094 29
January.....	37,437 79	60,502 95
February.....	40,045 92	90,385 19
March.....	59,469 05	113,257 71
April.....	104,126 98	145,156 07
May.....	135,202 50	200,020 02
Total, 1853....	\$440,763 64	\$689,429 23
Increase 35 per cent.		248,665 59
1st week in June..	\$30,343 87	\$46,378 69
2d week in June..	27,773 83	41,717 00
Total.....	\$58,117 20	\$88,095 69
Increase two weeks.		29,978 49

Is the New Haven Company liable for the fraudulent issues of its Stock.

The liability of the New York and New Haven Company on account of the recent fraudulent issues of its Stock, is a question of great interest to the public, as well as to the parties involved. In the present instance, the rules of law which define the nature and extent of the powers of Agents, may be superseded by a provision in the Company's Charter, limiting the Capital Stock to \$3,000,000. As we understand it, the company had exhausted its power of issuing Stock, consequently any additional issue, made in good faith, would have been invalid. If we are correct in our premises, therefore, the Schuyler issue is not worth the paper it is written upon.

But were it competent for the Company to make further issues of Stock, it is still doubtful whether they would have been bound to acknowledge the recent over-issues. The doctrine, "*facit per alium, facit per se*," though of general application, is always more or less modified by the circumstances of each particular case. The Agent cannot transcend the authority usually delegated to such, nor bind his principal by any act, not strictly within the range of his prescribed or customary duties. A clerk in a retail store, though he could sell by piece any article in it, and put the money in his own pocket, could convey no title, should he attempt to sell them in gross, as the law would in such case, regard the purchaser as *con-naissant* of the fraud. Neither could a clerk in a Dry goods establishment, convey a title to

the property sold, by receiving *Groceries* in exchange. To bind his *principal*, the sale or act of the Agent, must strictly conform to the usual mode of doing business, as any deviation from this mode is considered as notice to the third party, that the Agent has exceeded his authority.

As Transfer Agent of the New York and New Haven Railroad, Mr. Schuyler had a duty to perform, simply ministerial in its character. He had no authority to raise, nor did he pretend that he was raising, money for the Company. The lender on his fraudulent certificates did not suppose that he was dealing with the Company, through Schuyler, as Agent. They were dealing with Schuyler as *principal*. Had he assumed to act as *Agent*, he could not have sold the first share, as it would have at once been known that he acted without authority. What he was offering was simply *stolen* property. Now we apprehend that a storekeeper, or watchman, without any other authority than the mere *guardianship*, cannot acquire by *theft*, and convey a competent title to the property under his charge. Possession may be evidence of title, but, as is well known, is only *prima facie* evidence, and may be rebutted by shewing it to be wrongful; so that the purchaser may, and often does, buy in good faith of the man having the *apparent* title, without acquiring one. The old maxim of *caveat emptor*, has as wide and general application as the one quoted at the commencement of this article.

For the Principal to be bound by his Agent, the act of the latter must be strictly within the scope of his usual and acknowledged office, or duty; and the contracting party must suppose himself to be dealing with the principal, *through* the Agent.—Now, Mr. Schuyler had not, nor did he assume to have authority to issue Stock on behalf of the Company, nor did the purchasers of his issues suppose that he had, or that they were dealing with the Company. If he *stole* the Stock, they have acquired no better title than would a purchaser of a horse that had been stolen.

It appears to us that the holders of the fraudulent issue have not only no remedy, save against Schuyler, but that the largest holders of it took it under circumstances well calculated to awaken suspicion and put them on their guard. The mere fact of a man in Mr. Schuyler's position, with enormous contracts on hand, and pressed for money, as he was known to be, hawking about the street single certificates of Stock, to the amount of \$500,000, or one-sixth of the whole authorized Capital of the Company, was in itself sufficient evidence of fraudulent possession, and the parties who took such certificates under such circumstances, are not entitled to look to any one but Schuyler. Their losses are to be regretted, but if there is to be a loss, we conceive it more just that it should fall upon those who received the Stock from Mr. Schuyler, than upon parties who had no fact before them by which it could be inferred, that a fraud had been committed.

Since the above was written, we find on reference to the Annual Report of this Company, made to the last Legislature, and sworn to by Mr. Schuyler, that the authorized Capital Stock is limited to \$3,000,000, and that the whole amount has been issued, previous to his frauds. This fact of course releases the Company from all liability on account of Stock issues. If they are assumed, it will be by a *voluntary* act of the Company.

Physical Geography of the State of New York.

By ZERAH COLEBURN.

GENERAL FEATURES.

Every successful effort of the engineer is based upon physical science. In proportion to his knowledge of this basis must be the success of his efforts. In carrying great lines of improvements over the surface of states, perhaps of continents, the natural features met in his course are subjects demanding his study.

Economical Geography, based upon the topography and Physical character of the earth, is one of the most useful departments of physical science, and is of especial importance to engineers. It is a branch of science, however, which has never been popularized, and when learned from necessity, demands extended surveys and reconnoissances or the part of each learner. Were it reduced to an elementary study, and taught, with proper illustrations, in our common schools, it would drive out the whole farce of "Geography," as commonly taught. It would educate the popular mind upon a most essential subject, and it would reduce the hazard of outlays made for improvements on the surface of the soil. It would attract numbers and wealth directly to those spots best suited for any given employment, and it would thereby destroy many hurtful local prejudices.

Such a science would embrace the extent and disposition of the natural surface, its elevations and depressions, its water drainage, hydraulic power and natural moisture; its seasons, its crops and minerals; its adaptation for improvements, and especially for commercial channels; as well as many minor conditions naturally embraced in such a consideration. Upon the natural conditions of the Earth we might thus establish a science of *natural* and *economical* geography, as opposed to the *artificial* and *political* system now taught.

A minute knowledge of economical geography would be a good test of the value of proposed improvements. It would indicate to the engineer the proper route for a railroad or canal, and would be a basis of correct opinion, on the part of the merchant or capitalist, as to its success when built. An ignorance of the conditions of a good route, and of the amount of accommodation necessary for a given business, has worked great losses in many cases to communities who have undertaken the construction of railroads and canals. The States of Pennsylvania and Maryland are cases in point in the sacrifices they have made upon their respective water lines.

For convenience of description, and which, with a map, cannot be misunderstood, the state of New York may be said to form a great triangle, nearly equilateral, and of an average length of 325 miles to the side. One of the angles of this figure lies upon the best ocean harbor in America, while from the tide water, reaching inland, to the great lake basin, a less distance is interposed than in any other part of the United States.

Did the political boundary of New York coincide with what should be the natural outlines of a great and independent State, and such is very nearly the case, we should infer that each of the three sides of this triangle would lie mostly upon water lines, and that three ridges of natural eleva-

tion would unite in the centre, with their extremities reaching out to the angles. Such a formation would establish a symmetry of surface.

The character of such elevations, and the inclinations of their several slopes, would of course be modified by the elevations and directions of the marginal water lines.

We find on the eastern side of the triangle a navigable water line for 190 miles, parallel and near to the political boundary of the State. Continuing northward, a navigable lake with a northern outlet, completes with little interruption, the *great eastern water line*. On the north west, the waters of the great lakes and of the St. Lawrence complete an uninterrupted and natural boundary.—On the south and south western sides of the triangle, the waters of the Delaware, Susquehanna, Chemung, and Causteo either coincide with or lie near to the political boundary. It is only upon this boundary that any considerable natural difficulties exist to our easy communication with the city of New York, which is at the *marine* angle of our assumed figure. The interposition of the table land of the Mississippi, at the western extremity of the State, and of the Alleghany range across instead of *parallel* to what would otherwise be the natural drainage of the south eastern part of the State, serve to break the continuity of the southern water border.

With this reference to the external *cyclinal* or lowest boundary lines, we commence upon the elevations. The *anticlinal* or summit lines of the interior proceed with considerable regularity from the northern and southern angles to the centre of the State. Those proceeding from those extremes are the most strongly marked by their elevations. Instead of uniting, these ridges are separated at the centre of the State by a great natural depression, of which we shall speak hereafter. The western spur is less strongly marked by elevation or continuity; and after skirting the head waters of the interior lakes it subsides into the high table lands which are drained by the tributaries of the Mississippi.

These three spurs, radiating from the centre of the State, are properly the independent mountain system of New York, and are unconnected with the great Alleghany range of the country. This range, however, extends across the southern part of the State, having the same general range which marks it in Pennsylvania and Virginia. In the course of this range in New York it turns the Delaware river into Pennsylvania, and thereby intercepts a drainage which, but for this physical formation, might have reached tide-water at *Tappan Sea* on the Hudson. It also turns the flank of the Catskill mountains, distorting their course by its own, and creating a drainage nearly opposite in direction to that of the Hudson river.

The Hudson river, however, completely penetrates this range, and affords a navigation to the table land beyond,—a communication which is nowhere else found from the Gulf of St. Lawrence to the alluvial approaches of the Mexican Gulf. The St. John's, Penobscot, Kennebec, Androscoggin, Merrimac, Connecticut, Delaware, Susquehanna, Potomac, James, Roanoke, Peedee, Santee, Savannah, Altamaha, Chattahoochee and Alabama rivers nowhere afford a navigable pass through the Alleghany range, but have their sources upon its summits or eastern slopes. The Hudson is the

only river which, passing entirely through, has its sources upon an independent elevation beyond.— When it is considered how commerce follows "tide-levels," the value of the pass at the "Highlands of the Hudson" may be inferred.

East of the Hudson, the Alleghanies or "Highlands" shoot immediately up to a higher elevation than for several miles on the west side, and pass into Connecticut, extending thence through Vermont and New Hampshire into Canada.

The Mississippi table land of Western New York is another extensive as well as independent division of the interior elevation of the State.— The eastern boundary of this tract is nearly upon the county line between Alleghany and Steuben, while it extends north as far as to the summit drainage of Cattaraugus creek. This table land is generally from 1550 to 2000 feet above the ocean, but it has an irregular surface drained by streams, running, in some cases, in opposite directions. It is at the north eastern extremity of the extended plateau, dividing the waters of the Mississippi from those of the St. Lawrence basin. Towards the latter it breaks off abruptly, but to the South it slopes with gentle descent, so that a navigation is had from Olean Point, 2,300 miles to the mouths of the Mississippi, with no interruption except at the Falls of the Ohio at Louisville. This summit-plateau has less and less elevation as it extends westward. The natural summit between the waters of the Alleghany and Genesee rivers, near the village of Friendship in Alleghany County, N. Y., as found by Charles Ellet, jr., is 1,678 feet above the ocean level. Olean Point, on the Alleghany, as found by the same engineer, is 1,403 feet, and Chautauque lake, further west, 1,306 feet above tide. The natural summit between Conneaut lake and the harbor of Erie, Pa., is elevated 1,095 feet. That in Ohio, between the waters of the Muskingum, running to the south, and the Cuyahoga to the north, is 990 feet, the summit of the Ohio canal at Akron being 973 feet. Between the waters of the Sandusky and Scioto the natural summit is 923 feet; between those of the Maumee and Wabash 745 feet; while the natural summit between the Illinois river and Lake Michigan is 610 feet, or only 32 feet higher than the surface of the lake itself. At one point between the two waters last named, a depression occurs, reducing the summit to only 8 feet above the lake, and at which, with a level cut of less than one mile, the waters of Lake Michigan would flow into the Mississippi.

The variety of the surface of our State invests its physical geography with more interest than attaches to any other part of the country east of the Mississippi. The strong contrasts of the physical features of the State, the disposition of the surface, and its relation to the geographical structure of the great valley and basin of the great lakes, incontestibly prove that New York must forever be the principal commercial highway between the west and the seaboard.

Before dealing in dry figures and statistics of topography, it is proper to allude to the effects of elevation upon the capacity and economy of commercial routes.

The absolute rise and fall or undulation of a railroad governs the cost of transportation more strongly than the rate of its gradients. So with a canal. In the transportation of freight by rail-

road, every fifty feet of rise or fall, equally distributed or nearly so in each direction, is equivalent by its expenses to the cost of working one mile of additional level. The Philadelphia and Pittsburgh line has about 5,600 feet of undulation, equal to over 110 miles of level. The Boston and Albany line has over 4,000 feet rise and fall, equal to 80 miles of distance.

The Erie canal has but 620 feet rise and fall, equal to only 12½ miles of increased length in a route of 500 miles.

For heavy and bulky freights canal transportation is cheaper than by railroad, both channels having equal rise and fall, and both working to their full capacity. No practicable route exists, however, for a continuous canal between tide water and the lake basin except through the State of New York. The same remark is true in regard to any canal between the Atlantic coast and the Mississippi.

Where every other route of improvement culminates to a summit between the great valley or the lake basin and tide water, that of New York finds its summit at the lake itself.

In economical geography, therefore, the lines of lowest depression, or synclinal axes, are of the greatest interest. With such lines our State is intersected in directions the best adapted to the movements of commerce. In the number, length and continuity of such lines, New York has no rival in any seaboard State east of the Mississippi. Let us compare our own with the principal western routes of other seaboard cities.

New York reaches her commercial depot on Lake Erie with no greater ascent and no greater expenditure of power than that by which Boston gains the summit of the Worcester road, within 40 miles of her own harbor. Philadelphia encounters a summit higher than the surface of Lake Erie, within 50 miles of the Delaware river. Baltimore encounters a much greater elevation within 50 miles. Georgetown, with its Chesapeake and Ohio canal, following the Potomac, ascends to the level of Lake Erie at Cumberland, at the foot of the great Alleghany slopes. The cities south of Richmond reach their western trade over much higher elevations than exist upon the New York line. The Richmond lines ascend 3,000 feet.

These facts and considerations impart a greater interest to the topography of our commercial routes. We may now examine their elevations.

THE EASTERN WATER LINE.

This water line is level with the ocean for 160 miles. For the next 50 miles, the canal summit between the Hudson and Lake Champlain is but 134 feet above tide, or lower than the dome of the Merchants Exchange in New York city. The descent to Lake Champlain is but 54 feet, the level of the lake being 80 feet above tide, and having a navigable outlet on the north. The eastern water line is therefore a virtual connection of the St. Lawrence with the ocean.

THE NORTH WESTERN WATER LINE.

The North Western Water line is formed by lakes Erie and Ontario, and Niagara and St. Lawrence rivers. The elevation of lake Erie is 565 feet above tide, of lake Ontario 232 feet. Niagara river descends 333 feet in 36 miles. The St. Lawrence descends more than 180 feet between the lake and Montreal, 80 feet of which occur at the Long Sault rapids, opposite Massena in St. Law-

rence county. The north western water line is part of the great chain of lakes, covering 90,000 square miles, having a navigation of over 3000 miles in length, and draining more than 330,000 square miles of territory. The navigation of the St. Lawrence is improved for vessels of 130 feet keel, 26 feet beam and 10 feet depth. The descent of the Niagara river is effected by the Welland canal, with 34 locks, on the Canada side, while the Niagara ship canal will yet furnish still better facilities on the American side.

The elevations of this water line may be compared with those of various points in the Ohio valley.

The surface of lake Erie is 134 feet below low water at Pittsburg, Pa.; level with the Ohio at a point 10 miles below Marietta, 183 feet above low water at Cincinnati, and 290 feet above the mouth of the Ohio at Cairo. It is 408 feet below the summit of the Ohio canal at Akron; 211 feet below Columbus, O., 21 feet below the lowest summit between the Illinois river and lake Michigan and 62 feet below lake Superior.

On the east, the surface of lake Erie is 1195 feet below the highest summit of the Erie road, 1556 feet below the summit of the Pennsylvania road, 2055 feet below the summit of the Baltimore and Ohio road, 2189 feet below the summit of the Alleghanies at the crossing of the surveyed line of the Chesapeake and Ohio canal, and 1833 feet below the level surveyed for the tunnel of that work through the Alleghanies. But upon the line of the Erie canal, the lake is itself the summit.

The surface of lake Ontario is far below the top of Trinity spire in New York city, but at the same time is 125 feet above the surface of the Ottawa river, with which it is connected by the Rideau canal. The great lakes lie upon an elevated interior table land, sloping away on all sides except against the Alleghanies.

THE SOUTHERN WATER LINE.

The last marginal water line of the state is the Southern and South western, that followed by the line of the Erie road. Its elevations, where it approaches or coincides with the political boundary may be estimated from those of the Erie railroad track where located upon the immediate banks of the streams. These elevations are as follows:

Delaware Valley.		From N. Y.
Delaware Station	436 feet.	88 miles.
Deposit	997 "	177 "
Susquehanna Valley.		
Susquehanna Depot	907 feet.	192 "
Owego	814 "	236½ "
Elmira	854 "	278 "
Corning	921 "	291 "
Hornellsville	1139 "	331½ "

Between the Delaware valley and tide water at Piermont, the highest railroad summit is 896 feet above tide, and the total rise and fall 2814 feet. Between the Delaware and Susquehanna valleys, the railroad summit is 1366 feet above tide, and the rise and fall 829 feet. Between the valley of the Canistota and lake Erie, the highest railroad summit is 1760 feet above tide, and the rise and fall 3123 feet. The rise in the Delaware valley is 560 feet, and the rise and fall in the Susquehanna valley 730 feet, making a total rise and fall, between the Hudson river and lake Erie, of 8056 feet.

INTERIOR DEPRESSIONS.

Of these, the Mohawk valley is one of the most

peculiar and important, peculiar because it breaks the mountains near the center of the state, where, from the external water lines, we should expect to find the highest summits; and important because it is the great natural channel between the west and seaboard. The highest elevation of the Erie canal, within the Mohawk valley is 425 feet above tide, while on the south, mountains rise to 3804 feet, and on the north, to 5467 feet above the ocean. The Mohawk therefore has the same relation to the independent mountain system of New York that the Hudson has to the Alleghanies, it penetrates entirely through. As the valleys of the Mohawk and Hudson are united a route is formed, the most perfect that can exist.

The summit between the Mohawk and Oswego is upon the same plane as the "long level" of the Erie canal. It corresponds with the *crest* of the Alleghanies on other routes, but is 140 feet *below* the surface of lake Erie. Where the summits of other lines are from one quarter to nearly one half a mile *above* the level of Erie, the church spires of Rome and Utica are lower than the steamboat piers at Buffalo.

The principal descent of the Erie canal is in the Mohawk valley at Little and Cohoes Falls. The lower aqueduct over the Mohawk, just above Cohoes falls, is 185 feet above tide; at Schenectady the canal level is elevated 227 feet; at the mouth of Schoharie creek 291 feet, at the foot of Little Falls locks, 320 feet, ascent at Little Falls 40 feet; elevation of canal at German Flats 385 feet, and at Utica, and thence along the 70 mile level 425 feet. At Syracuse the canal descends 26 feet into the basin of Onondaga lake, and a few miles beyond it rises 17 feet; or to a level of 416 feet above tide. At Montezuma it locks down to its lowest level in the Seneca valley, where it has its lowest depression in the Ontario table land, viz. 380 feet. A rise of 126 feet, of which 24 feet are at Newark, 20 feet at a point west of Palmyra, and 37 feet at Brighton, besides other locks, raises the canal to the Genesee level at Rochester. This level is 506 feet above tide, and is about 65 miles in length. The last elevation of 62 feet at Lockport places the canal upon the level of lake Erie, 568 feet above tide.

Such is the topography of the two great and peculiar depressions in the surface of the state, the valleys of the Hudson and Mohawk, and the table land of lake Ontario. The adaptation and application of these depressions to the purposes of commerce are without parallel in the topography and history of any other seaboard state.

The Erie canal crosses two lateral depressions of interesting topography. The first is that of the outlet of the interior lakes. We have seen that the lowest depression of the Erie canal in the Seneca valley is 380 feet above tide. Cayuga lake is elevated 407 feet and Seneca lake 447 feet, giving a descent of the latter of 47 feet at Seneca Falls. Crooked lake is 718 feet above tide, giving 271 feet fall into Seneca outlet, and creating a water power in the neighborhood of Penn Yan. Canandaigua lake is 668 feet above tide. Most of the interior lakes have inlets, flowing from steep hills, giving often 400 or 500 feet fall in a distance of a few miles. Catharines creek, the inlet of Seneca lakes, descends 400 feet in 15 miles, affording a large water power in the neighborhood of Jefferson. Fall, Cascadilla and Six Mile creeks

also afford great water power at Ithaca, near their entrance into Cayuga lake.

North of the Erie canal, the Seneca river receives the overflow of Oneida lake, and under the name of Oswego river, descends 148 feet to lake Ontario. One hundred feet of this fall are within a distance of 24 miles, creating a vast and unfailing water power, drained from 7000 square miles of territory.

The Genesee Valley is the second great depression crossed by the Erie canal line. In approaching the Genesee from the east the canal ascends a sort of *levee*, the rise at Brighton, near Rochester, being 37 feet. It is possible that the Genesee formerly entered Lake Ontario at Gerundegut Bay some miles east of Port Genesee.

North of Rochester the river descends 250 feet through the several "Falls of the Genesee." South of Rochester, the Genesee Valley Canal rises 95 feet in reaching Mt. Morris. From thence to the summit above Portage, the ascent is 945 feet, or 1546 feet above tide. It is also 978 feet above lake Erie. This canal has the highest summit of any in New York, but as the work will unite the waters of the lakes with those of the Mississippi, it deserves comparison with some other works built for the same purpose in the Western states.

The Ohio canal summit is 973 feet above tide, and 499 feet above the Ohio river at Portsmouth. That of the Miami canal is 606 feet above tide, and 174 feet above low water at Cincinnati. The summit of the Illinois and Michigan canal is 586 feet above tide, and 8 feet above lake Michigan.

The character of the upper valley of the Genesee may be inferred from the fact that the great bridge of the Buffalo and New York city railroad crosses it at Portage, 234 feet above the water, with a length of less than 900 feet. About 100 feet below this bridge the river falls 60 feet. The head waters of the Genesee are on the table land of Western New York, already described.

Some of the other depressions of our state, suitable for business routes, are the Tioughnioga and Chenango valleys; the depression between the Shawangunk and Catskill mountains, forming the valleys of the Neversink and Rondout; the northern slope of the Clinton range, and in the valleys of nearly all of the principal rivers in northern New York.

The summit of the surveyed line of the Syracuse and Binghamton railroad, in the town of Tully, 18½ miles from Syracuse, is about 1200 feet above tide, being about 800 feet above the divergence of the Oswego and Syracuse track at Syracuse. South of Syracuse, the Binghamton road will ascend this summit by grades of 53 feet per mile. In the valleys of the Tioughnioga and Chenango the line will have a gentle descent to Binghamton.

The summit of the Chenango canal is 1131 feet above tide, being 706 feet above Utica and 303 feet above Binghamton.

The summit of the Delaware and Hudson canal in Sullivan county is 535 feet above tide.

The summit of the Northern, New York, railroad, near Chateaugay, Franklin county, is 1154½ feet above tide, the track at Ogdensburg being 238½ and at Rouses Point 88 feet above tide. The

whole rise and fall of the Northern road is 2580 feet.

There are depressions in the mountain system of Hamilton, Herkimer, Franklin, and Essex counties, which are available for lines of improvement. From near the centre of an extended plateau, occupying the northern part of Herkimer and Hamilton counties, four natural valleys diverge, nearly at right angles with each other.—These are the valleys of the Hudson on the south east; of Long lake, Fulton lakes, and Moose river on the south west; the Racket on the north west, and the Saranac on the north east. The general elevation of the lakes and streams, in the district from whence they flow in opposite directions, is from 1,500 to 1,600 feet, and the summits of any lines run from Troy to Ogdensburg, or from Rome to Plattsburg, would probably reach 2,000 feet above tide. One of the surveyed summits of the Saratoga and Sackets harbor railroad at Arietta is 2,465 feet. In the report of the engineer of the work just named, the following elevations are given:

	Feet
Hudson river at mouth of Sacandaga	536
" " Schroon	594
" " Boreas	1,184
" " Cedar	1,454
Junction of Rock and Cedar rivers	1,531
Long Lake	1,617
Racket Lake	1,745
Eighth lake of Fulton chain	1,776
Second do.	1,684
Outlet of Fulton chain in Moose	1,672
Moose river at Turin Forks	1,487
Upper Saranac lake	1,567
Sanford lake	1,712
Tupper's lake	1,500

This plateau, compared with the mountains rising from its eastern side, has a marked depression. The mass of mountains rising on the north west of Essex county is of greater height than the White mountains of New Hampshire, although Mount Marcy, the principal summit of the former, is 767 feet lower than Mt. Washington.

Mount Marcy is 5,467 feet above tide, while around it are a large number of mountains of above 5,000 feet high. As an elevated mass the Adirondack mountains are unsurpassed east of the Mississippi, except in the region of Black, Roan, and Grandfather mountains in North Carolina.

The highest elevation of the Highland range, on the east side of the Hudson, is 1,685 feet; of the Shawangunk mountains 1,866 feet, and of the Catskills 3,804 feet.

EASTERN SLOPE OF THE HUDSON AND CHAMPLAIN VALLIES.

This slope is of less interesting character than pertains to other parts of the State. The summit of this slope, although in part that of the Tagh conic range, is, in chief, that of the Hoosic or Green mountain ranges beyond. In the Champlain valley the Green mountains form the eastern slope. The elevations of the highest summits of these ranges are popular geographical facts, but the lowest occupied passes are less generally known.

The summit of the Western Railroad in Washington, Mass., is 1,450 feet above tide, and the elevation of the track at the State line 911 feet. In the tunnel, through the summit which sepa-

rates the valleys of the Housatonic and Hudson, the track is elevated 950 feet. The Troy and Greenfield road will be able by the excavation of the Hoosic tunnel (4 1-2 miles in length,) to pass the summit between the Connecticut and Hudson at about 860 feet.

In Vermont, the Mount Holly summit of the Rutland and Burlington railroad is 1,420 feet above tide, and 1,340 feet above Lake Champlain. West of this summit the valley of the Otter creek gives a line of easy descent to the lake. The Vermont Central Railroad has its principal summit in the back or second range of the Green mountains, 56 1-4 miles from Lake Champlain, and 913 feet above its surface, or 993 feet above tide.—From the eastern, through the western range of mountains to the lake, the Onion River valley has a continuous descent. By the side of the railroad track it is nowhere 500 feet above the lake, although the highest summits in Vermont, from 4,000 to 4,280 feet, are close on each side.

The Lamoille and Missisquoi are the only other streams breaking through the Champlain range of the Green mountains.

The summit of the Harlem road, in the north east part of Dutchess county, N. Y., is 769 feet above tide.

Such is a somewhat minute sketch of the prominent physical features of New York. To describe all would require a volume. Enough has been shown to prove that no state has a greater variety of surface, and that none is better adapted for the operation and support of commercial routes. Our incomplete view has not included the hydraulic power of the State, excelled in no other part of the globe; the great number and capacity of our interior lakes, which form one of the most remarkable features in the natural distribution of water; the great and productive table lands and valleys of rich calcarious and argillaceous soil; the quarries, minerals, and other natural elements of wealth abounding in our midst. All of these are better known than the topographical material we have exhibited, and at the same time would demand a quarto for their description.

Grand Rapids and Indiana Railroad Company.

The following are the officers and directors of this newly organized Company:—Joseph Lomax, President; Wm. H. Campbell, Secretary; Sylvester R. Shelton, Treasurer; Josiah D. Cook, Chief Engineer; Geo. Walker, Resident Engineer.

Josiah D. Cook, Joseph Lomax, of Marion, Indiana; Joseph G. Van Horn, of Grant Co.; Ambrose W. Henley, Andrew J. Neff, Amos M. Hackney, Lewis Baily, J. E. B. Rose, Abraham Stahl, N. D. Clouser, George S. Howell, Sylvester R. Shelton, and William Henley, of Hartford City, Directors.

This Company was organized Jan. 18, '54, with a subscription of 2200 shares at \$25 each. We have spoken of it previously under the name of Indiana, Kalamazoo and Grand Rapids Railroad Company. Though the name at the head of this article is the name under which the Company was chartered; the office of the Company is at Hartford city, Blackford county, Indiana.

Bridging the St. Lawrence.

The construction of the tubular iron bridge across the St. Lawrence opposite Montreal has commenced. One of the immense coffer-dams, made of timber, in which the piers are to be built, has been launched and towed to its place, and others are in progress. Some 1500 men will, it is said, be employed on the bridge the coming summer.

New Orleans and Ohio Railroad.

At a recent election for Directors of this road, held in Paducah, the following individuals were elected:

Wm. Smedley, E. L. Anderson, L. M. Flourney, G. H. Morrow, Henry Enders, S. M. Purcell, R. S. Ratcliffe, W. Thompson, L. S. Trimble, Rodney Case.

After the election had been held, the new Board met, and proceeded to the election of President, and L. S. Trimble was re-elected without opposition.

Peoria and Oquawka Railroad.

The annual meeting of the stockholders of this road was held at Knoxville. The following gentlemen were elected directors for the ensuing year.

Fitz Henry Warren, of Burlington;
W. S. Phelps, of Elmwood;
G. C. Bestor, R. Rouse, P. Sweat, W. Kellogg, J. Frink, of Peoria;
A. H. Danforth, of Washington;
J. Thomas, of Middleport.

Buffalo and State Line Railroad.

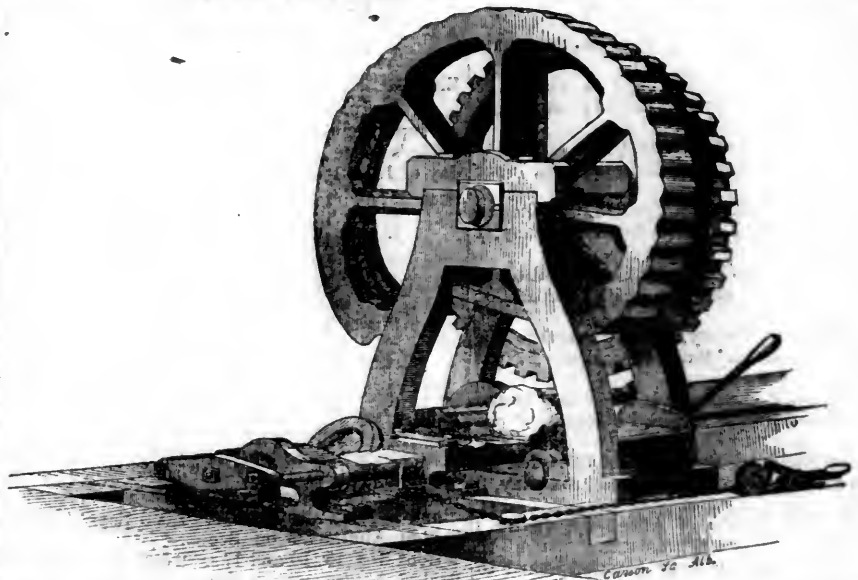
The following gentlemen were, on the 27th inst. elected Directors of this Board for the ensuing year: Alanson Robinson, George Palmer, Dean Richmond, William Williams, Charles H. Lee, Henry L. Lansing, Buffalo; Geo. W. Patterson, Westfield, Chataque county; James S. Wadsworth, Genesee, Livingston county; Joseph Field and Asa Sprague, Rochester; Horace White and John Wilkeson, Syracuse, Onondaga county. Homer Ramsdell, Newburgh, Orange county.

At a meeting of the Directors, George Palmer was re-elected President, and Dean Richmond Vice President.

Southwestern Georgia Railroad.

At a recent meeting of the Board of Directors of the Southwestern Railroad Company, petitions from Albany, Bufala, and Fort Gaines, were presented, asking an extension of the road to these several points. The Board decided to defer considering the question of extension until the 12th October next, when they will meet at Americus, and at which time the people of Southwestern Georgia are invited to meet them.

Winslow's Puddlers' Ball Squeezer.



THE Subscriber's Puddlers' Ball Squeezer, or Shingling Machine, has now been in use for several years, and in every instance has given unqualified satisfaction, as is attested by many Iron manufacturers who use it in different parts of the country and in England. Its advantages are, great expedition in performing its work, freedom from breakages, no wastage of Iron while being compressed, the action of the hammer upon the ends of the ball or bloom to upset it while being reduced in its diameter; and the very small amount of power required to work it, coupled as it usually is to the end of the ball rollers or forge train. Rights to use these machines can be had by addressing the Patentee, who will likewise cheerfully submit the many testimonials in his possession of its efficiency, from some of the first men in the country.

Persons residing west of the Alleghenies can be furnished with information in relation to the foregoing, by addressing
J. P. WINSLOW, Troy, N. Y.
A. S. WINSLOW, Cincinnati, O.

Phoenix Iron.

THE subscribers having made extensive additions to their Works at Phoenixville, are now prepared to receive and execute promptly, orders for BAR IRON, of their own manufacture, warranted equal to the best English refined, for quality and finish.

They also continue, as usual, to furnish T and U Rails, of any required pattern and weight; or from any of the following patterns, for which they have the rolls on hand, viz: weighing per lineal yard—20lb, 23lb, 40lb, 50lb, 55lb, 56lb, 57lb, 59lb, 60lb, 61lb and 64lb, of the T patterns.

48lb, 59lb and 75lb of the U patterns.
75lb Groove Rail for streets.

Also, a superior article of Wrought Iron Rolled Chairs, with continuous lips, 7 1/4 inches wide by any length required, weighing 1 1/2 lb per lineal inch, made to fit exactly the flanges of Rails, and ensuring a most perfect joint.

Also, Rolled Car Axles, of superior quality, cut to length. Dealers and Railroad Companies desirous of contracting, will please address.

REEVES, BUCK & Co.,
No. 45 North Water Street, Philadelphia.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 80 feet per rail.

Apply to
THOS. CHAMBERS,
September, 1854. President.

Engine Driver.

WANTED—A Situation by a Man of Great Experience in Engine Driving in England—Can produce first rate Testimonials—address, post paid, Box 1833, N.Y. Postoffice. 26tf

Welded Wrought Iron Tubes.

THE subscribers having lately added to their Cumberland Nail and Iron Works an establishment for making Wrought Iron Tubes, are now prepared to supply the trade with tubes two to twelve feet in length, furnished with screws and ferrules on their ends, of the following sizes—inside diameter,

1/2, 3/4, 1, 1 1/4, 1 1/2 and 2 inches,
Warranted and fully proved, equal to the best Pipes manufactured.

All orders addressed to us will receive prompt attention, and liberal discounts from the list of prices will be allowed to the trade.

REEVES, BUCK & Co.,
No. 45 North Water Street, Philadelphia.
July 13, 1854. 28.6m.

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors' Compasses Manufactured on the most improved principle and of the Best Quality

by THOMAS HUNT,
No. 53 Fulton Street,
New York.

DIVIDEND NOTICE.—THE SEMI-ANNUAL Interest, falling due in this city on the First Day of July, on the following named Securities, will be paid on and after that day at the office of the undersigned on presentation of the proper Coupons, viz.:

Bonds of the State of Indiana, for Banking purposes, issued in 1834, being the \$1,300,000 loan 5 per cent.

Bonds of the City of Pittsburgh, (Penn.), issued to the Ohio and Pennsylvania Railroad Company, 6 per cents.

Bonds of the City of Pittsburgh, (Penn.), issued to the Pittsburgh and Connellsville Railroad Company, 6 per cents.

Bonds of the City of Allegheny (Penn.) issued to the Ohio and Pennsylvania Railroad Company, 6 per cents.

Bonds of the City of Chillicothe, (Ohio,) issued to the Marietta and Cincinnati Railroad Company, 7 per cents.

Bonds of the City of Marietta, (Ohio,) issued to the Marietta and Cincinnati Railroad Company, 7 per cents.

Bonds of the City of Covington, (Kentucky,) issued to the Covington and Lexington Railroad Co., 6 per cents.

Bonds of the City of New-Albany, (Indiana,) issued to the New-Albany and Salem Railroad Company, 7 per cents.

Bonds of the City of Wheeling, (Va.,) issued to the Marietta and Cincinnati Railroad Company, 6 per cents.

Bonds of the Town of Harmer, (Ohio,) issued to the Marietta and Cincinnati Railroad Co., 7 per cents.

Bonds of the Franklin County (Ohio,) issued to the Columbus and Xenia Railroad Company, 7 per cents.

Bonds of Franklin County, (Ohio,) issued to the Cleveland, Columbus and Cincinnati Railroad Co., 7 per cents.

Bonds of Green County, (Ohio,) issued to the Columbus and Xenia Railroad Company, 7 per cents.

Bonds of Stark County, (Ohio,) issued to the Ohio and Pennsylvania Railroad Company, 6 per cents.

Bonds of Richland County, (Ohio,) issued to the Ohio and Pennsylvania Railroad company, 6 per cents.

Bonds of the County of Allegheny, (Penn.) Special Loan of \$75,000, 6 per cents.

Bonds of Allegheny County, (Penn.) issued to the Pittsburgh and Connellsville Railroad company, 6 per cents.

Ross county (Ohio) Bonds, issued to Marietta and Cincinnati Railroad company, 7 per cents.

Athens county (Ohio) Bonds, issued to the Marietta and Cincinnati Railroad company, 7 per cents.

Washington county (Ohio) Bonds, issued to the Marietta and Cincinnati Railroad company, 7 per cents.

Bonds of Van Wert county, (Ohio,) issued to the Ohio and Indiana Railroad company, 7 per cents.

Bonds of Allen county, (Ohio,) issued to the Ohio and Indiana Railroad company, 7 per cents.

The Bonds of Allen county (Indiana,) issued to the Ohio and Indiana Railroad company, 7 per cents.

Bonds of Crawford county, (Ohio,) issued to the Ohio and Indiana Railroad company, 7 per cents.

Ohio and Pennsylvania Railroad Co.'s Mortgage Bonds, 7 per cents.

Bellefontaine and Indiana Railroad company's Real Estate Special Mortgage Bonds, 7 per cents.

Indianapolis and Bellefontaine Railroad company's Mortgage Bonds, 7 per cents.

Marietta and Cincinnati Railroad company's Mortgage Bonds, 7 per cents.

Dayton and Michigan Railroad company's mortgage bonds, 7 per cents.

Peru and Indianapolis Railroad company's mortgage bonds, 7 per cents.

Fort Wayne and Chicago Railroad company's mortgage bonds, 7 per cents.

Indiana Central Railroad company's Income Bonds, 10 per cents.

WINSLOW, LANIER & Co., No. 52, Wall-st.
New York, June 26, 1854.

To Contractors.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

CHAMPLAIN CANAL.

Proposals when and where received:—At the Canal Commissioner's Office in the City of Albany until the 6th day of July, 1854, at 10 o'clock A. M.

Description of the work.	Amount penalty in bond.	When to be completed.
2 Combined Locks.....	\$10,000	Sept. 1, 1855.
1 Single Lock.....	6,000	" "
1 Road Bridge, located at Fort Ann.....	500	July 1, 1855.

ENLARGEMENT OF THE ERIE CANAL—EASTERN DIVISION.

Proposals when and where received:—At Engineer's Office in the City of Utica until the 8th day of July, 1854, at 10 o'clock A. M.

Section No. 13.....	\$1,000	April 1, 1855.
" 14.....	2,000	" " 1856.
" 15.....	6,000	" "
" 16.....	7,500	" "
" 17.....	4,000	" "
" 18.....	5,000	" "
" 19.....	1,500	" 1855.
" 125.....	7,000	" 1856.
" 126.....	6,000	" "
" 137.....	7,500	" "
" 128.....	6,000	" "
" 129.....	7,500	" "
" 130.....	7,000	" "
" 134.....	5,500	Sept. 1, 1855.

Waste Weirs on Sections 127 and 134.....	1,600	Sept. 1, 1855.
Bridge Abutments on Sections Nos. 15, 16 and 17..	2,500	July 1, 1855.
Bridge Abutments on Sections Nos. 18 and 19....	1,200	" "
Bridge Abutments on Sections Nos. 125, 126, 127, and 128.....	1,200	" "
Bridge Abutments on Sections Nos. 129, 130, 134 and at New London.....	1,400	" "
Culverts on Sections Nos. 16 and 17.....	700	" "
Culverts on Sections Nos. 126 to 128.....	2,600	" "
Culverts on Sections Nos. 129, 130 and 134.....	1,250	" "

BLACK RIVER CANAL.

Proposals when and where received:—At Engineer's Office at Lyon's Falls until the 12th day of July, 1854, at 10 o'clock A. M.

Section No. 30.....	\$2,000	July 1, 1855.
" 31.....	6,000	" "
Locks Nos. 99, 100 and 101..	4,000	" "
" 102.....	2,500	" "
" 103 104 and 105..	800	" "
" 106 and 107.....	500	" "
Bridges on Sections No. 31..	300	May 1, 1855
Raising Bridges across Black and Moose Rivers.....	300	Oct. 1, 1854.

ENLARGEMENT OF ERIE CANAL—MIDDLE DIVISION.

Proposals when and where received:—At the Engineer's office in the city of Syracuse, until the 15th day of July, at 10 o'clock, A. M.

Section No. 146.....	\$5,900	April 1, 1856.
" 147.....	5,400	" "
" 148.....	6,100	" "
" 149.....	4,600	" "
" 150.....	15,800	" "
" 151.....	9,600	" "
Aqueduct at Chittenango...	4,400	" "

and Section 202 connected 21,700 Nov. 1, 1855.

Culverts on Sec. 146, 147, 148 and 149.....	1,700	April 1, 1856.
Culverts on Sec. 150 and 151.....	2,200	" "
Culverts on Sec. 200 and 201.....	900	" 1855.
Bridge Abutments on Sections 146, 147 and 148....	1,800	" 1856.
Bridge Abutments on 150 and 151.....	1,000	" "
Bridge Abutments on 201..	900	" 1855.

ENLARGEMENT OF ERIE—WESTERN DIVISION.

Proposals when and where received:—At the Engineer's office in the city of Rochester, on Tuesday, the 18th day of July next, at 10 o'clock, A. M.

Section No. 212.....	\$3,500	April 1, 1856.
" 213.....	3,800	" "
" 214.....	5,100	" "
" 215.....	5,000	" "
" 216.....	3,700	" "
" 217.....	11,000	" "
" 218.....	14,000	" "
" 228.....	5,700	" "
" 229.....	5,800	" "

GENESEE VALLEY CANAL.

Proposals when and where received:—At the Engineer's office in the village of Cuba, on Thursday, the 20th day of July next, at 2 o'clock P. M.

Sections Nos. 82, 83 and 84..	\$2,500	Aug. 1, 1855.
" 91 and Feeder.....	4,000	" "
" 95 and 96....	3,200	" "
" 97.....	3,000	" "
" 98 and Feeder.....	3,400	" "
Ischua Feeder.....	6,500	" "
Ischua Aqueduct.....	1,000	" "
Culvert on Section No. 65..	100	April 1, 1855.
Valve Gates.....	1,500	Aug. 1, 1855.
Lock Houses.....	700	" "

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus defined will be received or acted upon.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a con-

tract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, June 9, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT,
CORNELIUS GARDINIER,
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

To Railroad Companies and Contractors.

FOR SALE—Fifteen second hand Locomotive Engines of various sizes and descriptions and in good running order suitable for all kinds of work. For particulars apply to

CLARK & JESUP,
General Railroad Agents,
38 Exchange Place.

Also Railroad supplies of all kinds, 4125

Prosser's Patent Lap-Welded Iron Boiler Tubes.

Tubes screwed together, flush on both sides, for Artesian Wells, &c. Free-joint Tubes, for Core Bars, Awning Frames, Railings, Leaders, &c.

Patent Wrought Iron Blacksmiths' WATER-TUBES, WATER-BACKS, &c.

Agents for KRUPP'S celebrated CAST STEEL for SHAFTS, RAILWAY Axles, Tires, Platters' Rollers, &c.

P. S.—All Tools necessary for the construction or keeping in order of Tubular Boilers

THOS. PROSSER & SON, 28 Plat street, N. Y.

SHANAHAN & LOEBER,

181 William-st,

(1st floor-Up Stairs.)

NEW-YORK.

MANUFACTURERS OF

THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
Chains, Scales, Levelling Rods, &c.

Sewall & Crehore

CIVIL ENGINEERS,

ST. PAUL MINESOTA.

JOSEPH S. SEWALL.

CHAS. FRED. CREHORE.

N. York and N. Haven R. R.

NOTICE OF SUMMER ARRANGEMENTS.



Commencing Monday, May 9, 1854.



TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A. M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A. M.—Commutation from New Haven.
9.10 A. M.—Special for Port Chester.	6.15 A. M.—Accommodation to New Haven.
11.30 A. M.—Accommodation for New Haven.	8.15 A. M.—Accommodation to New Haven.
3.00 P. M.—Express for New Haven, stopping at Stamford, Norwalk, and Bridgeport.	9.35 A. M.—Express from New Haven, stopping at Bridgeport, Norwalk and Stamford.
4.00 P. M.—Accommodation for New Haven.	1.07 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
5.00 P. M.—Express for Boston, stopping at N. Haven.	4.00 P. M.—Special, from Port Chester.
5.35 P. M.—Commutation for N. Haven.	4.00 P. M.—Accommodation to New Haven.
6.30 P. M.—Special for Port Chester.	9.30 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Sup't.

New Haven, May, 1854.

New York and Erie R. R.



PASSENGER TRAINS

leave Pier foot of Duane street,

as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.

Dunkirk Express, at 7 a. m. for Dunkirk.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations.

WAY EXPRESS, at 12½ p. m. for Dunkirk.

Rockland Passengers, at 3.30 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

Emigrant at 6 p. m.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Buffalo with first class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, &c.

D. C. McCALLUM, General Sup't.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COINERT,

European, American Employment Office,
287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.
And 102 Greenwich st.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five foot stroke, together with Blowing Cylinders, five foot diameter, and six foot stroke, in perfect working order, for sale. Apply to

EDW. BECH & KUNHARDT, 62 Beaver St.,
Or, A. TOWAR, Agent Pokeepsie Iron Works,
23d Pokeysie, N. Y.

Notice to Contractors.

PROPOSALS FOR THE ENTIRE CONSTRUCTION and equipment, or the graduation, bridging and masonry, separately, either in whole or in part, of the Mississippi and Tennessee Railroad, (extending from Memphis to Grenada, Mississippi, about 97 miles,) will be received at the office of the Company, in Memphis, till the 20th of July next. Proposals for the entire construction and equipment, and otherwise as favorable, will have preference. Profiles and estimates of the first 60 miles may be seen on application at the Engineer's Office in Memphis. Bidders must furnish satisfactory evidence of their ability to complete the work.

MINOR MERIWETHER,
Chief Engineer.

May 4th, 1854.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17th

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who retires from the business. The capacity of the Rossie Furnace for making iron, is believed to be unsurpassed by any charcoal Furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ore—specular red oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of Rossie, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

G. PARISH.

Ogdensburg, N. Y., April, 1853.

SEYMOUR, MORTON & CO. GENERAL R. R. AGENCY, Office, Metropolitan Bank Building. No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

MONTREAL AND NEW YORK AND Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6.30 a.m. and 5 p.m., arrive at 8 a.m. and 7.30 p.m.

Leave Plattsburgh for Montreal 7.30 a.m. and 4 p.m., arrive at 10 a.m. and 6.50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate stations.

Trains connect at Moores Junction with Northern (Ogdensburg) Railroad for Ogdensburg and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequalled for comfort and dispatch, and attended with least fatigue and delay than any other. It possesses moreover the advantage of a short Ferriage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.

For particulars see Freight and Passenger Tariff.

Baggage checked through.

H. W. NELSON, Superintendent.

Old Railroad Iron For Sale.

ABOUT 250 TONS, mostly whole bars, flat iron of superior quality. Deliverable at Portsmouth Va. as fast as it can be hauled. Immediate offers are invited, addressed to

L. O. B. BRANCH, President R. & G. R. R.

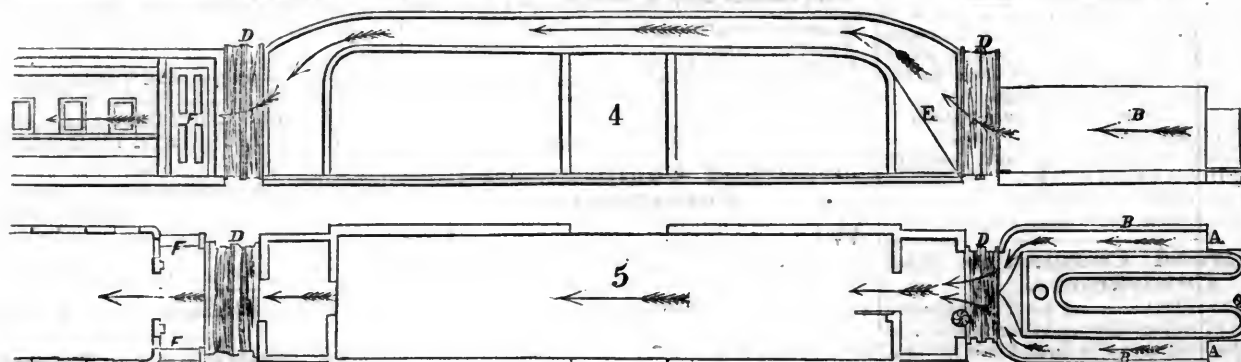
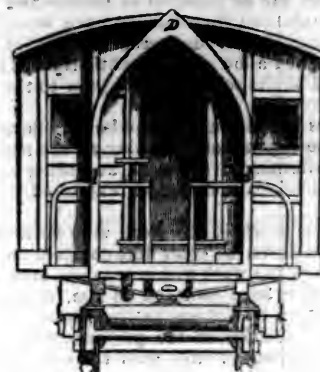
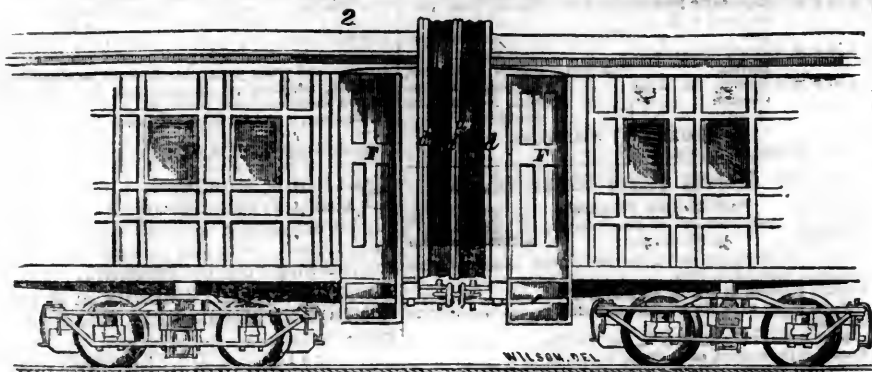
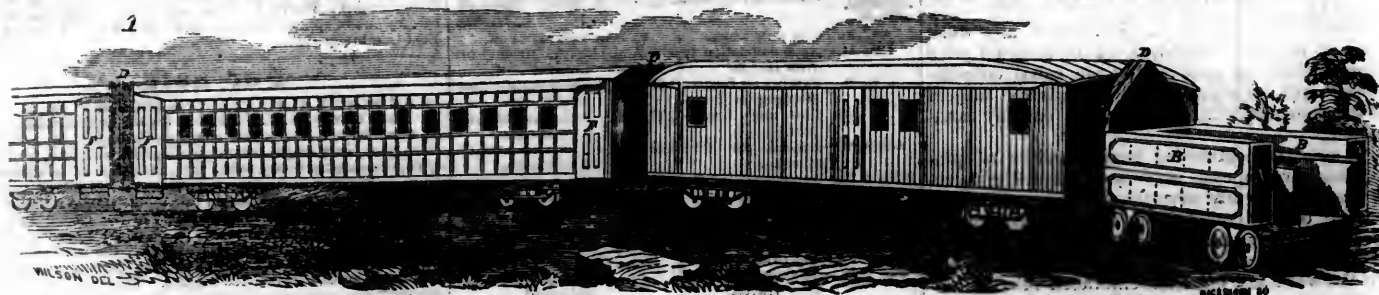
Releigh N. Carolina.

None but the accepted offer will be applied to.

8c.22

Waterbury and Atwood's Mode of Ventilating Railway Cars, and Excluding Dust, Smoke and Cinders.

CHARLES ATWOOD, Agent, BIRMINGHAM, CONN.



GROVE CAR WORKS, HARTFORD, CONN.

MANUFACTURERS OF

Railroad Coaches, City Cars, Freight, Coal, Gravel, and all other descriptions of Railroad Cars.

The above establishment has as great facilities, and turns out as large an amount of work, as any other Factory in the Union.
27tf

FALES & GRAY, Proprietors.

FOR SALE.

AN ALLIGATOR SQUEEZER, complete, entirely new, and in perfect order, to be put up at once.

It is of the most approved construction, with cam, cam shaft and pedestal, and with heavy driving gearing if required by the purchaser; and will be sold at a bargain.

For further particulars address

ROBERT BRIGGS, Jr.,

Supt. Rensselaer Iron Works, Troy, N. Y.

Also, for sale 7 Dimpfer Patent Fans, 2ft. x 9in. second hand. Apply as above.

Railroad Iron and Chairs.

The Lackawanna Iron and Coal Co., are now prepared with increased facilities to contract for Rails and Chairs at their works at Scranton, Penna.

Address S. T. SCRANTON Pres. at Scranton, or at the office of the Company in New York, 72 Beaver St.
26tf

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York,

19 tf

C. Floyd-Jones,

Division Engineer 3d and 12th Divisions.

ILLINOIS CENTRAL RAILROAD.

Vandalia, Ill.

Lyon's Tables of Cubic Contents, Etc.

These valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1 gives correct mean heights of cross sections with either two or three cuttings taken. Table 2 finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise.—
Price \$1.50. 21tf

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 6 1/4 in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12 1/2 in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce St., N. Y. 19tf

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE SOUTH AND WEST.

Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$16 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	16 00

An extra charge will be made for meals and state rooms on board the boats.
27tf

L. S. SPAFFORD,
General Supt

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 29.]

SATURDAY, JULY 22, 1854.

[WHOLE No. 953, VOL. XXVII.]

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

Branch-Roads and Guaranties.....	449
Aurora Extension Railroad.....	450
Remission of Duty on Railroad Iron.....	450
Pacific Railroad.....	451
Western Railroad Agencies.....	451
Disposition of Grades.....	452
Journal of Railroad Law.....	452
Railroad Traffic Returns.....	453
Grand Trunk Railroad.....	454, 453
Crystal Palace.....	454
Audroscoffin and Kennebec Railroad.....	455
Vicksburgh, Shreveport and Texas Railroad.....	455
Chicago and Mississippi Railroad.....	455
Are Railroad Securities worth what they were supposed to be.....	456
Eastern Railroad.....	458
Locomotive Forgings.....	459
Over-issues of New Haven Stocks.....	459
Fox River Improvement.....	459
Mobile and Girard Railroad.....	460
Public Debt of the United States.....	461

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, July 22, 1854.

Branch-Roads and Guaranties.

There is no fact in railroad economy better established than that *branch* roads never pay, and that assistance rendered by one company to another always costs more than it comes to. At the same time there are no mistakes into which railroad companies are so liable to fall, as the very ones we have named. There is no way in which a director, or a set of directors, can make themselves so odious, both in Old, and New, England, where railroads have their greatest development, and where experience has shown the policy best adapted to benefit or injure the investment, as by proposing the construction of *branch*, or *collateral*, lines. The *impolicy* of such measures will be obvious upon the slightest reflection. Railroads should be constructed only upon great routes of commerce. Upon such only will they *pay*. The feeders to such routes are the *ordinary* roads, over which a railroad will *not* pay. To build such is to incur for a *part* the same expense per mile, as

for a *whole*. In addition, the *trunk* will get all, or nearly all, the business brought to it by branches, whether they be built or not. Such is shown to be the fact by experience. To build branch lines therefore, is simply expenditure without increase of profits; an assertion we believe, which will not be controverted by any person versed in the management of railroads.

The aid which is so often guaranted by one company to collateral, or connecting lines, is generally liable to the objections urged against the construction of *branch* roads. The assistance may not result in actual *loss* to the party giving it, but as a contingent liability, it always impairs, and sometimes very seriously, the value of its securities. No person likes to buy into a stock over which a large number of claims may have the preference, although it may appear probable that the contingency feared may never happen. Any act of the kind, not contemplated by the parties to the original organization of a company, is just as much an injury, as far as the market value of their securities is concerned, as if 10 or 15 or 20 per cent. of the capital had been wasted outright. On this ground we think that any aid given by one company to another should always receive the unanimous consent all of the stockholders in the obliging company.

A still more serious objection against one company's aiding another, is the encouragement it affords to works that are *uncalled* for. The test of the expediency of any road, is the ability of the country through which it runs to supply the means for its construction. A *necessity* for a road should always precede it. Where this rule is not observed, the construction of these works will be over-done, and a revulsion, or commercial crisis of a severity greater or less, in proportion to the magnitude of the cause, will be the result. Now while railroads increase vastly the value of all kinds of property, and stimulate production to such a degree, that the increase of value due to these works alone is greater than the entire investment in them, still we hold that their progress should be subject to precisely the same law that controls investments in all other industrial enterprises. They should be constructed only on routes, where they will *pay* the ordinary rates of interest on their cost. We know of no other rule

which can be followed with safety to capitalists as well as to the best interest of the country. Railroads that will not pay should no more be constructed, than should the manufacture of iron or cotton be made to exceed the demand. The investment and the income should always be in *equilibrium*. We do not, of course, refer to roads which are sometimes built for *other* considerations than the mere income upon the cost, which being exceptional cases, are not amenable to a general rule.

Now it may and often does happen, that through the aid of other companies, roads are built that, having no business to sustain them, sooner or later end in disaster. *Opinion* in reference to the business capacities of routes for railroads is of little value. It is found to be wrong nearly as often as right. The only safe way is never to discard *evidence* for *conjecture*.

Where the people on the line of a proposed road, can furnish *one-half* its cost, this fact implies the existence of a local business sufficient for its support, and is worth more than a volume of elaborate argument to show that a business *may* be devolved where *none* exists. It is very easy to demonstrate, apparently, where *should* be the depots and routes of commerce; while to establish them is a very different matter. It is much safer to follow than to attempt to lead in matters which appear in a great measure to be independent of human foresight or control.

For reasons stated we have been quite willing to see the practice of cities and counties subscribing to railroads fall gradually into disuse. In some parts of the country it is, we admit, impossible to construct them without the aid of municipal bodies, but this fact does not impeach the general correctness of our positions. A corporation has no sense; and when private interest cannot be trusted, certainly individuals cannot, who have nothing, or comparatively nothing, at stake on the result. In the infancy of our railroads, and till confidence could be secured, both in their productiveness, and in the ability of private enterprise to successfully engage in their construction, it was frequently necessary for the community to aid them in its collective capacity. That period is now past, except, perhaps, in the more newly settled portions of the country.

The abuses, or evils, of which we have spoken, can easily be corrected by the purchasers of railroad securities, the parties of all others most directly interested. Let them refuse to have any thing to do with the securities of companies that will not give satisfactory assurances, that they will not undertake branch lines, no guarantee the securities of collateral or connecting roads, and two fruitful sources of loss and dissipation of railroad capital would be dried up.

While upon the subject we may state that another great source of losses in railway investments is in the dishonest or unwise exercise of a delegated authority. It is human frailty that parties having charge of railroads should naturally associate with their management ideas of gain, or personal advantage. If the power be left open to them, they will be tempted to enter upon new works, if only for the purpose of prolonging their term of service, or of turning it to account by commissions on purchases, or sales for new works, or by contracts for construction. So long as the opportunity exists, there will always be found some who will not be proof against its seductions.

Another strong temptation to the construction of new or branch lines, is the foolish rivalry that is apt to spring up between companies competing for the same traffic. It is too often the case that a road is no sooner constructed, than its managers think the next step to be taken is to either make war upon, or adopt a defensive policy against the aggressions of, other roads. They seem to regard the relations that subsist between railroads, as one of hostility. Hence their policy has constant reference to this idea. They are constantly entering into alliances and abandoning them, building a branch line to monopolize the trade of a particular district, or to get possession of it before their rival, incurring expenses that would not be tolerated upon any economical plan of working the road. If it be known in the outset that the managers of a road are only to be entrusted with sufficient authority and money to carry out the first plan, and that nothing is to be raised to correct mistakes, they will not be committed, but such route and plan adopted, which from its superiority will secure a natural monopoly, and which can only be competed with under circumstances disadvantageous to rival roads.

Aurora Extension Railroad.

This branch of the Galena and Chicago Union Road though built and operated by a separate company is now being extended to Galesburg to form a connection with the Central Military Tract Road. The company have declared that a semi-annual dividend of \$3 each share of the capital stock of the company, (not including the issue under resolution of December last,) be made, as of the 1st day of July, being 6 per cent. upon the money paid upon the stock, out of the net earnings of the road, payable on the 20th day of July. The dividend will be paid at the office of the Treasurer in Chicago. This road is 68 miles long. The net earnings for the six months were \$60,799; deducting interest the remainder, \$28,399 pays the dividend and leaves a surplus of \$6,080. The funded debt of the Company is \$665,000. The floating debt is small. The connection of this road with the Illinois Central will be made in a few weeks, when the receipts will be materially increased. The road is at present without any connection west, south-west or south.

The Remission of Duty on Railroad Iron.

The Congress of the United States are asked to remit, and repeal the tax imposed upon bar iron, used in the construction of railways. The object is to aid in the construction of railways already commenced, or, rather to prevent the stoppage of work upon them; and thus prevent throwing out of employment tens of thousands of laborers, mechanics, artisans, engineers, and persons, in all pursuits, who have found employment for their labor, and sale for their products, in these great enterprises: *In fine*, to prevent a sudden and depreciating change, in the labor and economy of the country. The statesman who acts upon this subject will ask:

1. Whether the tax on railway iron is really such a burden, as is likely seriously to obstruct their progress?
2. If it be, whether this tax has benefitted the mining and manufacturing interest to an extent which will compensate for the injury to railways?
3. Whether such a change in the productive industry of the country, as will be produced by arresting the construction of railways, will not prove far more injurious, than beneficial to the country?

1. Is the tax on railway iron a *real and positive burden*, likely to interfere in the construction of railways? To this, we answer, that it is. The proof of this is found in the *amount* paid, and in the *mode*, in which it is paid. As to the amount actually paid, by railway companies, at the present time, as a tax on their iron, we have two ways of ascertaining. First, we have the Treasury Returns of the importation of this species of iron, and the duties paid on it. It is well known, that the great increase in railway construction has been in the last five years, and the Treasury Returns show precisely what is the increased import of railway iron in that time. Thus:

Bar and rolled iron, imported in the year ending June 30th, 1848..... \$3,679,598
Bar and rolled iron, imported in the year ending June 30th, 1853..... \$15,402,776

Increased value per annum..... \$11,723,173

Now, it is well known, that almost the entire increase is in railway iron. The iron manufactures of the country have rapidly increased, and there is very little, probably no increased importation of common bar iron. Taking the average weight of iron per mile, and the cost of importation, (independent of duty), and the above increased value, will be equivalent to the iron on 2,000 miles of railway. Now does that compare with the actual railway construction? The progress of railway construction, in the last three years, has been, as follows:

Railways in May 1852, according to Andrews' Report..... 12,808 miles.
Railways in January 1853, according to the American Almanac..... 14,494 "
Railways in June 1854, according to the best authorities..... 17,500 "

Increase in two years..... 5,692 miles.
Increase in one year..... 2,846 "

It will be a most ample allowance, if we suppose what is over 2,000 miles, to have been ironed with American metal. Thus we find that the Treasury Report of the increased import of bar iron, and the amount actually required for railway construction correspond exactly,—when we have

made some allowance for the occasional use of American iron. But, we must go farther than this, and consider, that at this time, the number and length of railways, in construction, is much greater, than ever before.—But, suppose, we go back a year, or two, and test the annual construction, by what was then in progress. The time required to construct a medium railway now is about three years. But, we will allow *four*. We have then these data:

Miles of railway in actual construction in May 1852, according to Andrews' Report..... 12,808 miles.
Average per annum 4th..... 3,200 "

This again corresponds very well with the number of miles actually constructed since that time. On a careful revision of the various lines of railway now in progress, it will be found there are now 12,000 miles in the lines of railway actually commenced, and for which iron is not yet provided. If the work on these lines be not arrested, there will be constructed, in the next four years, 3000 miles of railway per annum, of which at least three-fourths (2,250 miles) must receive the iron from Europe. This may be assumed as a certainty; for, the tax on importation has not been able to prevent the importation of a single bar of iron, however onerous that tax may be.

Let us now see what the railways have paid and what they *will pay*, as a tax, or burden on their iron. In 1848, the value of imported bar iron was, \$3,679,598, of which less than three millions certainly was in iron used for ordinary purposes. We may assume then, three millions, as the average value of ordinary bar iron imported, and we have the following results, viz:

For the year ending	Total Imports of Bar Iron.	Used for ordinary purposes.	Used for Railways.
30th June 1848.	\$3,679,598	\$3,000,000	\$679,598
30th June 1849.	6,060,068	3,000,000	3,060,068
30th June 1850.	7,397,166	3,000,000	4,397,166
30th June 1851.	7,324,283	3,000,000	4,324,283
30th June 1852.	8,568,317	3,000,000	5,568,317
30th June 1853.	15,402,776	3,000,000	12,402,776
6 years ..	\$48,432,208	\$18,000,000	\$30,432,208

Tax paid by railways, on iron, in 6 years past..... \$9,129,662

In the six years past, railways have paid near ten millions of dollars, as a tax on their iron. But, supposing no new railways commenced, and only those in progress completed,—what tax will they pay on iron, at the present rate, in the next four years?—We have seen, that the importation of bar iron, in 1852-3 was in value \$15,400,000, and of that \$12,400,000 was of railway iron. In 1853-4 there was probably imported a larger amount; and this must continue for the next four years, or the works must be stopped. The number of miles to be ironed from Europe will be 2,250 per annum. This will require 225,000 tons. To this must be added 75,000 tons more for double tracks, side tracks, switches, &c., now constructing on nearly all railways. 300,000 tons will be valued (inde-

pendent of the duty) at \$55 per ton, amounting to \$16,500,000, on which the duty (30 per cent) is \$4,950,000; in round numbers: *five millions of dollars*. If the railways are to go on, they will pay to the government, in the next four years, *an actual sum of twenty millions*. This is a very heavy amount, even in the great outlays, on railways. But, when we come to consider the *mode* of payment, this burden is more than doubled. Let us analyze the *mode* of payments, in the construction of railways. The statistics of railways prove, that *one-half* the cost of construction has been paid for, by the contraction of an outstanding debt, mostly in mortgage bonds, which have been distributed throughout Europe, and America. This half of the money paid out, therefore, has not been raised, by the stockholders, nor the community, in which the road is made; but, by capitalists having surplus funds. Again, it may be assumed, as a fair average, that 20 per cent of all the railway stock, especially in the Western States, has been taken by the contractors, distributed to subcontractors, paid out for provisions, and thus become a sort of medium of exchange, in the construction of the work. We have then in the actual payments for construction in railways this result:

30 per cent cash paid by stockholders.
20 " " stock paid out for work and labor.
50 " " raised on bond and mortgage.

In the valley of the Mississippi, the average cost of railways, when fully equipped may be called \$30,000 per mile, though some are made for less. That \$30,000 will be distributed thus:

In cash by stockholders.....\$9,000
By bondholders.....15,000
Stock distributed for work.....6,000.

Now, of this total \$10,000 per mile has been paid for iron (including all things). This iron is almost universally bought in Great Britain for bonds; *but the duty is paid in cash*. This cash tax then is equal to \$2,000, the original cost of the bars, and freight being about \$6,500. Then the cash duty per mile paid to the Government, on iron alone, amounts to 22 per cent. of all the money actually raised by the stockholders!—Again the stockholders' payments are called in, and the money distributed during three years, making 33 per cent. per annum. So that the cash duty paid to the Government on iron will amount to *two-thirds* of all the money raised by stockholders, in one year. To this, there may be exceptions; but the history and statistics of railways, constructed in the last five years, show that this statement is very nearly accurate.

The question, then, whether the tax on railway iron is a *real, and positive burden*, on the construction of railways, and likely seriously to retard, if not arrest altogether their progress, is fully answered.

We have proved, that, if the railways, already begun, go on to completion, they must pay as a tax to the government:

1. Five millions per annum for the next four years;
2. Which is equivalent to 22 per cent. of the money actually raised by stockholders;
3. Which is equivalent again to two-thirds of what the stockholders must pay in cash in a single year.

It is then very evident, that the payments at

the Custom House are now one of the most serious drawbacks on the construction of Western railways, and one, which (if there be a continued scarcity of money for this purpose) will probably stop many, even the best of the railways now in progress. Ought not this burden to be removed? Is it necessary to the revenue of the Government, or to the protection of American manufactures? This question, we propose to answer, by proving, that it is necessary to neither one, nor the other; and has had no effect on the business of the American iron marts.

Pacific Railroad.

We presume, Congress will adjourn without taking action on the Pacific Railroad, except so far, perhaps, as to continue the reconnaissances in progress. Major Emory we learn, has been commissioned to compile the reports of the surveys, so that we shall soon be in possession of the evidence they develop. Major Emory's duties will be purely executive, we presume, so that we shall not have the *cost* of the road and the *difficulties* in the way of construction referred to any standard by which the public can infer what obstacles are to be encountered and what amount of time and money will be required to overcome them. Something more than this is wanted. Little actual progress will be made, till it is distinctly shown what is to be done. The most erroneous and absurd ideas upon the subject of a railroad to the Pacific are entertained not only by the public, but by members of Congress, whose acts are to supply the means of construction. The means will only be adapted to the work to be done, when the character and extent of that work is known. So long as members of Congress believe, as now seems to be the case, that one or more roads can be built by grants of lands, with a contract for mail service, not much to exceed what is now paid to first class roads, no other provision will be made. On the other hand should it be made to appear that all such provisions are totally inadequate to that end, then some more efficient and comprehensive plan will be adopted.

We learn that the detailed report of Gov. STEVENS' surveys is now in the hands of the War Department and will probably be submitted to Congress and thence to the Country previous to adjournment. Much important information regarding the Northern route may be expected from it.

While the Government parties who are, and have been, in the field, have, and will continue to supply a vast amount of information intelligible to the practical engineer, their reports furnish hardly anything from which the *inexpert* can form a correct idea of the magnitude and cost of the proposed work. An officer in charge of a party may present us with a birdseye view of the topography of his route, its geography, hydrography, flora, agricultural capacities, &c., &c., without being able to give a valuable opinion as to the cost, and time required for the construction of a railroad over it, for the simple reason that the construction and operation of these works is a kind of business in which he has neither experience, nor theoretical knowledge. From the lack of such qualifications we shall find, when we get the reports of the surveys, that they are made up of detail, and stated in such a manner that the public will be but little wiser than before. If, in

addition, provision had been made for placing the reports in the heads of a commission consisting of the most eminent railroad engineers throughout the country, we should have had a report which would have digested all the evidence, referred it to some standards with which the whole country is familiar; so that all could have seen at a glance the problem involved in the construction of a railroad to the Pacific. With such evidence before it, the country would have been ready to act without further delay upon a plan appropriate to the work. The sentiment of the country would be reacted upon Congress, which would immediately respond to the popular call. For the want of an intelligible statement of the subject, the whole country is groping in darkness, and members of Congress instead of meeting the subject as it demands, are making fools of themselves in speeches which only betray their ignorance, and furnish food for future regret and mortification.

It is not, however, too late to act. Will not some member follow the plan indicated, and do more for his own reputation, and the work than all that has yet been said and written upon the subject. It is *particularly* important that early action should be had before companies and individuals become involved in a work, the cost and difficulties of which they have neither counted nor understood.

Western Railroad Agencies in New York.

The intimate connection sustained by the principal Western Roads, with the business of New York, is shown in the numerous and successful freight and passenger agencies on Broadway. During the past and present seasons, many of the most important Western roads have established offices in New York, whence tickets and way bills are issued *through*, to all important points in the West. We have no doubt of the advantages of this system. It gives to these roads a proper representation in the great metropolitan depot of trade and travel, and affords to their patrons a valuable convenience and protection in contracting at once with principals, and for an entire route.

Under the old system, a passenger purchases tickets, at an increased expense of every road on his route, and is often beset and swindled by *runners*. Freight shipped over several lines is detained at every point of transhipment, and is taxed by each company, the ultimate charge being comprised in a bill of freight and "*expenses*," the amount of which can be seldom ascertained until demanded of the *Con ignee*.

By the system of Central Agencies, the passenger going, or the merchant sending to Cincinnati, Chicago, St. Louis, or intermediate points, contracts *here* with the road immediately intersecting his destination, and his ticket or way bill is acknowledged on all the intermediate roads. With freight, the contracting carrier becomes interested in its despatch at the least cost, and with the least delay.

On the west side of Broadway, we notice the the Michigan Central Agency at 178; the New York and Erie and Michigan Southern at 193; the Buffalo and New York City at 229; the Cleveland, Columbus and Cincinnati, and Indianapolis and Bellefontaine roads at 240; and the ticket office of the New York Central and Great Western Roads, under the Irving House, at 275 Broadway. The Pennsylvania Central, and Baltimore and Ohio

Roads have offices also in New York. These agencies have generally convenient and ample offices, furnishing every facility for the transaction of business and for supplying information, and offer, as we believe, the cheapest, and most convenient and responsible mediums for the despatch of through business from the East to the West.

Disposition of Grades—The Alleghany range in New Jersey.

"Grades" as usually understood, mean *inclines*, and the pitch of grades, or *rates* of inclination, is considered as a test of the practicability and operative economy of railroad routes. Indeed, in both of the principal physical elements of route, grade and curvature, the *rate* of each, or, more definitely, the *pitch* of the former and the *radii* of the latter, are regarded as the measures of the mechanical merits of the line. Strictly, however, it is only the total *elevation* overcome, and the total *angular change* effected by curvature, that determine the resistance of these elements. The same absolute power is required to overcome the gravity of a train ascending a grade of 40 feet per mile, two miles in length, as upon another of 80 feet per mile, but only one mile in length. So of curves; a "one degree" curve, or one of 5,730 feet radius, 10 chains long, offers the same resistance as a "ten degree" curve, or one of 573 feet radius, of one chain's length.

There is, however, a practical limit to the *rate* of inclines, although it is unsettled, from the different circumstances of the trains upon different roads, and from differences in the opinion of Engineers. Roads which from the extent and regularity of their tonnage can maintain assistant power, may overcome a given elevation by grades of 100 feet per mile with more economy than by diffusing the same or greater elevation over a greater distance, by grades of 40 or 50 feet per mile. On the other hand, roads running light trains, not beyond the power of ordinary engines on 40 feet grades, would lose by the working of 100 feet grades, even if occupying but a small portion of the length of the road, as such grades would require an embarrassing division of trains, or the use of assistant power which would be, for most of the time, out of use.

It is certain, that steep grades have other disadvantages, than in the loss of power which they involve. They offer greater liability to accident; they are apt, in winter, to embarrass the working of the trains, by ice and snow on the rails, reducing the available adhesion necessary for ascending with ordinary trains. Again, on a very heavy grade, the gravity of the moving power, that is, the Engine and tender, bears a much higher proportion to the useful load.

The highest grades worked by a heavy business in this country, are 116 feet per mile.

With a *disposition of grades* established upon the best principles applicable for the economical operation of a road, the mechanical merits of a route are governed by its total rise and fall, rather than by the *rate* of its grades. At any rate, *with a given rise and fall*, very little additional distance should be assumed to reduce the ruling grades below the practicable limit. On a great freight road, grades of 116 feet per mile, do not interfere with the economical operation of the traffic.

Not by these remarks, must our readers infer however, that a grade of 116 feet per mile is to be sought in preference to a lower rate of inclination.

The absolute elevation overcome being fixed, it is only to be *disposed* in the manner best suited for economical working, a disposition which is generally governed by particular considerations of the business of the route.

If we have succeeded in calling attention to the real element of the *resistance* of grades, it will be seen how important would be a popular knowledge of the topography of our country, particularly a knowledge of the lowest available passes through every considerable mountain ridge in the land. To our great railroads, a difference in elevation of but *one foot* is a difference of \$2,000, saved or lost in \$150 of yearly expenses. And at the same time we have mountain ridges traversing all the great divisions of our country, and liable to be attacked at any time, by the Engineer for the purposes of our internal commerce.

To the State of New York, the topography of that portion of the Alleghany range separating the waters of the Delaware and the Hudson, is of great interest and importance. The barrier lying between the rivers occupies the northern part of the State of New Jersey as well as the southern part of New York, and is marked by six or seven distinct and parallel ridges. There is but one depression in the State, penetrating so many as *five* of these ridges, and this is occupied by the Passaic and Pequannock rivers, a depression giving a far better route than that occupied by the Erie Railroad through Orange County, in New York.

We shall endeavor to give some data of the Topography of this section, after some examinations now progressing are completed.

Journal of Railroad Law.

HOW FAR ARE CORPORATIONS LIABLE FOR THE ACTS OF THEIR AGENTS.

The annexed authorities are relevant to questions which, at the present time, are earnestly agitated.

In the *New Hope & Delaware Bridge Company vs. the Phenix Bank* (3. Comstock's Reports of Court of Appeals 156.) it was held that the directors or managers of a banking corporation are probably chargeable, with notice of such matters relating to the ordinary business of the institution as are known to their cashier.

The above-mentioned plaintiffs, a corporation chartered by the Legislature of New Jersey, and exercising banking powers, increased their capital by new subscriptions; and by resolution of the Board of Managers directed the installments on the stock held in the state of New York, to be paid in at the defendants' Bank in the city of New York, which was accordingly done to a large amount in May 1835. The defendants' cashier, who was also one of the managers of the plaintiff's Bank, drew out and loaned a portion of the funds so deposited, to be repaid on demand, and sent a statement on such loans to the plaintiffs' cashier at the office of the plaintiffs kept at Philadelphia, requesting at the same time to be informed, if the loans were not satisfactory so that he might call them in. The plaintiffs' cashier replied that all was satisfactory. The Board of Managers afterwards met, and took action in relation to the business in New York, but expressed no dissatisfaction in respect to the loans so made, nor in any manner repudiated them. It was held that the Managers of the New Hope and Delaware Bridge Company were chargeable with notice of the fact

that the loans had been made from the time that it was communicated to their cashier, or at all events from the time of their meeting held a few months after their cashier had received the notice above-mentioned. And it was held further that by their silent acquiescence they had *ratified* the loan, and therefore that the defendants were not liable for permitting the funds to be withdrawn from their bank and loaned without authority by Mr. Delafield acting as before mentioned in his two-fold capacity of Cashier of defendant and Manager of the New Hope & Delaware Bridge Company. So far did the court of Appeals regard the New Hope and Delaware Bridge Company bound by notice communicated to their cashier, and by their own silent acquiescence in his acts.

But in the foregoing case, the Managers of the New Hope & Delaware Bridge Company were fully authorized to direct in what way their funds should be invested; and those funds having been loaned by Mr. Delafield upon stocks, it was perfectly competent for those Managers to ratify his proceedings, thus rendering them valid from the beginning.

But can a party *ratify* acts which he had no power previously to authorize? Is the New Haven Railroad Company to be regarded as having tacitly sanctioned the issue of stock, which could not have been warranted by an express preliminary vote of its members?

Could any act or acquiescence on the part of that Company impart validity to scrip unauthorized by law?

The case of *Delafield vs. State of Illinois 2. Hill* 100 grew out of a statute in Illinois where by certain officers and agents of that State were authorized to borrow money for public use, and for that purpose to sell its bonds or public stocks at not less than *their par value*. Certain bonds of the State were purchased by Mr. Delafield at their nominal amount, which were to draw interest from the time of their sale, the purchaser agreeing to pay for them in future instalments, without interest, and the State successfully invoked the aid of Chancery to extricate it from the difficulty in which it was involved.

A question arose in this case, whether not the State authorities had not tacitly ratified the proceedings relative to the transfer of the State bonds. Justice Bronson observed in substance, that "he was unable to say that there had been a ratification. Mr. Delafield relied on the fact, that the Governor of Illinois, after he knew of the first contract, signed the bonds and caused them to be delivered; and that analogous acts were performed by other public officers of Illinois in regard to the bonds. But the Governor acted under a limited authority, as did the subordinate officers referred to. None of them had authority to make such contracts as those in question; and if they could not make them originally they could not ratify them. Ratification must come from the principal, the State of Illinois (*the People vs. Phenix Bank*, 24, Wend. 431). The State of Illinois had done nothing to sanction the contract. The Legislature has neither affirmed the contracts, nor done any act in affirmation of them. It is true that *long acquiescence or even silence*, may sometimes amount to a presumptive ratification of the acts of an agent. (*Story on Agency*, 248). But before we infer any thing from the mere silence of the prin-

principal we must look into the nature of the original transaction, the relations between the parties, their habits of business, &c. How long or how short a silence on the part of the principal will justify an inference of ratification of his agent's acts must depend upon the circumstances of each particular case. A Legislature cannot be expected to move with the "celerity of a Wall street broker."

And accordingly, a period of silence which in the case of a vigilant mercantile firm might well justify the presumption of acquiescence, might be totally insufficient for such a purpose in the case of a large corporation.

Railway Traffic Returns.

Great Western of Canada.

Weeks ending	June 30,	July 7.
Passengers.....	\$17,139	\$14,530
Freight.....	3,470	*1,220
Sundries.....	1,189	1,080

\$21,798 \$16,830

Passengers carried	8,822	8,241
Total passengers since Jan. 1st	177,958	
Total receipts since Jan. 1st	\$532,309	
Miles open.....	229	

* Freights were stopped between Hamilton and the western station during the past week.

Cincinnati, Hamilton, and Dayton.

Month of June	1853.	1854.
Passengers.....	\$20,528	\$24,295
Freight.....	10,905	14,660
Mail, &c.....	870	1,020

Total..... \$32,303 \$39,975

Increase, nearly 24 per cent. \$7,672

Great Western of Canada 229 miles.

For the week ending July 14th 1854.

Received for passengers.....	\$13,208
" Freight.....	2,265
" Sundries.....	1,053

Total..... \$16,526

No. of passengers carried..... 7,118

Do. since Jan. 1st 1854..... 185,076

Total Receipt since Jan. 1st..... \$548,836

Grand Trunk of Canada 292 miles.

For the week ending July 1, 1854.

Received for 3,039 passengers.....	\$5,724
" 3,341 tons freight.....	7,522
" 608 M. feet lumber.....	2,593
" 731 cords wood.....	1,033
" Mails &c.....	780

\$17,652

Total receipts since June 1..... \$355,744

Bellefontaine and Indiana Railroad Company.

The following is a statement of the receipts and expenditures of the Bellefontaine and Indiana Railroad Company for the six months ending June 30, 1854:

From Passengers.....	\$55,035 48
From Freight.....	61,913 39
From Mail and Express.....	4,225 89

Total..... \$121,174 76

Total Expenses..... 47,966 63

Net Earnings..... \$73,203 13

The Baltimore and Ohio Railroad.

Show the following receipts for the month of June:

Main stem. Wash. Br. Totals

For passengers.....\$45,594 42 \$25,356 26 \$70,950 68

For freight.....271,207 92 6,522 72 277,730 64

\$316,802 34 \$31,878 98 \$348,681 32

The receipts of coal and flour are as follows:

June, 1854.....	57,751 tons.	31,791 bbls.
June, 1853.....	21,580 "	28,261 "
Increase.....	36,171	3,530

The half year closes with June, and the following statement of the receipts of the main stem will show how the first six months of this year compares with those of the last:

Main Stem, 1854.		Main Stem, 1853.
January.....	\$254,277 10	\$101,819 49
February.....	279,856 87	99,017 27
March.....	356,880 45	216,257 37
April.....	351,379 81	200,219 59
May.....	366,974 86	204,950 01
June.....	316,802 34	189,967 51
	\$1,926,171 43	\$1,012,241 24

Prospects of the Grand Trunk Railway.

We give below the remarks of Mr. Galt on the Grand Trunk Railway, made in the House of Assembly of Canada, June 20th:—

Mr. Galt said he thought it proper to make some reply to the remarks by the Hon. member for Kent on the Grand Trunk Railway. Hon. gentlemen might express some surprise at his undertaking the defence of the Grand Trunk Company after the position he occupied in 1852. He had nothing to add nor nothing to retract from the statements he had then made; but the reason that induced him to withdraw his opposition, was (while he saw the determination of the government to persist in the scheme,) the prospect of securing a bridge across the St. Lawrence at Montreal, and a continuous line of railway under one management, westward of Montreal, to Sarnia. The bridge he considered of the utmost provincial importance, and a continuous railway, under one management would afford the public greater accommodation, at less price than several lines possibly could.

He further contended that under the circumstances the present policy of the Grand Trunk Company was the best that could be adopted. It was impossible to deny that the position of the money market in England rendered it very hard to obtain money for any new undertaking. That fact might be learned on any exchange on this continent or in England.

With respect to the issue of Debentures by the Government in favor of the Company, he would state that the total amount of provincial Debentures forwarded to their shareholders by the Grand Trunk Company, was £1811,500, which were sent under authority of Railway Guarantee Act viz: St. Lawrence and Atlantic 467,500 Less issued before amalgamation,..... 400,000 Quebec and Richmond,.... £267,500 £250,000 £317,500

Grand Trunk Railway distance 345 miles at £3,000 per mile..... £1,035,000 Trois Pistoles Line, distance 153 miles, at £3,000,.... 450,000 £1,811,500

One half has been sent to London Agents, or.... £905,750

Comprehending balance due St Lawrence and Atlantic £67,500 Quebec and Richmond.... 260,000 Grand Trunk and Trois.... 588,250 Pistoles,..... £905,750

The remaining half has not yet been sent to London. About £300,000 of those sent, have been issued to the public; being less than was due for the St. Lawrence and Atlantic and Quebec and Richmond Road. The remaining £600,000 will be issued as they are paid for in full; the

proceeds remaining at the credit of the Province till the Company are entitled to the same. The total amount of Provincial aid under all Acts forming the Grand Trunk Company, is £1,811,500, for which the Province will hold a first mortgage over an expenditure of £9,500,000; the St. Lawrence bridge, and Toronto and Sarnia road and the Grand Trunk Junction Line, making together about £3,200,000, being undertaken without any Government aid. The Provincial advance will, therefore, be only 24 per cent. instead of 50 per cent. under the Railway Guarantee Act and 34 per cent. under the Grand Trunk Act. The principle has been admitted by the government in the case of every railway company in the Province, of permitting the negotiation of Government debentures at the period and in the manner most advantageous to the Company, subject to the condition that the proceeds thereof remain at the credit of the Province, until the Companies become entitled to the same by the progress of their works. This course has been taken towards the Grand Trunk Railway. Also, in their case it was the more necessary, because the debentures were by the Companies' prospectus, in fact, sold to the parties before becoming shareholders, and it was impossible to so divide amongst them the sums provided by the Act to be issued £40,000 in every £100,000 expended. The whole amount therefore, must have remained unappropriated, until the completion of the entire works, a course that would have deprived the Company of that provincial credit, which it was designed by the legislature to give them, and which had become more important, owing to the change in the money market, arising from the disturbed state of Europe. He believed the Company would be able to carry out their engagements and that the contractors were men of the very highest standing

The following table taken from a speech delivered in Congress a few days since by Mr. Haven, shows the expenses of maintaining the Postal System, and the amount of revenue collected in each State:

States and Territories.	Total Postages Collected.	Transport'n.
Maine.....	\$125,194 94	\$52,767 88
New Hampshire.....	81,703 53	31,999 45
Vermont.....	78,638 86	62,476 85
Massachusetts.....	455,966 80	180,117 13
Rhode Island.....	47,877 79	12,139 72
Connecticut.....	146,364 50	64,173 13
New York.....	1,175,516 06	466,019 76
Delaware.....	16,310 71	9,412 00
New Jersey.....	89,074 17	74,139 55
Pennsylvania.....	488,303 30	238,019 69
Maryland.....	152,158 11	191,586 20
District of Columbia.	37,832 89	
Virginia.....	183,472 19	313,234 72
North Carolina.....	60,751 51	175,630 59
South Carolina.....	82,985 75	127,160 19
Georgia.....	142,800 14	215,238 78
Florida.....	16,878 83	38,661 99
Alabama.....	96,091 85	178,543 35
Mississippi.....	73,108 21	115,924 92
Texas.....	47,164 46	189,362 19
Kentucky.....	112,542 60	139,038 15
Michigan.....	96,757 19	136,260 14
Wisconsin.....	73,570 83	46,608 00
Louisiana.....	123,170 18	90,420 73
Tennessee.....	85,701 10	92,886 29
Missouri.....	98,781 82	140,454 41
Illinois.....	175,846 83	181,611 10
Ohio.....	375,759 72	363,182 37
Indiana.....	137,339 43	109,392 96
Arkansas.....	25,105 89	90,859 15
Iowa.....	40,980 22	36,893 32
California.....	123,152 00	174,243 02
Oregon Territory.....	9,798 35	47,682 16
Minnesota Territory..	3,521 86	2,386 28
New-Mexico Terr'y..	517 92	19,647 22
Utah Territory.....	959 66	3,269 70
Nebraska Territory..	520 18	
Washington Territory	536 89	

Total..... \$5,084,464 57 \$4,199,951 68

Col. Benton's Attack upon Major Emory.

It will be recollected that a prominent feature in Col. Benton's late speech against the Mexican treaty was his violent opposition to what is known as the southern railroad route to the Pacific. In connexion with this subject he indulged in remarks which implicated Major Emory in a manner calculated to affect that gentlemen's character. Major Emory is not the man to submit to an injury of this kind without repelling the assault. It will be seen from his letter below that he meets the charges of Col. Benton with a straightforward denial, which will satisfy all unprejudiced minds that he has been wantonly and unjustly assailed.

This is one additional proof that Col. Benton's passions have obtained the mastery over his better judgment. Maj. Emory's letter is as follows:

WASHINGTON, July 6, 1854.

To the Editor of the Union:

SIR: A speech of Thomas H. Benton on the ten-million-treaty bill, published in the Globe of yesterday, and which has this moment reached my eye, contains this statement:

"And now for the reason this route must go south of the Gila, and a thousand miles out of the way, &c., &c."

"I will tell you, and for that purpose must introduce you to a large object, on paper—the city of New San Diego. Here it is—here it is—and with explanatory notes showing that it is a port, an United States military depot, &c., &c.; and further showing that it was surveyed by A. B. Gray, United States boundary commission, and T. D. Johns, United States army."

"For the rest, this new San Diego is south of the old San Diego, and so far south that no road to San Francisco could go by it, unless it went south of the Gila."

"Its conception dates with the sojourn of the boundary commission there, some five or six years back; and Mr. Bartlett, who was dismissed from that commission, has often told me that the boundary survey was delayed eight months, waiting for the survey of that town."

"Mr. Emory, of the topographical corps, and who was of the boundary commission, and is in charge of the Pacific route surveys, and who is brother-in-law of the president of the one hundred million company, is said to be interested in this city."

Now sir, I pronounce these charges and insinuations against me malicious and false, and without even the shadow of truth.

I do not own, and never did own, a single lot in new San Diego; I never surveyed, caused to be surveyed, or permitted any person over whom I had control to survey, new San Diego, or to engage in any other private survey in California. Throughout the whole course of my service in Cal. with Gen. Kearney, and on the boundary survey, I remained constantly on the work, never accepting private employment of any kind, although offers were made to me which at this distance would appear fabulous.

I never owned property in either old or new San Diego. The only property I ever owned in the vicinity of either was transferred to me, during my absence on the boundary survey line, by my friend, the late Gen. Bean, for the sum of \$320 advanced by me to him. The property I then considered nearly worthless. I sold a portion of it in 1850 for \$200, and executed a power of attorney in the same year, directing the remainder to be sold; and I presume it has been by this time, if not on my account, for taxes, as I have

had no return from it since then, just four years ago this summer. If Mr. Benton has more precise information, it will be cheerfully received; and I shall be glad to learn that the proceeds of the further sale are sufficient to reimburse the remainder of my advance.

To show more conclusively the infamy and injustice of his insinuation in connexion with my duties on the Pacific railroad surveys, I will here state that if I have an interest in any city of California, it is San Francisco. I do own what is to me a very considerable interest in that city, having some time since invested there four thousand dollars which I received from my father's estate in Queen Anne's country, Maryland.

I will add, moreover, that I am not, nor have ever been, connected with any Pacific railroad scheme; that I have never owned at any time any shares whatever in any route, and have no personal interest whatever, directly or indirectly, in any scheme of a railroad to the Pacific; and that I have never had any business transactions with Mr. Walker, public or private.

Ever since my campaign with General Kearney in 1846, in which a member of Mr. Benton's family was dismissed from the army, he has not failed, on every occasion that presented itself, to attempt by his influence to injure me in the discharge of my official duties, and to attempt to malign me in speeches purporting to have been delivered on the floor of Congress.

I have, like others, silently endured up to this time Mr. Benton's evident malice and his notoriously slanderous tongue. I shall do so no longer; and whatever others may do in like cases, or think, I will henceforth stamp as such, any falsehood he may utter to my prejudice.

WILLIAM HEMSLEY EMORY.

—Wash. Union.

Canadian Grand Trunk Railway Company.

We have been furnished with the traffic receipts of the Grand Trunk Railway of Canada from the 1st of January last, which exhibit a pleasing aspect, inasmuch as the progress in the increase has from the 1st of January been gradual. Our informant states that the line is still unfinished for about fifty miles in the centre, between Monteval and Portland, and that the present traffic must be considered as purely local; indeed, the small amount received per head for passengers, 78 cents, or 3s 3d sterling, clearly proves this. We are further informed that by the 1st of July next "through" traffic may be expected to pass over the line, and a very large increase will consequently be the result.

This section of the Grand Trunk, as estimated, will cost, though seventy miles longer, the same money as the Great Western Railway of Canada had done: it may, therefore, be fair to contrast the receipts of the one with the other. So far they preponderate in favor of the latter—the average weekly receipts of the Great Western being £3,870 per week against £2,505 of the Grand Trunk; but the last week's receipt showed a difference only of £971—the respective amounts being published in last Saturday's railway papers—the Great Western Railway £4,270 sterling, and the Grand Trunk Railway £3,299 sterling; so that it will be seen the latter is making rapid strides to reach the Great Western. We shall watch with some anxiety the progress it makes; but are told not to expect much till after the 1st of July. It must be evident to all interested that, when the Quebec and Richmond section is opened, a considerable addition to the receipts must take place on the portion of the line now being worked. The connecting of the cities of Quebec and Montreal with Portland and the Atlantic ought of itself to be enough to produce a traffic capable of paying a

good per centage on a railway which will cost £8,000 per mile, including staff, plant, and interest to shareholders until completion.

The following statement will show the details of the operation of the road, for the year to May 13.

		Amount rec'd.
Total passengers carried.....	81,569	\$62,833
" tons of freight do.....	46,835	110,812
" Feet of lumber do.....	6,371,214	18,626
" Cords of wood do.....	17,415	23,082
Rec'd. for Mail service.....		16,320

Total receipts..... 237,743

The receipts per week have been as follows:

Week ending,	Total Dollars.	Sterling £.	s.	d.
January 7.....	8,001 72½	1,644	3	9½
" 14.....	8,871 56½	1,822	18	6
" 21.....	10,633 48	2,184	19	3
" 28.....	10,842 50	2,227	18	2½
February 4.....	12,333 16	2,033	4	2½
" 11.....	10,671 35½	2,178	7	3
" 18.....	10,002 44½	2,055	5	8
" 25.....	9,605 13½	1,973	18	2
March 4.....	12,193 12½	2,505	16	11½
" 11.....	12,243 45½	2,515	15	7
" 18.....	13,251 51½	2,722	18	3½
" 25.....	13,793 07½	2,834	3	10½
April 1.....	11,500 77	2,365	3	5½
" 8.....	14,549 91	2,989	14	2
" 15.....	12,873 27	2,645	3	9½
" 22.....	15,301 65½	3,144	3	6½
" 29.....	14,793 23½	3,033	10	19½
May 6.....	14,252 56½	2,928	12	2½
" 13.....	16,088 05½	3,299	12	0½

\$237,743 98 £47,606 4 9

Crystal Palace.

We are sorry to find that the recent attempt to resuscitate the "Crystal Palace" has proved unsuccessful. M. Barnum has resigned the Presidency of the association for the reasons stated in the following note addressed to the Directors:

Gentlemen: in accepting at your hands the office of President, I pledged myself to devote my entire time to your interest. I have unflinchingly done so. Perceiving now that over exertion, especially at this season is affecting my health and becoming sensible that my other numerous avocations pre-emptorily require my attention, I feel constrained respectfully to tender you my resignation.

The report of the Finance Committee, made this day, shows that, even at this dull season of the year, the receipts of the Crystal Palace exceed the current expenses. From the desire generally manifested by manufacturer and artists to get in their specimens for exhibition during the present month, there seems no reason to doubt that visitors at the Palace during the Autumn will surpass in numbers those of any former period, particularly if you decide to terminate the entire Exhibition, dissolve the Association, and dispose of its property, on the 1st November next.

As one of the Directors, I shall continue to esteem it a pleasure to exert myself for the promotion of the interests of the Association. In common with my fellow citizens, I am grateful for the prosperity it has already conferred upon our City, as well as upon the country at large, (notwithstanding the pecuniary embarrassments under which it has labored,) by extending the popular love for Industry and Art in all their beautiful and useful developments.

I am, gentlemen, respectfully yours.

P. T. Barnum

Theresignation was accepted and John H. White Esq., was unanimously elected President *pro tem*.

A Committee was appointed to obtain the services of an efficient Superintendent for the season before us and it was resolved to finally close the Exhibition on the 31st of October next.

It was further resolved to appoint a Committee

with power to dispose of the Crystal Palace and all other property of the Association, deliverable on or after the 1st day of November next.

So the "Crystal Palace" is to have its demise on the first of November next.

Androscoggin and Kennebec Railroad

The recent annual report of this company states the whole cost of the road to be \$2,176,506, or \$39,572 per mile.

The earnings for the year ending May 31st 1854, were \$161,321 40, and the expenses were \$67,950 98, leaving the net earnings \$93,370 42. The proportion of expenses to earnings was 41½ per cent. The miles run by locomotives 120,070, at a cost per mile run of 56 6-10 cents.

The capital stock amounts to \$687,276 64; the Bonds to \$1,045,800, and the floating debt \$99,004 41, from which last item deduct the sum of \$41,459 20 for cash and other assets on hand.

The following table will show the receipts and expenses for the several years:

Year.	Receipts.	Expenses.	Increase.	Gain.
1851.	102,646 95	63,548 77		
1852.	125,054 36	58,078 56	22,407 37	20 per cent.
1853.	140,561 42	60,507 99	15,507 05	12 1-15 per ct.
1854.	161,322 40	67,050 98	20,760 00	14 3-4 per ct.

In reference to the future prospects of this road we copy the following from the report.

In the spring of 1853, the debt of the Company was very pressing, and its credit at a low ebb, in consequence of its not being able to meet its engagements with promptness. The floating debt was about \$240,000 and its over due bonds about \$270,000, while the only available means it had was about \$300,000 of the million loan undisposed of. The Directors submitted a proposition to issue bonds to the amount of \$500,000, payable in *Stock* at the expiration of ten years, or sooner, at the option of the holder; the bonds to have semi-annual interest-warrants annexed payable in cash; and to be paid for one-half in stock, the other half in money, which was adopted by the shareholders and went into immediate operation. Many of the most Sagacious Stockholders perceiving the advantages offered by this proposition, both of relieving the Company and putting a dividend upon the shares surrendered into their own pockets, availed themselves at once of the privilege. By the investment they obtained six per cent upon the cash advanced. The Treasury has thus far, received from the operation \$142,200 in cash or outstanding debts; and as the principal is to be repaid in stock, the only burden which comes upon the Company is the payment of interest, which is readily met from the receipts of the road.

The Directors say it must be apparent on examination of the earnings and prospects of the road, that it has the ability, when once relieved from the pressure of the floating claims against it, to pay from its net earnings all its interest, and leave a handsome surplus for keeping up the sound condition of the road, and distributing to its shareholders a regular dividend.

If such results may be inferred from this state of things, what may not be anticipated when the Penobscot and Kennebec road shall offer us its contributory stream, connecting us, within the year, with the grand seat of enterprise and business on the Penobscot river and the rapidly growing country east of it; and at a time not far distant, with the flourishing provinces still further east, whose traffic and passengers will seek the west through this commodious channel. And also when that other tributary stream, the Androscoggin road, shall extend her facilities into the beautiful vallies of the Sandy river and the upper waters of the Kennebec.

In order to help forward the early completion of the Penobscot and Kennebec road, we have during the last seven or eight months furnished the Company with facilities and means for transportation and equipment, and have received payment in the stock of that road to the amount of \$7600, bearing

interest, which forms new part of the assets of our Company.

We have made a new contract with the Government of the United States, for the transportation of the mail, by which we have received since the first day of July last \$100 a mile, or \$5500 a year for transporting the mail twelve times a week each way. We have to furnish a separate apartment in our cars, conveniently fitted up for this service.

The Directors for the year are Rufus Horton and Ira Crocker of Portland.

D. L. Millikin, of Burnham, Ashur Hinds, of Benton, Wm. M. Longley of Green, Anson P. Morrill of Readfield, and John M. Frye, of Lewiston.

Vicksburgh, Shreveport and Texas Railroad.

Our readers will be gratified to learn that the Board of Directors of the Vicksburgh, Shreveport and Texas Railroad Company, at their late meeting put 50 miles of the road under contract. Twenty miles at Vicksburgh, ten at Monroe, running west, and twenty at Shreveport, running to the Texas line. The contract at Vicksburgh was awarded to Col. J. B. Ives of New Orleans, a gentleman of much experience in road building, and fully responsible. His contract embraces the entire completion of the road, such as grading, furnishing, and putting down the cross-ties, laying the iron, etc.—and cars. The Company will purchase and deliver the iron, locomotives and cars. The other two contracts embrace similar provisions. The contract for ten miles at Monroe, was taken by Dr. J. T. Simmons & Co.

The twenty miles at Shreveport was taken by Dr. C. Young and Mr. P. J. Tournadre. The contractors will commence operations just as soon as arrangements can be made to get hands and the necessary tools to work with. The entire subscriptions to the stock at this time amount to the sum of \$1,790,500 with every probability of an immediate enlargement. A company of gentlemen in New Orleans have agreed to take \$100,000 worth of stock, and it is expected that some gentlemen in Georgia will take stock to the amount of \$25,000. The following important resolution was passed by the Board;

Resolved, That N. D. Coleman, Esq. the President of this road, be authorized to contract with any Railroad Company for the construction, in whole or in part, of the section of this road from Red River west to the Texas line, on the best terms and conditions practicable, and to submit the said contract or contracts, to this Board for their ratification.—*Shreveport Dem.*

Finances of Philadelphia.

By an official report, we learn that the debt of the consolidated city of Philadelphia amounts to \$18,138,371 87. Amount of railroad stock drawing interest, \$9,708,440 40. Funded debt secured by dividend paying stocks \$8,429,927 47. Amount of interest due \$367,000. Cash in Treasury \$142,792 82. In consequence of the confusion affairs incident to the change of several municipal corporations into one city, the treasury lacks the necessary funds to pay the July interest of the debt. An ordinance has in consequence been introduced, authorizing a loan of \$370,000 for that purpose.

Central Military Tract Railroad.

We learn from the Galesburg Democrat, that a meeting of the stockholders of the Central Military Tract Railroad Company was held in Galesburg, on the 12th ult., for the election of directors for the ensuing year. The following gentlemen were chosen.

J. W. Brooks, James F. Joy, Henry Ledyard, and G. V. W. Lathrop, of Detroit; C. G. Hammond, I. H. Burch, J. H. Kinzie, of Chicago; Silas Wil- lard, G. W. Gale, C. S. Colton, Wm. J. Sheldon, Jas. Bruce, and Enos M. Euler, of Galesburg.

At a meeting of the new directors, held the same day, J. W. Brooks, of Detroit, was elected president of the Board, and David Sanborn, of Galesburg, secretary.

Lowell Locomotives.

A new locomotive (the first twelve of an entirely new pattern which are now being built,) has just been completed at the "Lowell Locomotive Shop." All Railroad companies will be pleased to learn that the combinations which this machine possesses has proved perfectly successful.

The trial trip of this engine, in drawing the express train from Lowell to Boston—consumed only thirty nine minutes, and was effected with as apparent ease and safety as the best engines of the road accomplished in fifty minutes—which is the usual time.

The engine went out of the yard, the property of the Western Vt. R. R. Co.

These engines embracing as they do every variety of modern improvement, cannot fail to be as profitable to the proprietors as they are complimentary to the taste and artistic skill of the designer and manufacturers—and if the one here referred to is an indication of what is to follow, Lowell may be marked in the front line in locomotive building.

Mr. Stephen F. Gates, for many years connected with the Boston Locomotive Works, was the designer of this beautiful combination, which 'breathes and moves' and it was built under his immediate supervision.—*Lowell Courier*

Catawissa Railroad.

We are informed that a locomotive was run over the entire length of the Catawissa Railroad, from Catawissa on the Susquehanna river, to the junction of the Little Schuylkill Railroad at Tamaqua, on Saturday last, 21st ult. In a few days the link that is to connect these roads between Tamaqua and the Junction, will also be finished, and in less than a week's time we hope to chronicle the opening of the whole line from Philadelphia to the Susquehanna.

Chicago and Mississippi Railroad.

We learn from the *Allan Telegraph* that the annual meeting of the stockholders in the Chicago and Mississippi Railroad Company, for the election of Directors, was held in Springfield on the 19th instant. The election resulted in the choice of the following gentlemen, viz.: George Bliss, Springfield, Mass.; Henry Hotchkiss, New Haven, Ct.; James Wright, Owego, N. Y., Henry Dwight, Jr., New York city; Charles Gould, New York city.

It will be seen that two of those who composed the former board—Messrs. Cleveland and Litchfield—were left out, and their places filled by Jas. Wright and Henry Dwight Jr., Proxies, representing 23,195 shares of stock, were present, and the entire vote was cast for each of the above gentlemen, with the exception of Mr. Dwight, who fell five hundred short, that number having been thrown for John Stryker, of Rome, N. Y.

The several acts amending the charter of the company, passed at the last session of the Legislature, were, by resolution, unanimously accepted by those voting.

A written protest, however, signed by Major C. W. Hunter, of this city, and a number of stockholders in Springfield, against the amendments was received and placed upon the minutes.

Ohio and Pennsylvania Railroad.

The receipts of the Ohio and Pennsylvania Railroad for June 1854, were..... \$82,059 22
Receipts for June, 1853..... 55,350 31

Increase..... \$26,706 91
Pass'rs carried for the month 39,290.

The receipts of the Ohio and Pennsylvania Railroad for six months, ending July 1, 1854, were..... \$445,608 88
For six month, ending July 1, '53 241,192 57

Increase 85 per cent..... \$204,416 31
Passengers carried for the six months, 193,825.

A dividend of 4 per cent. has been declared out of the net earnings of last six months, payable on the 29th inst. to the stockholders of the books of

the New York agency, at the office of Winslow, Lanier & Co.; to all others, at the Company's office in Pittsburgh.

American Railroad Journal.

Saturday, July 22, 1854.

Are Railroad Securities worth what they were supposed to be.

Securities of all kinds have taken another tumble, and have reached a point of depression which would, at any other time, indicate a serious distrust of their value. As the sentiments existing at the present time in reference to the value of railroad and municipal securities, as evidenced by prices, contrast so strongly with those which prevailed a year or two since, it is certainly of the greatest consequence to determine to what the change is due; whether to some newly discovered evidence impeaching their productiveness, or the probability of their ultimate payment, or to causes in a great degree independent of both.

While one of the leading motives to the construction of railroads in this country has been the incidental advantages that were expected from them, and while these advantages have undoubtedly been much greater than the entire cost of our roads, it was claimed, and these works have been constructed under the belief that their earnings would yield a profitable return upon their cost. Under this belief a very large amount of capital has gone into them, so that no matter how much the aggregate of the community may be enriched, should the investment prove unproductive, the disaster to individuals, and through them to all the interests in the land would be incalculable. The fear that such may turn out to be the case, is already producing the injurious effects of the reality. If such fear should turn out to be unfounded, and if the holders of railroad, and municipal securities, have all they contracted for, and all they were supposed they were getting, it is certainly of first importance that they know how they stand.

Railroad securities may be divided into two kinds; *stocks* and *bonds*. These, as a general rule make up the aggregate cost of our roads. Now there is a wide distinction between the two, not only in their *intrinsic* values, the latter being always preferred to the former, but in the *degree* of estimation in which each are held.

In a country like the United States, many portions of it sufficiently well settled to supply a lucrative traffic to a railroad, are unable, or unwilling to furnish all the means for its construction. The process has been, therefore, for the community immediately interested in a road, to subscribe toward its construction an amount sufficient to constitute a basis for the security of a loan necessary to complete the work. Such community acting upon the idea that the incidental advantage to be derived from the work would exceed the amount of its contributions, nearly every person composing it contributes in proportion to his means; and as he is benefitted in an equal degree, he regards himself the gainer, even should his stock prove comparatively valueless. By the opening of the road, he is paid in advance by the increased value of his property, and by the amount saved in the transportation of his products. He, therefore, very likely puts his stock upon the market at a price much below its nominal value,

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	88
Androscoggin and Kennebec.. "	55	824,863	1,043,540	2,036,140	177,003	80,053	none	30
Kennebec and Portland... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,479,384	208,669	6	95	
York and Cumberland... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	85
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence....	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central.....	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	5
Vermont and Canada.....	47	1,600,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	82
Western Vermont.....	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	80
Boston and Maine.....	83	4,076,974	150,000	4,111,315	803,024	418,358	8	100
Boston and Providence.....	55	3,160,000	402,326	3,579,041	509,326	226,639	6	77
Boston and Worcester.....	69	4,500,000	590,541	4,850,754	887,219	413,289	7	96
Cape Cod branch.....	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River.....	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern.....	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	60
Fall River.....	42	1,050,000	6,208	1,050,000	294,183	126,589	8	90
Fitchburg.....	67	3,540,000	191,500	3,716,870	626,659	214,633	6	82
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony	45	1,964,070	295,038	2,239,534	374,897	122,866	none	93
Taunton Branch	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	11
Worcester and Nashua.....	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,786	7	93
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	67
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	97
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	639,529	294,269	10	116
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill..	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven....	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	50
Buffalo and New York City... N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progress	.....	.....	none	65
Buffalo and State Line.....	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F..	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira.....	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.....	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)....	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	50
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	51
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	.....
Long Island.....	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central.....	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	91
Ogdensburg (Northern).....	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	14
Oswego and Syracuse.....	35	350,000	206,000	633,598	92,353	46,072	.....	70
Plattsburg and Montreal....	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.....	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.....	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington....	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston.....	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey.....	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central.....	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster..	36	830,100	713,227	1,702,523	265,827	106,320	8	55
Philadelphia and Reading....	95	6,856,332	10,427,800	17,141,987	2,480,626	1,251,987	7	77
Philad., Wilmington and Balt.	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	63

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,800,000	1,943,827	617,625	....	97
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	50
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	....
Charlotte and South Carolina..... S. C.	110	.....	.....	In prog.	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River..... Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..... "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..... Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	70½
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	70
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	100
Columbus, Piqua and Indiana..... "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton..... "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine..... "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati..... "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis..... "	62	.....	.....	.....	opened.	.....	.....	.....
Madison, Indianapolis & Peru..... "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Terre Haute and Indianapolis..... "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	123
Michigan Southern and Ind. N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	95
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,316	8	90½
Pacific..... Mo.	38	.....	non	In progress	Recently	opened.	.....	.....

looking upon what he receives as in one sense, clear gain. It will be thus seen that as much of the stock to railroads has been subscribed in the manner, and for the objects indicated, its great depreciation does not indicate the loss of an equal degree of capital, nor would the loss of such stock produce the distress that would the loss of an equal amount invested in other enterprises.

The parties who have purchased the obligations of railroad companies neither expect, nor are they in a position, to be benefitted by the construction of railroads as are the subscribers to the stock. They have purchased them solely by way of investment of capital. Any loss to such holders would be without compensations. It is the extent to which the value of such securities may be impaired that is the most important in itself and most important for us to consider.

Throughout the whole period of the recent decline, and in the present excited feeling which prevails, we have not heard the first word of complaint as to the productiveness of our railroads. When they were proposed, certain results were predicated of their construction. It was faith in these results that lead to their construction, and induced the capitalists to purchase their securities. Those promises have not been broken. The capitalist has got in the aggregate, all and even more than he contracted for. In the expectation of realizing an interest of 7 per cent. he gave par for the securities of a particular road. He sees these securities now selling at from 80 to 85, indicating a loss of 15 to 20 per cent. He is, of course, mortified and chagrined at the result, without being one cent the poorer, unless he is compelled to sell.

In the present unsettled state of the public mind it is natural that a result similar to that which followed the over-construction of railroads in Great Britain, and in New England, in fact should be feared for the whole of the United States.

The examples cited are not parallel to the case before us; consequently are not entitled to much weight. Except in some particular districts, the construction of railroads has not been overdone, nor is it likely to be, as the present pressure will certainly put an end to all projects for the construction of which the strongest reasons do not exist. It is certainly true that the revulsion, which is now experienced is most fortunate for the safety of investment in railroads, as it will prevent the waste of money on uncalled for projects, and leave the system in just the position contemplated by the parties, at the time of making their investments.

But the present depression is due more to an over-supply of securities, than to distrust as to the value. Municipal securities issued for other objects than railroads, and in reference to which not a breath of suspicion can be whispered, have settled with the rest of the market. An unquestioned 7 per cent. security is worth a premium of from 10 to 20 per cent., taking the average of market values for a series of years. Yet such securities are as much below their par value; or from 30 to 40 per cent. below their average current value. The explanation for this exception to the general rule is in the fact, that the supply of such securities exceeds the demand, as the value of such depends upon a law precisely similar to that which regu-

merchandise. Flour in its uses, is just as valuable at \$5 per barrel, as at \$10; and to regard it as a worthless article of merchandise because from abundant crops its market value sinks below the average standard of prices, is just as rational as it would to distrust the value of municipal or railroad securities, because the supply might exceed the demand, provided the supply did not indicate an unhealthy, or over-issue.

In forming an opinion of the value of railroad securities, it is our aim not to be misled, nor to mislead others. It is the correctness of our views that constitutes our capital in business, as the patronage of our paper is measured by the degree of confidence attached to its statements. Now we believe that taking the aggregate of our securities, the holders of them have not only a substantial value, but all they supposed they were getting. In the vast number that have been sold, it is not strange that there should be here and there an exception to the rule of general soundness, but there are fewer exceptions in this, than in any other kind of legitimate business we are acquainted with, and as far as the past is concerned, the holders of securities have no good cause of distrust or complaint.

There is no doubt that from the extraordinary confidence which has prevailed for two or three years past in the productiveness of railroads, encouraged by the great abundance of money, that tendencies threatening the safety of investments in such works were rapidly developing themselves. A second crop of projects were springing up all over the country; roads which could not be built without involving a loss of the greater part expended in their construction; or of any equal amount of capital, by dividing between two roads, a business formerly accommodated by one. To check this second crop the present revulsion of sentiment happened most opportunely. Upon such roads only a trifling sum has been expended, so that no serious loss is involved in their entire abandonment. But less is really to be feared from the construction of rival works than has been supposed. It must be borne in mind that the parties who are to furnish a considerable portion of the money for any new work have no collateral or incidental interest in the result, and who look not only to the safety of their present, but of previous investments. A person who comes to this market for money for a road which is to be a rival to one already in operation, is almost certain to encounter an insurmountable opposition. It is an easy task to throw that degree of discredit upon such project, as to render success impossible. Every man who has invested a penny, becomes a conservative as far as all new schemes are concerned; and as nearly every man in the community, has more or less of his means in old works, it will be seen how strong is the conservative sentiment of our own people who are more interested in preserving what they have, than in new acquisitions.

We shall pursue this subject in our next issue.

Indianapolis and Cincinnati Railroad, - Resignation.

George Haven, Esq., has resigned his office as Superintendent of this road, to take effect on the 10th inst. We understand he will soon leave for the East. We do not know whether he expects to take a similar position on any of the eastern roads, where he has formerly had many years' experi-

ence, or return to the West. We hope the latter, for there are but few men his superiors in this business, uniting, as he does, great experience, a solid, comprehensive judgment, popular address, and prompt energy. Any road will be fortunate to secure his services.—*Cin. Gazette.*

Annual Meeting of the Eastern Railroad Company.

The 19th annual meeting of this corporation was held this morning. The annual report was presented by the President, and duly accepted.—From this it appears that the receipts of the year have been:

From passengers.....	\$443,490
" freight.....	105,444
Expresses, extras, mails, &c....	30,262
Property accounts.....	33,944
	<hr/> \$613,141

The expenditures:

For working road.....	\$292,272
Interest, insurance and taxes....	91,571
	<hr/> \$383,843

Net income.....	\$229,298
Add value of East Boston Ferry.....	111,500
Teaming income.....	5,627
Surplus of former years.....	80,834
	<hr/> \$427,259

Loss by fire.....	12,235
Engines and cars.....	27,235
Two dividends.....	234,183
	<hr/> \$273,404

Leaving for renewals, &c.....\$153,855

The report says that at the last meeting of the Legislature a resolve was passed to remedy certain railroad crossings, and, if it should be deemed expedient to make the terminus on Market street, an agreement has been entered into with the Boston & Lowell to build a passenger depot for the joint occupancy of both companies.

Several directorial meetings have been had with the Boston & Maine R. R., having for their object a union of the interests of both roads, with a view of fixing upon a rule of division of the joint receipts, but without result as yet.

The total valuation of the property of the company in houses, lands, and a little stock is \$1,262,313.

The act passed by the last session of the Legislature, authorizing railroad corporations to issue bonds for the purpose of funding their floating debt, or for money which they might borrow for any purpose sanctioned by law, was accepted on motion of Mr. Philbrick.

It appears that the floating debt of the Company is \$1,640,325 31; of which, however, is due to the Company, \$153,865 28, for surplus income or earnings of the road, and which if paid must again be invested, and could be placed in no position safer than now. Properly speaking, the debt of the Company, as such, is the notes payable and unpaid dividends; making the sum of \$1,486,460 03, which is varying from day to day, as the former mature and the latter are called for.

On motion, the Directors were authorized to issue bonds to the amount of \$1,500,000 for the purpose of funding the floating debt.

Mr. Sturgis offered a resolve, that the Directors be authorized to give one or more mortgages to secure the payment of the bonds already issued, or to be issued.

Mr. Ackerman, of Portsmouth, moved to amend by adding, "provided that such bonds shall not be sold for less than 10 per cent below par." This was unanimously rejected, and Mr. Sturgis's motion was adopted.

The meeting then proceeded to the choice of Directors for the ensuing year.

The following gentlemen were unanimously elected: Albert Thordike, of Beverly; Micajah Lunt, of Newburyport; Ichabod Goodwin, of Portsmouth; David A. Neal, of Salem; Isaiah

Breed, of Lynn; Benj. T. Reed, of Boston; Samuel Hooper, of Boston.—*Boston Traveller.*

Madison, Indianapolis, and Peru Railroad.

The stockholders of the Madison, Indianapolis and Peru Railroad Company met at Madison on the 28th June, and elected the following Directors unanimously:—W. M. Dunn, Philo Hurd, Nathan Powell, C. S. Shrewsbury, J. G. Marshall, Madison; E. W. H. Ellis, E. J. Peck, J. P. Drake, Allen May, Indianapolis; W. J. Jackson, Tipton; Geo. L. Dart, Peru; V. Worthington, Cincinnati; A. L. Dennis, New York.

The Coal Trade.

The quantity sent by Railway, during the week ending Thursday, July 13th, 1854 was 51,531,07 tons, being an increase above last week's shipments of 75,27 15 tons. The quantity sent by canal during the same time was 27,077 12 being an increase of 6,146 05 tons. Total quantity by Railway and Canal 78,608 19 being an increase on the two lines of 13,674 00 tons. The shipments for the week will be found in detail, below:

WHERE FROM	BY RAILROAD	BY CANAL
Pt. Carbon.....	15,916 06	10,092 10
Pottsville.....	3,028 05	987 12
Sch. Haven.....	21,267 11	14,640 09
Auburn.....	2,117 16	
Pt. Clinton.....	9,201 09	1,357 01

Total.....	51,531 07	27,077 12
Previously this year,...	1,000,610 08	383,232 06

Total.....	1,052,141 15	410,309 18
To same time last year,...	785,648 15	362,964 19

Lateral Railway Tonnage. Week. Season.

Mine Hill and S. Haven to July 5,	28,929	531,266
Mill Creek Railway July 13,	11,543	229,441
Schuylkill Valley Railway July 8,	14,726	241,010
Mt. Carbon and Pt. Carbon " 8,	16,424	295,190
Union Canal R. R. for month		
of June,	8,801	33,195
Swatara Railway, for month		
of June,	5,500	20,094

Charleston and Savannah Railroad.

At a meeting of the stockholders of the Charleston and Savannah Railroad Company, in Charleston, held on Wednesday, the following officers were elected:

President.—Thomas F. Drayton.

Directors.—T. L. Hutchinson, Mayor, Wm. Kirkwood, W. B. Hodgson, L. T. Potter, Otis Miles, J. B. Campbell, Ed. Frost, J. Bradley, N. Heyward, W. F. Colcock, C. G. Memminger, Daniel Heyward.

The Western and Central Railroad.

This road is being put in first-rate order, says the Indianapolis Sentinel, with the intention ere long to run the trains through from Dayton to Indianapolis in about three hours. During a trip over it the other day, we noticed that a considerable portion of the track had sodded itself, looking like miles of green ribbon—refreshing to the eye and free from dust.

The number of passengers carried over this road, is very large, and west of Richmond the cars are always crowded.

To Supply Engines with Water.

It is stated that a resident of Fredonia, N. Y. has invented a curious apparatus for supplying locomotives with water. According to the new plan, a cistern must be constructed beneath the track, having connection with a force pump, which in its turn is connected with a series of friction wheels, inserted above it on the track. The locomotive is run upon its wheels, and then however swiftly its wheels may revolve with those of the engine. The force pump is in this manner set at work, and made to raise from 1500 to 2000 gallons per minute. A practical test of the invention is about to take place on the Buffalo and Brantford Railroad.

Who is Liable for Over-Issue of New Haven Stocks?

We stated last week our view of the liability created by the over-issues of New Haven Stock;—that the over-issues are of no value, *provided* they can be distinguished from the *bona fide* stock. The liability of the Company, if any exists, does not result from the relation that subsisted between Schuyler and the Company, as he was not the Company's agent for what he assumed to do, and of course could not bind the Company without authority. But the question is mooted, and there may be something in it, that the company may be liable on ground of gross carelessness or negligence of itself, or its agents, in consequence of which the public have been defrauded, which a reasonable prudence on the part of the former might have prevented. The ground taken by those who support the affirmative of this proposition is, that the company having conducted their business in such a manner that the public, exercising due caution, was liable to be deceived, are bound to make good any losses that may be the consequence.

Should this view of the case be supported the next question is, who is *liable*? It is not customary for corporations, or stockholders of a company, to have any thing to do with the management of its affairs. The administration of these are without exception, it is believed, delegated to a board of directors. The New Haven Company, therefore, by which we mean the stockholders are not culpable parties, as they have done no more nor less, than have all similar companies whose conduct is not impeached. The wrong doing, if there has been such, is on the part of the directors. Is the liability to attach directly to *them*, and are they responsible to the sufferer, or to the company, the latter being in the first place responsible?

The hypothesis of liabilities which is above assumed is based upon the *equitable* relation of the parties. If a claim of this character exists, must it not be against those whose negligence caused the loss; or in other words, against the directors? The company has done all that was incumbent upon it to do. Upon the choice of directors, its functions ceased. It is not right that the stockholders should suffer from acts for which they are not censurable, and over which they had no control. If the directors have been guilty of *misfeasance* or non-feasance, may they not be liable to the injured parties as well as to the company?

We make the suggestions for what they are worth. The question as to who is to bear the loss of the Schuyler fraud, is and will continue to be for a long time, the great topic of discussion, and we give the above as one of the views which is taken of the subject.

Washington and Alexandria Railroad.

The Baltimore American says, when this gap of eight miles shall have been filled up by an extension of the Baltimore and Alexandria, we shall have an unbroken line of Railroad for more than two hundred miles, extending into the valley of Virginia. By the time that the Alexandria Railroad shall have been extended to Lynchburg, a distance of sixty additional miles, we shall have a continuous Railroad of more than four hundred miles into Tennessee. This radial line traverses a populous and productive country which is rapidly constructing communications with the markets of the East.—The travel and mercantile custom to be derived from that region when put in Railroad connection with Richmond, Alexandria, Baltimore and other

cities, will give an immense impulse to the business of them all.

The Fox and Wisconsin Rivers Improvement

The *St. Paul Pioneer* announces the arrival at that port on the Mississippi of the Steamer Montello, from Oskosh Wisconsin on Lake Winnebago. She steamed her way from that lake to within five miles of Portage City, located on the canal joining the Fox and Wisconsin rivers, without trouble or delay. From that point, till she reached the channel of the Wisconsin the miserable condition of the locks and canal, made the passage a work of some difficulty. She came down the Wisconsin without hindrance, and has arrived here, says the *Pioneer*, in good condition. The improvements on the upper Fox and Lower Wisconsin, have been barely commenced, and the passage of a good sized boat through them in their present condition is a fact worthy of particular notice. An energetic company has control of the whole line, and it will not be many years before we shall see this route becoming a great highway of trade between the Atlantic cities and the upper Mississippi valley. Within five years we shall be able to take passage on elegant river steam packets, running regularly from St. Paul to Green Bay; and heavy goods will come by this route, with only two transshipments between New York city and Minnesota. May Providence and the Wisconsin Improvement Company, hasten this consummation.

The above improvement will be finished, we are informed by Mr. TANCK of Green Bay, one of the Directors in the Company, so as to pass boats from the Wisconsin to Green Bay, this fall, thus connecting the Lakes with the Mississippi by Steam. This will then be the shortest and most expeditious water route from Northern Missouri, Illinois, Iowa and Southern Minnesota and Wisconsin to Buffalo New York, and Montreal.

From the Lake Superior Journal of June 17.

The Saute Ste. Marie Cotton Manufactory.

It may seem strange to some that any one should be so short sighted as even to suggest the establishment of a manufactory of this kind at this remote point; but let us reason for one moment upon the subject, and it may not seem quite so chimerical as at first thought it may appear.

Cotton could be transported from low down the Mississippi, or even from New Orleans, as cheap, if not cheaper, than it can be to the manufactories of Lowell, Mass., and when once landed here it can be manufactured as cheaply. We have any amount of water power susceptible of improvement. All that is wanted is the cash to set the spindles in motion. When once in motion the next thing necessary for the successful termination of an enterprise of the kind, would be to find a market for the consumption of its fabrics.

Let the most skeptical but reflect for a moment upon the probable—nay undoubted—vast population which, in the course of a few years, will be found upon the borders of Lake Superior, and the country adjoining. We might even include a goodly share of what we now call the West—Michigan, Ohio, Indiana, Illinois, Wisconsin and Iowa, not taking into account the early future settlements in Nebraska and Washington territories, all of which might be more cheaply supplied from this point than from the far Eastern section of our country.

Our population is increasing so rapidly, both from emigration, and the natural increase, that means must be provided, nearer home, to meet the necessary demand. We might as well have

an establishment of the kind half way between the extremes of our country, (as we feel warranted in calling this) as to be obliged to pay the necessary cost attending the transportation of the fabric, when manufactured, which we look upon as entirely an extra expense.

An establishment of this kind forms a nucleus around which would gather others of equal importance. Capitalists and those acquainted with the business would do well to reflect upon the subject, and come and examine into its feasibility at their earliest leisure. A trip to this region at this season of the year, would well pay them for their trouble at least.

All the above reasoning might very well be applied to the manufacture of iron, for which purpose we have little doubt the water power at the Sault will soon be made available; but we think several series of years will elapse before cottons will be economically manufactured there.

Heavy Locomotive Forgings.

The heavy forged works of a locomotive, its frame, axles, rods, etc., are among its most essential parts, and probably in no other portions is there the same latitude for the extremes of good and bad work. Long experience and peculiar facilities are required in this branch of business.

Our locomotive establishments in New York and Paterson, depend for their iron work, mostly upon forges in Massachusetts. The Glendon Works, the works of Ranstead and Dearborn, and of Alger and Reed in Boston; of Lyman Kinsley at Canton, Mass., and also of the Nashua Iron Co., at Nashua N. H. and of Horatio Ames at Falls Village, Conn., are among the oldest and best establishments of the kind at the east. A forge has been also established at Paterson, N. J. which has been supplied with men and machinery from Massachusetts. The Canton and the Falls Village Works employ Salisbury Blooms, the Glendon Works use iron from their own lands in Pennsylvania, while the other forges named use a variety of stock, mostly scrap. Some of the soundest locomotive cranks are forged from the latter material.

About Philadelphia, there are large forges for the convenience of engine shops in that city. A fine forge, working six fires, and three of Lewis Kirk's steam hammers, has been established for some time at Reading, Pa. Some engine shops at the south, from having no forges in reach, have used frames, axles, piston and connecting rods, and tires rolled, at their own works. There is a large and fine forge at Pittsburg, Pa., owned by Everson, Preston & Co. Other smaller works are also established at the same place. At Cleveland, Ohio, a fine establishment is worked by Ford and Otis, which supplies heavy engine forgings and car axles to works in Cleveland, Detroit, Cincinnati, Chicago and Canada. The Pittsburg forges work up Juniata blooms, and the Cleveland forge commands a selection of some of the best stock at the west, Missouri, Lake Superior Hanging Rock, etc.

New York and N. Haven R. R.

The following gentlemen constituted the present board of directors of the New York and New Haven Railroad: Rob't Schuyler, Morris Ketchum, Jonathan Sturges, Wm. E. Worthen, Wylls Blackstone, N. York; Wm Barrill, Bridgeport; Wm. W. Boardman, John C. Sanford, N. Haven; John E. Thayer, Boston.

Public Debt of United States.

A very full and interesting exhibit of our public debt, its redemption, and its condition, including interest payable to July 1st, 1854, is made by F. Bigger, U. S. Register. The whole amount redeemed since the creation of the several stocks is \$28,311,290 97. Of this amount the proportion redeemed since March 3d, 1853, reaches the large sum of \$21,948,931 22.

On the 1st of January, 1854, the amount of the public debt outstanding was.....\$54,398,757 52
 Amount redeemed since, of the
 loans of 1842, 1843, 1846, 1847,
 1848, and Texan
 indemnity..... 7,201,101 47
 Treasury notes paid 350 00
 Debt of corporate
 cities..... 16,800 00

\$7,218,251 47

Outstanding this day.....\$47,180,506 05

The total amount redeemed since the creation of these several loans is as follows:

Loan of 1842.....	\$3,146,465 22
1843.....	6,976,331 35
1846.....	2,365,936 19
1847.....	11,473,400 00
1848.....	3,115,358 20
Texas indemnity.....	521,000 00
Corporate cities.....	712,800 00

28,311,290 96

Of which there as been redeemed since the 4th March, 1853, 21,948,931 22

There is still outstanding stock of the loan of 1843 for \$27,000 \$25,600 of which is held by the Superintendent of the State of New York in trust for the Suffolk County Bank. This stock ceased to draw interest on the 1st day of July, 1853.

There is payable in Baltimore of the loan of 1842, the sum of \$50,600, the interest on which, payable on the 1st instant, was \$1,518. Of the loan of 1846, \$56,500; interest payable 1st instant, \$1,695. Of the loan of 1849, \$709,000; interest payable 1st instant, \$21,270. And of the loan of 1848, \$138,650; interest payable, \$4,159 50.

Value of Real and Personal Estate in Buffalo.

The Buffalo Express publishes the following statement of the valuation of the real and personal estate in the city of Buffalo and the town of Black Rock, for the years 1853 and 1854, and the taxes levied thereon for those years:

BUFFALO. 1853.		
Real Estate.....	\$16,698,700	\$3,456,023
Personal estate.....	2,698,655	456,700
Total value.....	\$19,397,355	\$3,755,732
Aggregate tax.....	124,000	14,234
BLACK ROCK. 1854.		
Real Estate.....	\$16,079,218	\$4,764,026
Personal estate.....	8,518,221	427,000
Total value.....	\$24,597,439	\$5,242,625
Aggregate tax.....	808,000	20,938

Growth of Chicago.

Chicago is making rapid strides. A census of the population completed on the 15th of June, gives a total 65,873. Of these, 28,869 are males; 32,947 females; and 4,316 'mariners.' In December last the population was 60,652. Increase 5,220. The proportion of natives and foreigners is—Americans 25,677; Foreigners 35,876. Majority of Foreigners 10,202. The Tribune says:

The last census of our city was taken about six months ago. At that time our population was 60,652 souls. For the three months first following this period, there was no increase of any moment in our population. The increase of 5,220 souls has almost entirely been made during the months of April, May and June, and the increase during the remaining months of the Summer and Fall, will unquestionably be 10,000 more. We may un-

doubtedly expect to number a population of 70,000 by next December.

FINANCIAL AGENCY.

Isaac Osborn Davis,

No. 38 Third Street,
CINCINNATI, O.

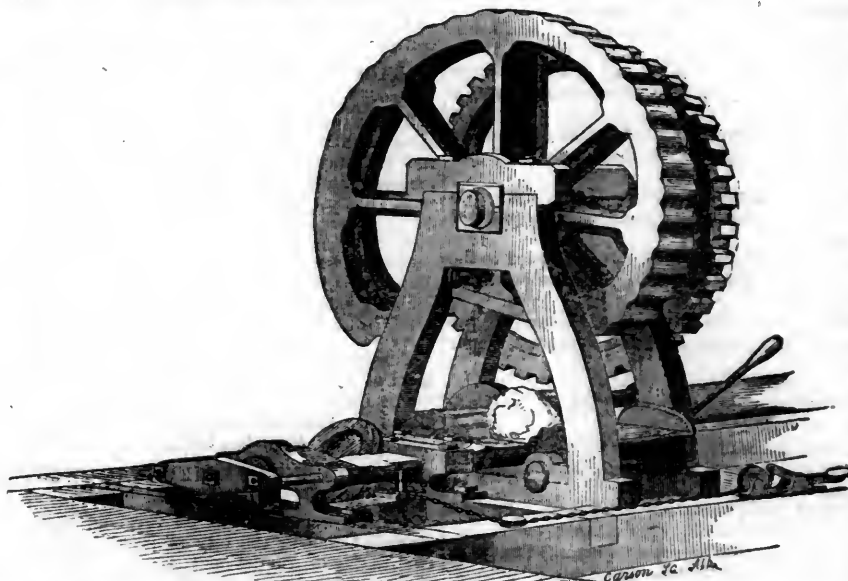
BUTTS, SGLLS and NEGOCIATES LOANS ON BUSINESS PAPERS
AND ON ALL KINDS OF RAILROAD SECURITIES,
ON COMMISSION.

CINCINNATI REFERENCES:

Dunlevy, Atwood & Co, Bankers;
T. S. Goodman & Co.,
Chas. Stetson, Esq., Pres't Ohio Life and Trust Company;
J. P. Bishop, Esq., Cashier
Smead, Collard & Hughes, Citizens' Bank; "
Geo. Mellen & Co., Bankers;
P. M. Gregory, Esq., "
Ellis & Sturges, "
McMiekin & Co., "
Ino. H. Groesbeck, Esq., Banker;
S. W. Torrey & Co.
C. A. Olmstead & Co., Ohio & Mississippi Railroad.

NEW YORK REFERENCES:
Atwood, Dunlevy & Co., Bankers;
Samuel J. Beale, Esq., 80 Broad str.

FOREIGN CORRESPONDENT:
De. Coppet & Co., New York.

Winslow's Puddlers' Ball Squeezer.

THE Subscriber's Puddlers' Ball Squeezer, or Shingling Machine, has now been in use for several years, and in every instance has given unqualified satisfaction, as is attested by many Iron manufacturers who use it in different parts of the country and in England. Its advantages are, great expedition in performing its work, freedom from breakages, no wastage of Iron while being compressed, the action of the hammer upon the ends of the ball or bloom to upset it while being reduced in its diameter; and the very small amount of power required to work it, coupled as it usually is to the end of the ball rollers or forge train. Rights to use these machines can be had by addressing the Patentee, who will likewise cheerfully submit the many testimonials in his possession of its efficiency, from some of the first men in the country.

Persons residing west of the Alleghanies can be furnished with information in relation to the foregoing, by addressing
J. F. WINSLOW, Troy, N. Y.
A. S. WINSLOW, Cincinnati, O.

Phoenix Iron.

THE subscribers having made extensive additions to their Works at Phoenixville, are now prepared to receive and execute promptly, orders for BAR IRON, of their own manufacture, warranted equal to the best English refined, for quality and finish.

They also continue, as usual, to furnish T and U Rails, of any required pattern and weight; or from any of the following patterns, for which they have the rolls on hand, viz: weighing per lineal yard—20lb, 23lb, 40lb, 50lb, 55lb, 56lb, 57lb, 59lb, 60lb, 61lb and 64lb, of the T patterns.

48lb and 59lb of the U patterns.
75lb Groove Rail for streets.
Also, a superior article of Wrought Iron Rolled Chairs, with continuous lips, 7 1/2 inches wide by any length required, weighing 1 1/2 lb per lineal inch, made to fit exactly the flanges of Rails, and ensuring a most perfect joint.

Also, Rolled Car Axles, of superior quality, cut to length.
Dealers and Railroad Companies desirous of contracting, will please address.

REEVES, BUCK & Co.,
28 6m No. 45 North Water Street, Philadelphia.

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to
THOS. CHAMBERS,
September, 1850. President.

Railroad Iron.

300 TONS Old Wrought Staffordshire Rails, Bridge pattern, for sale by NAYLOR & CO., 29 John st.

To Railroad Companies and Contractors.

FOR SALE—Fifteen second hand Locomotive Engines of various sizes and descriptions and in good running order suitable for all kinds of work. For particulars apply to

CLARK & JESUP,
General Railroad Agents,
38 Exchange Place.

Also Railroad supplies of all kinds, 4125

Prosser's Patent Lap-Welded Iron Boiler Tubes.

Tubes screwed together, flush on both sides, for Artesian Wells, &c. Free-joint Tubes, for Core Bars, Awinng Frames, Railings, Leaders, &c.

Patent Wrought Iron Blacksmiths' WATER-TIGHTEN, WATER-BACKS, Etc.

Agents for KRUPP'S celebrated CAST STEEL for SHAFTS, RAILWAY Axles, Tires, Platters' Rollers, &c.

P. S.—All Tools necessary for the construction or keeping in order of Tubular Boilers
24th THOS. PROSSER & SON, 28 Plat street, N. Y.

Engine Driver.

WANTED—A Situation by a Man of Great Experience in Engine Driving in England—Can produce first rate Testimonials—address, post paid, Box 1833, N. Y. Postoffice. 26th

Welded Wrought Iron Tubes.

THE subscribers having lately added to their Cumberland Nail and Iron Works an establishment for making Wrought Iron Tubes, are now prepared to supply the trade with tubes two to twelve feet in length, furnished with screws and ferrules on their ends, of the following sizes—inside diameter,

1/2, 3/4, 1, 1 1/4, 1 1/2 and 2 inches.
Warranted and fully proved, equal to the best Pipes manufactured.

All orders addressed to us will receive prompt attention, and liberal discounts from the list of prices will be allowed to the trade.

REEVES, BUCK & Co.,
No. 45 North Water Street, Philadelphia.
28 6m.

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors' Compasses Manufactured on the most improved principle and of the Best Quality

by THOMAS HUNT,
No. 68 Fulton Street,
New York.

1y10*

gauge bonds, 7 per cents.

position is distinctly and plainly inserted.

JOHN T. CUMER, State Eng. and Surveyor.

Sewall & Crehore
CIVIL ENGINEERS,
ST. PAUL MINESOTA.
JOSEPH S. SEWALL. CHAS. FRED. CREHORE.

Henck's Field Book for Engineers.

SECOND EDITION.

D. APPLETON & CO. 346 and 348 Broadway.
JUST PUBLISHED.

FIELD BOOK FOR RAILROAD ENGINEERS
Containing Formulæ for laying out Curves, Determining Frog Angles, Levelling, Calculating Earth Work, &c., &c., together with Tables of Radii, Ordinates, Deflections, Long Chords, Magnetic Variation, Logarithms, Logarithm and Natural Lines, Tangents, &c., &c. By John B. Henck, A. M., Civil Engineer. One vol., pocket book form. Price \$1.75.

The first edition of 1000 copies of this Work was sold off in four weeks, a sale almost unprecedented in works of this class. The Publishers have received letters from the following eminent Professors and practical Engineers, who commend it as the best practical elementary work on the subject of American Railroad Engineering:

Professor D. H. Mahan, West Point.

Professor M. M. Gillespie, Union College.

Professor H. E. Eustis, Lawrence Scientific School.

Professor B. F. Greene, Rensselaer Polytechnic School.

Professor J. T. Benedict, New York Free Academy.

W. J. McAlpine, State Engineer.

E. S. Chesbrough, City Engineer, Boston.

S. M. Felton, Philadelphia.

G. W. Whistler, New Haven Railroad.

Wm. E. Worthen, New Haven Railroad.

CRITICISMS OF THE PRESS

"This treatise presents one of those rare instances in which thoroughly scientific theory is applied, in an eminently practical and common sense way; the tables alone, if republished in a separate form, would be a valuable treatise to civil engineers in every department, and for architects, mechanics, and also to all persons engaged in practical calculations. The whole treatise reminds us of 'Bowditch's Navigator,' and seems to us destined to hold the same rank with railroad engineers that the 'Navigator' holds with shipmasters. It must become the indispensable *Vade Mecum* of every assistant engineer. It will be of great service to the intellectual character of the profession as well as a great means of diminishing their labors."—*Railroad Journal*.

"This book will be warmly welcomed by assistant railway engineers. It contains thorough treatises on curves, levelling earthwork, &c., &c. The tables have evidently been prepared with great care. The book, in fact, contains almost everything that can be required by assistant engineers, either in the field or office. The author evidently knows what they require, and in what form it should be given."—*American Railway Times*.

"An invaluable book to a civil engineer, particularly if engaged in laying out railroads."—*Boston Transcript*.

"Much of the work is the result of original investigation, and has the zeal and commendation of a working man."—*Rochester Advertiser*.

29.3t

Notice to Contractors.

PROPOSALS FOR THE ENTIRE CONSTRUCTION and equipment, or the graduation, bridging and masonry, separately, either in whole or in part, of the Mississippi and Tennessee Railroad, (extending from Memphis to Grenada, Mississippi, about 97 miles,) will be received at the office of the Company, in Memphis, till the 20th of July next. Proposals for the entire construction and equipment, and otherwise as favorable, will have preference. Profiles and estimates of the first 60 miles may be seen on application at the Engineer's Office in Memphis. Bidders must furnish satisfactory evidence of their ability to complete the work.

MINOR MERIWETHER,

Chief Engineer.

May 4th, 1854.

N. York and N. Haven R. R.**NOTICE OF SUMMER ARRANGEMENTS,**

Commencing Monday, May 9, 1854.



TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A. M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	6.00 A. M.—Commutation from New Haven.
9.10 A. M.—Special for Port Chester.	6.15 A. M.—Accommodation to New Haven.
11.30 A. M.—Accommodation for New Haven.	8.15 A. M.—Accommodation to New Haven.
3.00 P. M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	9.35 A. M.—Express from New Haven, stopping at Bridgeport, Norwalk and Stamford.
4.00 P. M.—Accommodation for New Haven.	1.07 P. M.—Express stopping at Bridgeport, Norwalk and Stamford.
5.00 P. M.—Express for Boston, stopping at N. Haven.	4.00 P. M.—Special, from Port Chester.
5.35 P. M.—Commutation for N. Haven.	4.00 P. M.—Accommodation to New Haven.
6.30 P. M.—Special for Port Chester.	9.30 P. M.—Boston Express stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Sup't.

New Haven, May, 1854.

New York and Erie R. R.**PASSENGER TRAINS**

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.

Dunkirk Express, at 7 a. m. for Dunkirk.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations.

WAY EXPRESS, at 12½ p. m. for Dunkirk.

Rockland Passengers, at 3.30 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

Emigrant at 6 p. m.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

Railroad Companies and Contractors,

WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment.

Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,

287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.

And 102 Greenwich st.

SHANAHAN & LOEBER,

181 William-st,

(1st floor—Up Stairs.)

NEW-YORK.

MANUFACTURERS OF

THEODOLITES, TRANSITS, LEVELS,

Surveyors' Compasses, Drawing Instruments, Chains, Scales, Levelling Rods, &c. 1y10

To Railroad and Canal Co.'s Contractors, &c.

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics &c., of any description, and also inform them that they forward and deliver such men at whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.

No. 86 Greenwich Street, New York.

26.4t

To Chief Engineers.

A Gentleman who has had some Eight years Experience in construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17 U

For Sale.

THE ROSSIE FURNACE AND FOUNDRY, etc., St. Lawrence County, N. Y.—This well known establishment, having attached to it a large and complete Casting House and Machine Shop, with ample accommodations for workmen, and every convenience necessary to the prosecution of an extensive business, together with valuable Iron Mines and Mining Rights, also Timber Lands, is offered for sale by the proprietor, who reserves from the business. The capacity of the *Rossie Furnace* for making iron, is believed to be unsurpassed by any charcoal furnace in the country, having repeatedly run up to fourteen tons per day, with 55 to 60 per cent. yield from ores—specular iron oxides—coal, per ton, 100 bushels. The same has been in uninterrupted operation for over twenty years, and the reputation of its iron is established throughout the West. The location of these works is in the village and town of *Rossie*, county of St. Lawrence, N. Y., six miles from the River St. Lawrence, and connected therewith by a plank road. Their cost, apart from premises and water power, has involved an expenditure of over \$100,000, and their present efficiency, in every respect, is considered unexceptionable. For further information apply to D. W. Baldwin, Agent, at the works, or to the undersigned.

G. FARISH.

15,2m*

Ogdensburg, N. Y., April, 1853.

SEYMOUR, MORTON & CO. GENERAL R. R. AGENCY, Office, Metropolitan Bank Building, No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years interest.

OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R. R. STOCK.

BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

MONTREAL & NEW YORK AND

Plattsburgh and Montreal

RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6.30 a.m. and 5 p.m., arrive at 8 a.m. and 7.30 p.m.

Leave Plattsburgh for Montreal 7.30 a.m. and 4 p.m., arrive at 10 a.m. and 6.50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate station.

Trains connect at Moores Junction with Northern (Ogdensburg) Railroad for Ogdensburg and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations.

Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequalled for comfort and dispatch, and attended with least fatigue and delay than any other.

It possesses moreover the advantage of a short Ferriage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.

For particulars see Freight and Passenger Tariff.

Baggage checked through.

H. W. NELSON, Superintendent.

Steam Engine and Blowing

Cylinders for Blast Furnace

for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke,

together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to

EDW. BECH & KUNHARDT, 62 Beaver St.

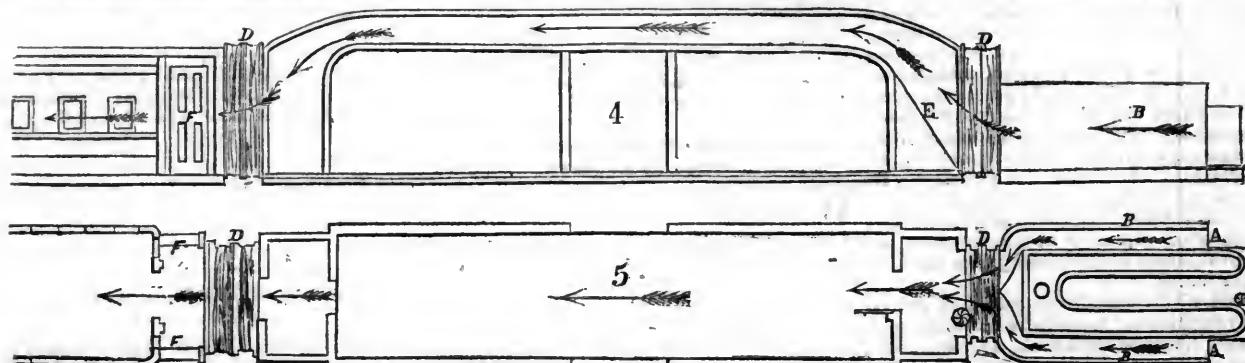
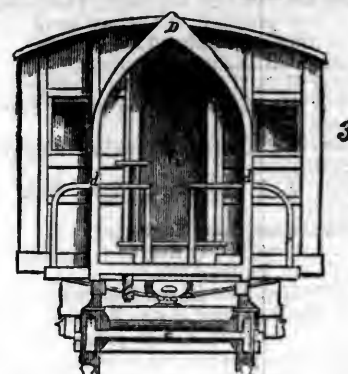
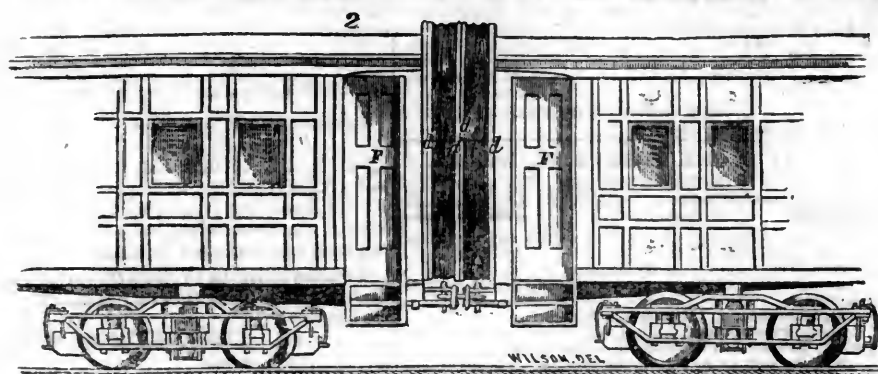
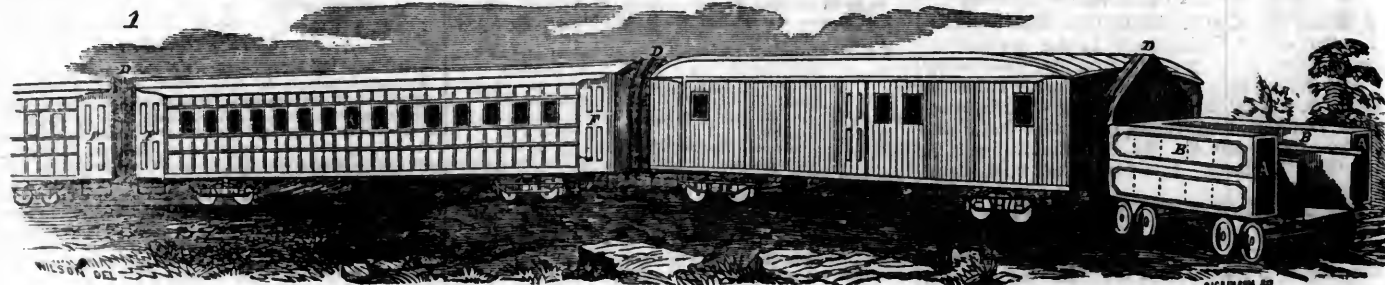
Or, A. TOWAR, Agent Pokepsie Iron Works,

26t

Pokepsie, N. Y.

Waterbury and Atwood's Mode of Ventilating Railway Cars, and Excluding Dust, Smoke and Cinders.

CHARLES ATWOOD, Agent, BIRMINGHAM, CONN.



GROVE CAR WORKS, HARTFORD, CONN.

MANUFACTURERS OF

Railroad Coaches, City Cars, Freight, Coal, Gravel, and all other descriptions of Railroad Cars.

The above establishment has as great facilities, and turns out as large an amount of work, as any other Factory in the Union.
27tf
FALES & GRAY, Proprietors.

FOR SALE.

AN ALLIGATOR SQUEEZER, complete, entirely new, and in perfect order, to be put up at once.

It is of the most approved construction, with cam, cam shaft and pedestal, and with heavy driving gearing if required by the purchaser; and will be sold at a bargain.

For further particulars address

ROBERT BRIGGS, Jr.,

Supt. Rensselaer Iron Works, Troy, N. Y.

Also, for sale 7 Dimpfer Patent Fans, 2ft. X 9in. second hand. Apply as above.

Railroad Iron and Chairs.

The Lackawanna Iron and Coal Co., are now prepared with increased facilities to contract for Rails and Chairs at their works at Scranton, Penna.

Address S. T. SCRANTON Pres. at Scranton, or at the office of the Company in New York, 72 Beaver St.
28tf

For Sale.

By the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York,

19 tf

C. Floyd-Jones,

Division Engineer 3d and 12th Divisions,
ILLINOIS CENTRAL RAILROAD,
Vandalia, Ill.

Lyon's Tables of Cubic Contents, Etc.

These valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1. gives correct mean heights of cross sections with either two or three cuttings taken. Table 2. finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise.—
Price \$1.50. 21tf

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N. Y. 19tf

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE SOUTH AND WEST.



Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$16 50
do do Norfolk.....	8 60
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	16 00

An extra charge will be made for meals and state rooms aboard the boats.
27tf
L. S. SPAFFORD,
General Supt.

Boiler and Tank Rivets, Nuts and Washers; All Sizes of Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 30]

SATURDAY, JULY 29, 1854.

[WHOLE No. 954, VOL. XXVII.]

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

How Railroads make money Scarce.....	465
Boston and Worcester Railroad.....	466
Michigan Southern and Northern Indiana R. R.....	468
Car Ventilation.....	470
Railways in Nova Scotia.....	471
Harlem Railroad.....	471
Stock and Money Market.....	472
Journal of Railroad Law.....	474
Latrobe and Knight's Rule for Equation of Grades.....	474
Illinois Central Railroad.....	475

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, July 29, 1854.

How Railroads Make Money Scarce

When individuals or the community find themselves in trouble, or that their affairs do not go on as desired, or as was expected, it is customary to vote the *apparent* cause a nuisance or humbug, to be suppressed or abated, and they fully resolve, henceforth, to have nothing to do with the supposed author of their misfortunes. This practice pretty well describes the feeling entertained at this particular crisis toward railroads, which are supposed by the immense sums expended in their construction, to have caused the present tightness in the money market, and which in addition to interfering in the ordinary transactions of business, has reacted upon railway securities themselves, carrying prices all the way from 5 to 30 per cent. below first cost.

With the market value of railroad securities we have little concern. If any one has made a mistake in going into them, it is not because the conclusions then formed as to their productiveness were erroneous, but because the *relations* of things are changed. As we stated in our last, railroads have been, and are, as productive as was supposed they would be when the public took their securities at the highest figures which prevailed. If there has been a *change* it is not so much in the railroads, as in the *relations* that other things bear toward them.

In the United States where entire freedom is allowed to every impulse, it is natural that the *pendulum* of public opinion should oscillate beyond the boundary that marks the limit of its *healthy* movement. It was to be expected that with the passion which has existed for railroads in this country, united with the conviction that they would prove profitable investments of capital, that their construction should have exceeded the harmonious development of all our great interest, and that they should have taken the *lion's* share of the available or accumulated means of our people, leaving a corresponding deficiency for other avocations and enterprises.

We have no doubt such is the fact. We have frequently stated such to be our connection. But it is of little use to give warning or advice. A man must experience what has been told him before he will hear what has been said.

While the construction of railroads has proceeded out of proportion to *other* interests, this fact by no means proves that they are in advance of the *wants* of the country. To supply this want a great *increase* of roads may yet be necessary. The mistake committed is not that we have too many railroads, but that there are wants *paramount* to these, which should first be provided for; for as soon as harmony or equilibrium is restored, the construction of railroads may be resumed both with safety and profit.

It is undoubtedly true, that railroads have given a value and significance to capital that it never before possessed. While the application of *steam* to the mechanic arts has infinitely increased the productive capacity of society; the demand for *capital* is increased in the same ratio. There is not a man among us of forty, who does not remember when the capitalist of his native village had always a plenty of money to lend at 6 and 7 per cent. on good security of names or lands. Society had then hardly crossed the line demarkation which separates the *old* from the *new*, the period which signalized the introduction of the forces of nature into the economy of life. The use of *steam* has increased beyond all calculation the value and productiveness of labor. *Money* now stands for whatever results the *steam engine* can accomplish. Capital has become valuable just in proportion to its increased capacity

for production, and as by the inventions and discoveries which are being made every day, this capacity is increasing in *geometrical* ratio, we can see no pause in the demand for *capital* till there is a corresponding pause in human ingenuity, or till man shall forego a portion of his wants, or rest contented with his present means for their gratification.

But these remarks are somewhat wide of the subject. What we intended to say was, that railroads have, as alleged, consumed an immense amount of capital in the construction, which has in a measure been withdrawn from *other* channels, at some inconvenience to *other* departments of industry. While this has been the case, the effect has been to create an additional demand for *twice* or *thrice* the capital that has gone into them. The construction of every railroad furnishes the means for the development of other resources, greater or less, as the case may be. Let us suppose 100 miles of railroad to be constructed in *Ohio*. At every two or three miles upon its line some element of wealth is rendered available, which before lay dormant. At *one* point the timber on the line of the road is manufactured for use. At *another*, a coal mine is opened. At *another*, iron works are erected. At a *fourth* some other useful mineral is brought out. At a *fifth*, is a water power to be set at work for a whole neighborhood. The development of all these resources offers the greatest inducement to the profitable investment of capital, so that no sooner is a road constructed than a demand, springs up for the objects stated, for *two* dollars, where the construction of the road called for *one*, to accomplish the legitimate results due to such a work.

The demand for capital created by the construction of railroads is not only what is required for the roads themselves, but for all the works and improvements to which the former gives birth, and which may safely be estimated to exceed, in a very short time, twice their cost. But the *cost* of railroads, experience shows, increases in proportion to the increase of their *business*. The Boston and Worcester Railroad, a brief history of which is to be found in another column, is a good illustration in point. The first cost of this road was about \$1,200,000. This amount has been

increased some 400 per cent. in 18 years, or at the rate of 22 per cent. annually. Now the additions to the *first* cost of the road were just as necessary and proper as was the original outlay. If the roads completed the present year have cost \$75,000,000, they will require an equal expenditure within the next four years, to accommodate the ordinary increase of business. Estimating the annual increase of cost of our roads at 10 per cent., this amount would call for \$50,000,000, annually for *old* roads. Our works in progress probably call for \$75,000,000. If the improvements and investments consequent upon the construction of railroads equal this sum, the expenditure of capital due to construction of these works amount to \$200,000,000 annually.

Such is the annual draft that railroads impose upon the productive energies of the country. The above facts will serve to explain the constant and active demand that exists for *money*. When we reflect that we have only commenced the construction of railroads, and the development of the unlimited resources of this country, and that at 50 years from the present time, our people will be just as much occupied with *new* projects as they are at this moment, and that every year enlarges the field of enterprise and industry, it is difficult to foresee a period in which the accumulations of capital shall exceed the demand for its profitable employment.

But while railroads are making, and will continue to make, immense calls upon the capital of the country, of all other investments, they make the speediest and most generous return on their cost. They have increased value of the aggregate property of the country, by more than *five* fold their cost. In addition to their earnings, they save to the public at least 25 per cent., of the whole cost annually, in transportation. They have created no small share of the foreign and domestic commerce of the country. They are the great fact in the physical progress of our people, and have contributed more than any other agency to their astonishing progress in wealth, prosperity and comfort. They may have received a disproportionate development, not disproportioned to the *wants* of our people, nor their ability to supply to them a lucrative traffic, but to other interests, and other enterprises alike clamorous for capital.

It is something to live in the present age; but while art and science are constantly unfolding new truths for our admiration and profit, they impose upon society a corresponding necessity for labor and toil. We cannot accept the *one* without the *other*. That we are oppressed and distracted by the new calls made upon our time and means is no good cause of complaint. We ought rather to feel honored at the post assigned to the present generation in its great mission of unfolding natural laws and of subjecting their action to the comfort and progress of mankind.

Railroad Convention.

A convention was held at Saratoga on the 25 inst., at which the Central, Erie, Penn., Baltimore and Ohio, and other companies were represented, to agree upon an uniform system of *fares*, and to adopt such other measures as the interest of the companies may demand. We understand that an increased rate of fares will probably be proposed.

Boston and Worcester Railroad.

OFFICE, Boston.

PRESIDENT, THOMAS HOPKINSON.

MANAGER, GINERY TWICHELL.

Length of main line now open for traffic.....44½ miles.
Length of branch lines now open for traffic.....24 "

Total.....68½ miles.

The Boston and Worcester Railroad Company was incorporated by an act of the Legislature of Massachusetts, on the 23th day of June, 1831, for the purpose of constructing and maintaining a railroad from the city of *Boston* to the town of *Worcester*. The charter conferred the ordinary rights and powers usually granted in such cases, and authorized the Company (on payment therefor) to lay out their road five rods wide, and to take such other land as might be necessary to supply stone, or gravel, for construction. The charter further provided that for a period of 30 years, no other road should be authorized to be made leading from Boston, or from Brookline, Roxbury, Cambridge or Charlestown to any place within five miles of the termination of the road, or of the Milbury Branch, in Milbury. The charter also provided that the "commonwealth might at any time during the continuance of the charter of the Boston and Worcester Railroad Corporation, after 30 years from the *opening* for use, of said railroad, purchase of said corporation the road, and all the privileges and franchises of the Company, by paying therefor the amount expended in making said road, and such sum, which together with the tolls and profits of the Company of every kind, should be equal to a net profit of 10 per cent. on the cost of the road from the day of payment of the same." With this limitation the charter is perpetual. The Legislature reserved to itself the right to prescribe the rate of tolls, but is not entitled to reduce them so as to produce less than 10 per cent. on the cost of the road. The charter also provided that the Company may construct *branch* roads to any part of the towns through which the road might run, or of towns adjoining. The capital stock authorized was \$1,000,000, a sum which exceeded the estimated cost of the road by more than \$100,000. Subsequent acts of the Legislature have conferred no important additional powers or privileges, except to authorize an increase of *capital stock*, which now amounts to \$4,500,000 with authority to increase the same to \$5,000,000, which authority has been partially exhausted, by the issue of *convertible* bonds to the amount of \$325,000.

The first estimated cost of the road was \$83,904, or \$20,000 per mile. It was estimated by the directors, in their report under date of Jan'y 18th, 1833, that amount of transportation on the route equalled 30,000 tons, and the number of passengers to be to 54,000; that the income to be derived from the carriage of these would equal \$142,500. The expense of operating and maintaining the road was estimated at \$34,148, which sum would leave a net income of \$108,352 per annum.

The same report estimated that the amount annually paid for the above movement of persons and merchandize equalled *twice* the gross estimated income of the road, or about \$290,000 per annum; that the road when completed would re-

duce the cost of transportation *one-half*, and be the means of saving to the public an equal amount.

The work of construction was commenced in the month of August 1832. The first division from Washington street to *Needham*, 12¾ miles, was opened for traffic in June 1834; the second division from Needham to *Northboro*, a distance of 31½ miles from Boston, in November 1834; and the remainder to Worcester, on the 4th of July 1835.

The physical features of the road are as follows:

Elevation of summit, near Worcester,
above tide water.....490 feet.
Total ascent going West.....556 "
" descent " "100 "

Total rise and fall.....656 feet.
Grade of 30 feet to the mile, (maximum), 14 miles.
" " from 13 to 27 feet to the mile 13½ "
Level.....16 "

Total.....43½ miles.
Length of shortest radius.....1150 feet.

The rail first used was the "Edge"-pattern weighing 40 lbs. to the yard, of English manufacture, and confined by cast iron chains weighing 15 lbs. each. Both the rails and chains have been long since replaced by others of more approved kinds.

The first engine used upon it was the *Meteor*, placed upon it in 1834, and built by Robert Stevenson. Its average speed was about 18 miles per hour. The second engine put upon the road was one built for the burning of *anthracite coal*, by Col. Long of Philadelphia. The *third* was built at the Mill Dam foundry, Roxbury. The greater part of the original equipment of engines, however, was obtained from England.

The construction of the double track was commenced in 1839, and completed early in 1843.

The cost of the road when opened for traffic, with an equipment of 6 locomotive engines, 17 passenger cars, and what were supposed to be a sufficient number of freight cars, buildings &c., with the exception of the stations at Boston and Worcester, was \$1,160,556 19. This sum was increased in 1836 to \$1,500,000; on the first day of January, 1838, to \$1,700,000. The capital stock of the Company at the same period was increased in an equal degree. The increased cost of the road has generally been met by an issue and sale of *stock*, for which legislative authority was obtained as a matter of course, upon application. The amount of capital upon which dividends have been paid has been as follows:

Year.	Capital Stock.	Year.	Capital Stock.
1836....	1,500,000	1845....	2,900,000
1837....	1,500,000	1846....	3,500,000
1838....	1,700,000	1847....	3,500,000
1839....	1,700,000	1848....	4,500,000
1840....	1,800,000	1849....	4,500,000
1841....	2,200,000	1850....	4,500,000
1842....	2,700,000	1851....	4,500,000
1843....	2,700,000	1852....	4,500,000
1844....	2,900,000	1853....	4,500,000

Branch Roads.—The Boston and Worcester Company have constructed *six* branch roads, as follows:—The Milbury Branch opened in 1836, the Saxonville Branch opened in 1846, the Newton Low'r Falls Branch opened in 1847, the Brookline Branch opened in 1848; the Milford Branch opened the same year, and the Framingham Branch opened in 1849. The following statement will

show the length, cost, receipts and income, of these branches.

Names of Branches.	Length in Miles.	Cost.	Am't carried to and from Main Road.
Millbury.....	3,000	43,262 78	
Saxonville.....	3,867	81,131 66	
Milford.....	11,966	327,713 87	
Newton Lower Falls.....	1,251	39,350 04	
Brookline.....	1,553	54,705 03	
Framingham.....	1,993	48,980 79	
Names of Branches.	Expenses.	Earnings.	Am't carried to and from Main Road.
Millbury.....	1,842 01	1,153 30	9,707 32
Saxonville.....	3,493 71	2,265 85	9,045 60
Milford.....	20,731 54	25,715 09	48,461 39
Newton Lower Falls.....	3,326 78	2,037 91	10,391 94
Brookline.....	13,018 66	21,658 72	None.
Framingham.....	1,645 40	1,075 78	4,000 59

\$44,058 10 \$53,906 65 \$81,606 84

The following statement shows the cost, gross, and net, income, expenses of operating the road, and dividends paid by the Boston and Worcester Railroad Company for period of 18 years commencing the first year after its completion, viz:

Years.	Cost.	Gross Income.	Expenses.	Net Income.	Divid.
1863.....	\$569,942.202	\$8,808.683	\$4,085.528	\$4,723.155	126
1864.....	4,580.784	867.219	456.528	410.691	7
1865.....	4,845.966	758.819	427.522	331.297	7
1866.....	4,882.648	743.922	414.109	329.813	7
1867.....	4,862.748	757.947	377.041	380.906	6
1868.....	4,808.332	703.361	406.551	296.810	6
1869.....	4,650.392	716.284	381.917	334.367	8
1870.....	4,113.609	722.170	381.986	340.184	10
1871.....	3,455.232	654.712	283.876	370.836	8
1872.....	3,204.078	487.455	249.729	237.726	8
1873.....	2,900.000	426.403	233.254	193.149	7
1874.....	2,836.200	383.367	206.641	176.726	7
1875.....	2,764.306	349.207	168.510	180.697	6
1876.....	2,374.547	310.807	162.998	147.809	7
1877.....	1,994.991	257.547	140.441	117.106	6
1878.....	1,848.065	231.807	122.572	109.235	6
1879.....	1,710.214	212.324	89.395	122.929	7
1880.....	1,600.000	210.047	94.762	115.285	6
1881.....	1,500.000	187.185	89.135	98.050	6
1882.....	1,500.000	187.185	89.135	98.050	6
1883.....	1,500.000	187.185	89.135	98.050	6

The dividends paid by the Boston and Worcester Railroad Company have been nearly equal to 7 per cent. upon the whole expenditure. The increase of cost of the road over original estimate has been \$3,966,880, or 550 per cent.; of earnings 620 per cent.; of expenses 1,200 per cent., and of net earnings 400 per cent. The annual increase has been pretty uniform. At the end of 9 years from the opening of the road for traffic, the gross earnings reached the sum of \$426,403; at the end of 18 years, \$887,219. The cost of the road reached its maximum in 1849, since which time it has been slightly reduced. The earnings in the mean time have increased from \$703,361 to \$887,219, a gain of \$183,858, or 26 per cent.

The road is thoroughly constructed with ample grounds, buildings, and side tracks for the accommodation of its business. The amount paid for real estate has added largely to the cost of the road. The equipment of the Company on the 30th day of November 1853 consisted in 26 locomotive engines, 100 passenger cars; also 44-236th

parts of 24 passenger cars belonging to the New York and Boston Express Line; 18 baggage cars, and 44-236th parts of 10 baggage cars belonging to the above line; 640 merchandize cars, and 84 gravel cars.

It is the declared policy of the Company to make no further addition to the capital account.

Synopsis of the Report of the Company for the year ending Nov. 30th, 1854.

The earnings of the Company the past year were \$887,219 87, derived from the following sources, viz:

From Passengers.....	\$481,222 05
" Freight.....	382,558 51
For Mail.....	3,540 41
Rents.....	9,934 90
Transportation on Charles River Branch.....	9,964 00

Total income.....\$887,219 87

The working expenses for the year have been as follows:

Salaries, wages and expenses in the Passenger Department.....	\$52,117 88
Do. do. Freight Department.....	75,329 59
Salaries of President, Superintendent, Treasurer, &c.....	29,446 84
Repairs of engines.....	35,805 47
" " passenger cars.....	12,662 09
" " merchandize cars.....	22,099 84
" " gravel.....	566 20
" " road.....	42,695 08
Renewal of iron.....	30,127 77
Repairs of buildings.....	6,931 52
Repairs of bridges.....	12,339 82
Fuel for engines.....	95,958 13
Oil for do. and cars.....	10,698 54
Waste.....	752 90
Gratuities and damages.....	6,205 13
Repairs of fences.....	1,401 13
Wages of switchmen, signal men and watchmen.....	11,555 00
Taxes and insurance.....	8,836 08

Total expenses.....455,528 01
Add balance of interest account.....18,402 03
Two dividends 3 1/2 per cent. each.....315,000 00

\$788,930 04

887,219 87

Balance to reserved income.....\$98,289 83
Reserved income at the close of previous year.....100,626 76

\$198,919 59

From which is to be deducted amounts to depreciation account:

For engines.....	23,071 00
For merchandize cars.....	30,000 00
For passenger ".....	7,000 00
	60,075 00

Total reserved income.....\$138,841 59

The amount charged to depreciation is believed to be sufficient to make good the wear of the rolling stock. The depreciation of iron has been made good by the additions of new rail. The company during the past year have made arrangements by which they have secured access, over the Grand Junction Railroad, to the docks at East Boston which lie upon the deep water of the harbor. As the wharves of the Boston and Worcester Company cannot be approached by large class of sea going vessels, they find themselves unable to compete with other roads entering Boston and more favorably situated for the transportation of imported merchandize, the carriage of which is becoming an important item in the business of Massachusetts Railroad. As a part of the above

arrangement, the Boston and Worcester Company purchase 100,000 of the bonds of the Grand Junction Company, which are believed to be well secured. The Company incur no further liability by the transaction. There appears to be no contingency by which the capital account of the Company will be liable to be materially increased above its present amount.

The items that make up the cost of the road are:

Graduation and masonry.....	\$737,376 51
Bridges.....	265,102 67
Superstructure, including iron.....	1,410,811 06
Stations, buildings and fixtures.....	760,254 88
Land, land damages and fences.....	903,676 66
Engineering and agencies.....	228,425 33

Total cost of road.....4,315,981 02

EQUIPMENT.

Locomotive engines.....	189,425 23
Passenger and baggage cars.....	92,923 12
Merchandize cars.....	252,425 33

\$534,773 68

The total number of miles run the past year, was—

By passenger trains.....	320,786
" freight.....	178,528
" gravel.....	14,266

Total.....513,580

Total number of passengers carried.....1,460,011

Total do. carried one mile.....24,800,512

Total tons of freight carried.....309,715

" " " " one mile.....11,577,498

" " " " to and from other roads.....8,413,132

The proportion of receipts from local traffic, to that derived from other roads was as follows—

PASSENGERS.

1. From passengers on main road and branches.....	\$320,961 51
2. From Western.....	\$142,648 00
" Norwich and Worcester.....	12,604 00
" Chas. River Branch.....	5,008 54
	160,260 54

Total.....\$481,222 06

FREIGHT.

1. From freight on main road.....	155,732 65
2. From freight carried to and received from other roads.....	226,825 86
U. S. mail.....	3,541 40
Rents.....	9,934 90
Charles River Branch.....	9,964 00

Total.....\$405,997 82

Statement of Accounts of the Boston & Worcester Railroad Corporation.
Road and equipment.

Main Road.....	\$3,720,836 85
Branches.....	
Saxonville.....	81,131 66
Millbury.....	43,262 78
Lower Falls.....	39,350 04
Milford.....	327,713 87
Brookline.....	54,705 03
Framingham.....	48,980 79

Equipment.

Engines.....	189,425 23
Passenger Cars.....	92,923 12
Merchandize and gravel cars.....	252,425 33

Total.....\$4,850,764 70

Assets.

Cash.....	\$23,915 90
Loans on Collateral.....	215,242 50
Notes Receivable.....	25,888 05
Bills Receivable.....	66,923 87
Norwich and Worcester Railroad	

Bonds	59,000 00
Boston and Worcester Railroad Stock	20,200 00
Balances due from connecting roads	37,911 57
Individual accounts	45,572 73
	<u>\$494,654 57</u>

Materials for Consumption and Repairs.	
Iron.....	\$21,701 93
Sleepers	1,259 45
Fuel.....	\$42,059 63
Wood land.....	5,500 00
	<u>47,559 53</u>

In machine shop.....	18,928 29
In car shop.....	13,077 28
In blacksmith shop.....	2,947 44
	<u>\$105,474 02</u>

Recapitulation.	
Road and Equipment	\$4,850,754 70
Assets.....	494,654 56
Materials on hand	105,474 02
	<u>\$5,450,883 29</u>

Capital.	
45,000 shares, par value \$100 each.....	\$4,500,000 00
Debts.	

Funded.	
Bonds payable in 1860, .. 100,000 convertible into stock at par	325,000
	<u>425,000 00</u>

Floating.	
Notes payable.....	66,542 91
Bills for materials for consumption and repairs	69,833 68
Balances to connecting roads.....	16,147 25
Unclaimed dividends	7,228 00
Individual accounts.....	5,789 86
Dividend payable Jan. 2d, 1854.....	167,500 00

Depreciation.	
Engines	23,075 00
Freight cars in 1850.....	\$3,925
" " " 1853.....	30,000
	<u>33,925 00</u>
Passenger cars	7,000 00
Reserved income	138,841 59
	<u>\$5,450,883 29</u>

Michigan Southern and Northern Indiana Railroad.

OFFICE OF THE MICH. SOUTHERN AND NORTHERN INDIANA R. R. Co's, No. 13 WILLIAM-STREET. }
COPY OF DIVIDEND NOTICE OF JUNE 21, 1854.

A dividend of five per cent. upon the full stock of these Companies (except construction stock) has been declared, from the net earnings of the current six months, payable in cash, on and after the 5th day of July next, to stockholders who shall be such at the closing of the books. An extra dividend from the surplus earnings has also been declared, payable to the holder of full stock as above, as follows: By the issue to them, on the 1st day of August next, of one share of construction stock for every three shares of old stock held by them; which construction stock will be issued with twenty per cent., endorsed as paid thereon, and subject to the further payment of eighty per cent., payable as follows:

Fifteen per cent. on the 1st day of August.
Fifteen per cent. on the 1st day of September.
Fifteen per cent. on the 1st day of October.
Fifteen per cent. on the 1st day of November.
Twenty per cent. on the 1st day of December.
Parties will have the option of paying faster or in full at any time, and interest will be allowed accordingly; and those entitled to the fractional part of a share, will make the sum full by payment of the difference.

The semi-annual payment of four per cent. for interest on the construction stock, will be made at this office on the 1st day of July.

By order of the Board,
EDWIN C. LITCHFIELD, Treasurer.

NEW YORK, Monday, July 24, 1854.
In advising the stockholders of the extra dividend mentioned in the foregoing notice, we annex, for their information, the following statement of the business and condition of the companies.
The gross earnings of the company, for the year ending 30th June last, compared with those of the preceding year, have been as follows:

Months.	Passen- gers.	Freight.	Mails and Miscel- laneous.	Totals.
1852.				
July	\$54,303	\$23,168	\$42	\$77,515
August	63,403	28,063	126	91,593
September	68,317	46,972	.....	115,289
October	79,180	52,051	.....	131,232
November	41,573	56,805	3,704	102,083
December	30,444	26,269	.....	56,714
1853.				
January.....	30,525	16,159	.....	46,685
February.....	39,237	16,137	.....	55,374
March.....	63,460	20,188	.....	83,629
April.....	74,300	28,061	6,017	108,379
May.....	83,032	36,167	25,610	144,809
June.....	93,045	34,470	17,915	145,430
Mails.....	.....	42,183	42,183	

Totals.....	\$720,825	\$384,496	\$95,600	\$1,200,922
Gross earnings for the year as above.....				\$1,200,922

Operating expenses, including taxes and rent of the Erie and Kalamazoo Road	\$579,636 30
Interest	212,265 97
Extraordinary expenses incurred in forming the Boat connections upon the Lakes in 1852.....	34,357 86
	<u>826,259</u>

Net profits for the year.....	\$374,662
-------------------------------	-----------

Months.	Passen- gers.	Freight.	Mails and Miscel- laneous.	Totals.
1853.				
July.....	\$76,555	\$26,255	\$4,757	\$107,568
August	91,993	51,731	3,953	147,684
September	123,699	60,370	5,737	189,806
October.....	141,661	64,500	9,699	215,861
November	108,535	45,752	3,622	157,911
December	78,873	23,553	7,948	110,375
1854.				
January	55,079	23,296	9,949	88,325
February.....	61,831	26,688	5,277	93,797
March.....	104,604	37,642	7,339	149,586
April.....	119,172	38,656	7,505	165,334
May.....	130,333	59,650	11,644	201,628
June.....	124,582	55,068	6,012	185,653
Mails.....	.....	.....	.....	.....

Totals..	\$1,216,927	\$513,156	83,448	\$1,813,533
Gross earnings for the year, as above...				\$1,813,533
Operating expenses	\$851,951	29		

All other expenses, including salaries, rent of Erie & Kalamazoo Road, &c.	56,136 06
Taxes.....	44,323 24
Interest on bonds and accounts	270,389 41
Sundry expenses, of steamboats, and other expenses applicable to business of previous years, but paid in 1853-4.....	35,152 58
	<u>1,257,952</u>

Net profits for the year.....	\$555,580
-------------------------------	-----------

NOTE.—The above earnings will be found to differ somewhat from the amounts heretofore published, for the reason that an amount of boat earnings before included have been entirely left out in this statement. The net profits from this source will be added at the end of the year.

The Company have paid from their net earnings during the year the following dividends:

In January, 1854, a dividend of 10 per cent. upon \$2,800,000, amounting to.....	\$280,000
In July, 1854, a cash dividend of 5 per cent. upon \$2,854,500 of stock, amounting to.....	142,725

The extra dividend above announced, and payable in stock on and after the 1st day of August next, will amount as follows:

The new stock to be issued will be equal to one-third of the amount of full paid stock, at the date of the declaration of the dividend; this was.....	2,854,500
One-third of this amount is.....	951,500
20 per cent. to be endorsed as paid on this account, will be.....	190,300

A recapitulation for the year shows the following result:

Balance to credit income account, July 1, 1853.....	\$103,307 15
Net earnings for the year, as per preceding statement.....	555,580 74
	<u>\$658,887 89</u>

Dividend paid January, 1854.....	\$280,000
Dividend paid in July, 1854.....	142,725
Extra dividend, payable August, 1854.....	190,300
	<u>\$618,025 00</u>

Surplus..... \$45,862 89
As the May issue of stock was, by its terms, to become full stock, and entitled to full dividends after July, it was deemed proper to divide most of the surplus on hand among the stockholders, who were such prior to that date.

The foregoing earnings have been exclusively from the finished lines of the Company. No portion of the new works of the Company (except about 15 miles of the Jackson Branch) have yet been brought into operation. It will be remembered that it was stated in the last annual report of the Directors of this Company, that they were engaged in constructing a branch line of about 40 miles, extending from the Michigan Southern line to Jackson; also an independent line, known as the "air line," and extending West from Toledo to Goshen, 120 miles. These two new works making together 160 miles of new road, were estimated to cost about \$3,300,000. It was then proposed to defray the expenses of the construction by an issue of \$2,000,000 of mortgage bonds, (\$1,500,000 to be secured upon the Goshen Line, and \$500,000 upon the Jackson Branch,) and by an issue of stock to the amount of \$1,400,000.

The stock was accordingly issued in August, 1853, and distributed among the stockholders. It was subsequently found, that owing to the changed state of the money market, it was impossible to negotiate bonds at rates satisfactory to the Company. The bonds were, therefore, withheld from the market, and a further issue of stock was made in May last, amounting to \$1,186,800. A still further issue is provided for, as stated in the above notice, to be made on the 1st of August next.

It appears, then, that the aggregate amount of stock issues authorized for the purpose of constructing the Goshen Line and Jackson Branch have been as follows:

In August, 1853.....	\$1,400,000
In May, 1854.....	1,186,800
To be issued August, 1854.....	951,500

Total.....	\$3,538,300
------------	-------------

This sum, the Board believe, will be adequate to open these lines for operation. More extensive arrangements for business accommodations at Toledo, than originally contemplated, and other changes of plans, have, it will be seen, somewhat, but not materially, enlarged the first estimate of cost.

Having thus provided for the cost of the new works, by issues of stock, the Company have been able to retain on hand unsold most of the bonds

which they had originally designed for this purpose. There have been sold, and are now outstanding, \$247,000 of the \$500,000 bonds secured upon the Jackson Branch; and \$131,000 of the \$1,500,000 of bonds secured upon the Goshen line. The proceeds of those sales have been used for the general purposes of the Company. The remainder of these bonds are now on hand, and will only be sold in case satisfactory prices can be obtained, and the Company shall find it desirable to realize the avails of them for the purpose of enlarging their equipment, and the necessary station accommodations for their rapidly augmenting business.

The financial condition of the Company is as follows:

GENERAL STATEMENT AFTER PAYMENT OF DIVIDEND OF JULY 5.

Construction and Equipment:

Michigan Southern R. R.....	\$3,562,412 53
Northern Indiana R. R.....	3,360,826 94
Jackson Branch.....	479,824 06
Goshen Air Line.....	1,089,432 41
Erie and Kalamazoo R. R.....	1,363,324 23

	\$8,855,820 17
Steamboats.....	418,457 10
Wood and material on hand..	113,949 14
Stocks, bonds and mortgages..	430,161 41
Cash in hands cashier & ag'ts....	357,579 85
Cash on hand and in banks.....	70,818 50

Total.....\$10,246,786 17

Capital Stock:

Michigan Southern old stock.....	\$1,428,800
Michigan Southern construction.....	609,600
Northern Ind. old stock.....	1,425,700
Northern Ind. construction.....	1,285,200
Issue of May 10, old stock.....	742,660 91
	\$5,491,960 91

Bonds:

Mich. South. mortgage (1860).....	\$1,000,000
Mich. Bonds of 1863.....	325,000
Mich. Bonds income 8 p. c. (1857).....	500,000
Mich. Bonds Jackson Br. (1868).....	121,000
	2,072,000
Northern Ind. mortgage (1861).....	\$1,000,000
Northern Bonds of 1863.....	495,000
North. Bonds Goshen Br. (1858).....	247,000
	\$1,626,000 00

Erie and Kalamazoo R. R. (1862).....	300,000 00
Due State of Michigan 1854-'55.....	75,000 00

Bills payable and receivable:

Balance this account..	541,603 22
Sundry balances.....	91,359 15
Balance income account.....	45,872 98

Total.....\$10,246,786 17

It will be seen from the foregoing statement, that the construction and equipment of the lines of road already in operation, have cost to this date \$7,286,563 70, while \$418,457 10 have been invested in steamboats, deemed necessary for perfecting the business connections of the Company upon Lake Erie. It also appears that up to this date, \$1,569,256 47 have been expended upon the new works of the Company, while the corporation owns bonds and mortgages and stocks to the amount of over \$430,000.

The actual amount of stock of all kinds issued by the Companies on the 1st July, was \$5,491,960-

91. Of this amount it appears that the old capital Stock of the two Companies, amounting to \$2,845,500 was held by 552 different shareholders and construction Stock of the Companies amounting to \$1,894,800, was owned by 632 shareholders; the issue of May 10 not being included in these sums. Thesum then remaining due and unpaid upon the May issue, was \$444,139 09; if to these sums we add the issue of August 1, of \$951,500, the aggregate capital stock of the Company will amount to \$6,887,600. This sum of \$444,139 09, together with the amount to be realized from the new Stock to be distributed on the first day of August, constitutes the fund upon which the Company rely to complete and bring into use their unfinished works.

These works are in an advanced state of forwardness. The work upon the Jackson branch has been let in small sections. Fifteen miles of the line are completed and in use. Fifteen miles more of it are ready for the rails, which are now being laid down. Thirty-two out of the forty miles of the branch will be completed by Fall, and the remainder at an early day thereafter.

The Goshen Line was let in larger contracts.—Messrs. B. FOLSOM, CURTIS, & THOMAS having a contract for the eastern 70 miles of the road, to be completed by the 1st day of September next; and Messrs. ALLEN, DANIELS & GRANT, having the contract for the remainder of the line, to be completed by the 1st day of January next. Over 40 miles of the road is already finished, and the completion of the whole of it may be confidently expected soon after the time named in the contract.

It cannot be necessary here to enlarge upon the importance of the prospective value of these lines. Upon this point the last annual report of these companies was full and explicit.

But it may not be out of place, at this time, to suggest, for the consideration of the stockholders, some data, which establish, beyond all doubt, the value of the stock which is now offered for distribution.

The gross earnings of our road for the first year of its operation were \$1,209,922 11; for the second year, \$1,813,533 32, thus showing an increase of 50 per. cent. If we assume that the increase of business for the third year will be only 25 per cent. the total earnings from our line as it is, will, for the year ending July 1855 exceed.....\$2,250,000 If from this amount we deduct 50 per cent. for expenses..... 1,125,000

It will leave us net earnings..... 1,125,000 Deduct from this sum the int. of \$4,000,000..... 280,000

And it will leave for dividends..... \$845,000 Equal to over 12 per cent upon \$7,000,000 of Stock.

These estimates, it will be remembered, are based upon our line as it is. The Board entertains no doubt whatever, that the 160 miles of new road now in process of construction, will prove remunerative in themselves, and add largely to our earnings. Without attempting to fix the precise amount of the probable business of the Company, the Board from past experience, and from the knowledge of the country traversed by, and tributary to their road, feel justified in expressing their confident opinion, that \$2,500,000 is the minimum of the gross earnings of this Company within one year from the time when its new lines shall be completed and brought into use. If 50 per cent. is allowed for expenses, and interest upon \$4,000,000 is deducted, there would still be left \$970,000 for dividends, equal to about 14 per cent. upon \$7,000,000 of capital stock. Here is a margin wide enough for a satisfactory result in any probable contingency; and we dismiss this subject with the single remark, that heretofore, all our published estimates of profit have been exceeded by the actual results; and we believe in a similar vindication of our opinion in this case.

In carrying out the general object of the Company—the construction of a Railroad communication between Lake Erie and Chicago—we have

aimed, not to be diverted from this general purpose, nor drawn into other and extraneous enterprises. We have acted steadily upon this policy, and have only departed from it in a few instances, where important considerations, in the opinion of the Board, justified and demanded such a course. For example: In the early history of the Rock Island Railroad Company, this Company availed itself of the charter of that Company to procure the right of way through a portion of Illinois, and, by arrangement with it, subscribed for its stock, to the amount of \$190,000. A portion of this subscription was expended in constructing our own line in Illinois, and a portion of it was invested in the stock of that company which is now held by us. This subscription was, at the time, of very great importance to that Company; it enabled it to perfect its organization, and aided essentially in giving it that impetus which has carried it, within two years to a prosperous completion. The completion of this important line, has not only rendered the stock which we took in it good property, but it has also opened to us nearly two hundred miles of Railroad communication from Chicago to the Mississippi River, which is now daily sending a large Railroad traffic, which it gathers from the Far West, over our line, from Chicago to Lake Erie.

Having, by the means of the Rock Island Railroad, secured a connection with the direct West, the Company deemed it advisable to strengthen, and secure their communications with the Southwest; and, for this purpose, and upon contracts, securing them desirable business connections.—They have, within the past year, extended a limited amount of assistance towards the completion of the lines which point to the Mississippi and St. Louis. The moderate aid thus rendered, upon ample securities, has essentially hastened the completion of continuous Railroad communications to St. Louis. By these arrangements, this Company by a moderate outlay, has secured, and within a short time will enjoy—through different routes—direct and continuous railroad communications from Toledo over their own line to Chicago, and thence to St. Louis. Thus, this company will be placed in the most favorable position which it can occupy to compete successfully for the Southwestern traffic with the lines of railways in process of construction, extending east from St. Louis through the Wabash Valley to the Lakes, and through the interior to the Atlantic cities.

In no other cases than that above mentioned has this Company gone beyond its own immediate lines to aid in the construction of other works; nor has it any commitments or entanglements with any other enterprise than its own. The Board will confine their efforts to perfecting, developing, and protecting their own lines; feeling assured that with the extensions and connections already secured, and the early completion of nearly finished roads, the business which their lines may confidently expect will be enough to tax its full capacity, and to satisfy, by its returns, all its stockholders.

It has been the uniform custom of these Companies, at frequent periods, by Committees of the Board, and by its executive officers, thoroughly to investigate and examine their accounts in all their departments. Immediately preceding the declaration of July dividend, the usual examination was had; as also an examination of the stock and certificate account of the Companies, extending from their organization that time.—Although it has not been customary to refer to these examinations in their communications to the stockholders, yet the Board do not deem it improper at the present time to do so, and to say, that in all cases, the result of their examinations has demonstrated the accuracy and the perfect fidelity of the accounts and books of the Company, and of those having them in charge. It may be proper to add, that the stock and certificate books, have always been open to the inspection of every stock holder; and they will continue free of access to all who are partners in the corporation, and have thereby acquired a right to know their contents. The Board have heretofore adopted all those guards

which seemed necessary to secure accuracy and fidelity in their books and accounts, and they will from time to time adopt such additional ones as their own experience, or that of others may suggest, as best calculated to attain this end.

In conclusion, we beg to suggest to the stockholders in these Companies a few considerations, made pertinent by the present excited state of the public mind. A panic—temporary in its duration, we trust and believe, apparently caused by the development of misconduct on the part of prominent railway managers—has, for the moment, seized upon the financial public, and caused a depression in all railroad securities. This is an unnatural state of things, and it must be temporary. Railroad securities, like all others, will eventually be estimated according to their intrinsic value.—Those which are faithfully administered, and are based upon a solid, established and remunerative business cannot fail in the end to be rightly appreciated.

At a time like this, when the general distrust may for the moment, confound the worthy with the unworthy railroad enterprises of the day, we address ourselves to the stockholders, whose agents we are, and present to them this report, to which we invite their careful attention. Less than five years ago some of those who now address you with a few associates, first organized for the construction of the Michigan Southern Railroad. In 1851, they commenced taking up subscriptions for the Northern Indiana Railroad. In June, 1852 less than eighteen months from that time, the line from Lake Erie to Chicago was first opened for use. At the present time, these companies are in the receipt of gross earnings from their business which will not be less than \$2,000,000, for the current year ending the 1st January next. These earnings from 135 miles of road now completed and in use, insure a net profit, large enough to pay the interest upon the entire debt of the Companies, and ten per cent. dividends upon their stock, as that debt and stock will be when 475 miles of road which the companies have projected, are completed.—If to the \$2,000,000 of present revenue, which secures these results, are added, a reasonable allowance for the natural annual increase of business upon the finished lines, and the most moderate estimate for the 160 miles yet to be brought into use, it will be demonstrated, beyond all reasonable doubt, that the future earnings of the Companies will allow dividends as liberal as those they have heretofore paid to their stockholders.

Fully believing that the stock of these Companies were never more valuable than at the present moment, we recommend all the stockholders to avail themselves of the opportunity offered for enlarging their investment. The property we are managing belongs to them. The new works we have in hand partly completed, and which this issue of stock is designed to finish, is for their benefit—calculated and intended to secure and increase the value of the investment they have already made.—At the time like the present, it is important that the Board feel they are fully and cordially sustained by the stockholders. With a view to give to their operations the utmost efficiency and enable them to finish the new works to the best advantage, the Board expect that the stockholders will respond promptly to the call of the Company, by taking, on the first of August, the new stock to be awarded to them on that day, and paying the instalment then due; and they hope that the stockholders will, as far as convenient, anticipate the remaining instalments. By so doing they will most effectually strengthen the hands of the Board, and enable them to carry out successfully the new works they have undertaken.

By order of the Board, JOHN B. JERVIS, Pres.
EDWIN C. LITCHFIELD, Treasurer.

Albany and Northern Railroad.

George A. Clarke, of the Central Road, has been appointed Superintendent, and R. C. Johnson, of Utica, General Freight Agent of the Albany and Northern Railroad.

Car Ventilation.

A communication, which we published two weeks ago, on this subject signed "P. M. H." and on which we ventured a comment disagreeing with some of its conclusions, has brought out another from the Waterbury party, and a second from "P. M. H." which will be found below.—Were the subject not one of the first importance, one in which the whole travelling public are deeply interested, and in which railway companies themselves are interested in so much as it affects the amount of travel, we should refuse to cumber our columns with the views of different people upon it. But the vital necessity for relief from the present suffocating heat, and blinding dust, is fully evinced by the numerous plans, propositions and expedients resorted to for effecting that object. Almost every week the returns from the Patent Office record some new plan of ventilation showing that the whole inventive genius of the country has been so wrought upon by the public demand for relief, that it is impossible longer to resist the pressure.

Ardent investigations of the subject have resulted in these numerous devices and it is due to the inventors as well as the public that their utility should be tested. It is not anticipated that all will be found successful. It may however reasonably be expected that some of them will prove equal to a removal of the difficulty.

Railways working in competition with water routes, where fleet steamers are but a few minutes longer in making the same distance, feel the want of a correct and healthy ventilation. Their finances show it. Their meagre trains filled with "way" passengers, black with the dust and blind with smoke, are indisputable evidence of the fact. For instance compare, at this season of the year, the "through" trains on the New Haven road with the crowded condition of the boats on the Boston Lines. Who would not prefer the road to the Sound if the same degree of comfort could be attained. So with the Hudson River trains and the Albany boats; the Lake Shore and Canada trains, and the Lake Erie Steamers.

Now, suppose the cars on these roads were well ventilated to the exclusion of dust and smoke, by the introduction of a plentiful supply of fresh air, does any man think they would not be generally preferred as a mode of travelling over the steamer?

Well, here are plans by which it is claimed such results may be reached at a cost of not more than one to two hundred dollars the car; and so far as the experiments have shown heretofore these claims are not exaggerated.

We will suppose that by the adoption of one of the proposed modes of ventilation at a cost of two hundred dollars the car, where it is applied to cars already constructed, or two thousand dollars the train of ten cars, an addition of fifty per cent. could be made to the railway travel by diverting it from the boats. We do not believe this is an extravagant estimate of what might be expected from such policy in regard to "through" travel. If we are correct it would take but a few days to pay for the attachments to the cars and the tax for the use of the "right."

The lines above mentioned have a peculiar interest in the success of "car ventilation," and it will be well worth their while to encourage the

trial of all such modes as promise a reasonable prospect of success. They will find it an admirable method of enhancing their receipts—much better than advancing rates of fare.

It appears to us that the theory upon which the operation of the plans proposed by Mr. LANCASTER and Messrs. WATERBURY and ATWOOD is based, is the correct one. What weight should be attached to the objections of "P. M. H." to the latter mode, must be decided by the result of experiments now in process; and we must say that, thus far, the testimony is decidedly opposed to their validity.

The idea of a current of air which is conducted through the train, at the rate of from four to eight miles per hour becoming very badly impregnated with impurities, is, we think a little far fetched. The quantity of fresh air to each person, under such circumstances would be greater than is now furnished to our own dwellings and sleeping apartments. "P. M. H." must see that with such an arrangement "Smoking" would not be allowed in the "Head Car" of the train.

But "P. M. H.," while objecting to the plan of Waterbury and Atwood, as being insufficient says nothing as to Mr. LANCASTER's mode, to which, it seems to us, none of his objections apply, and yet asserts that the mode of ventilation which shall prevent the intrusion of dust, is still in the future. How does he know that? Because all yet tried are unsuccessful, does it follow that there is, or will be, no method devised which shall succeed?

We believe that both Messrs. LANCASTER and WATERBURY are on the right track in theory and that they will eventually succeed, though on some accounts one plan will be preferred over the other and perhaps *vice versa*; but that the dust, smoke and cinders, may be excluded by the introduction of fresh air in the manner they propose, we have not the slightest doubt.

2 Mr. Lancaster's plan is entirely self-adjusting, and gives the occupant of each seat the power to regulate their own supply of fresh air; so that invalids or those susceptible of colds, may not be obliged to take more air than they deem advisable.

By shutting off the entire gravity of cold or fresh air in cold weather. You do not render yourself liable to be deluged with dust, as the continuous passage of the current of air between the inner and outer walls of the cars still effectually repels the dust. These are advantages which we have seen claimed by no other inventor, and we deem them of importance. The real thing to be desired is, the one which will in the most effectual manner relieve the public from the privations now suffered by dust, without regard to whose plan it is, or how it works. Will it exclude dust, and ventilate cars with air fit for respiration? If so, will it do it without entailing inconveniences and nuisances greater than those from which it relieves us? These are the great considerations, and immediately following them is the question of economy. What will they cost? If they will not add more than ten to twenty per cent. to the present cost of cars they will be highly desirable, as they will add at least twenty per cent. to the amount of travel.

Here are the communications.

(For the American Railroad Journal.)

It is a rule of yours, I presume, not to let an incorrect statement of any considerable importance stand upon your pages without a correction when-

ever a suitable one is tendered; I therefore send this to set right some statements made by P. M. H. respecting Car Ventilation. He says that Payne's system "emptied and refilled the car 30 times in one minute with fresh air." This is grossly incorrect—I may say, impossible; for his injectors had only about 40 square inches each for the admission of the air, and the greatest number I ever saw on a car was 8—(almost always less)—so that there was in all only about 320 square inches, or 2.2 feet. The contents of a car is about 2,520 cubic feet. Say that the passengers occupy 520 feet; and in order to change 2,000 feet 30 times a minute, the air must come in through the injectors a little over 5 miles a minute, or over 300 miles an hour!! which is a little faster than they can go, so that according to this rule which P. M. H. says experience should whisper to experimenters, he ought to have succeeded. This velocity is almost equal to that of a cannon ball. But if Paine's injectors were entirely unobstructed—if they were only open throats 10 inches in diameter, and nothing were lost by friction, the air would have to enter at the rate of 132 miles an hour to empty and refill a car 30 times a minute.

But P. M. H. is as much in error respecting the perceptible presence of offensive odors in Atwood and Waterbury's mode as in the amount of air taken in and expelled by Paine's injectors. No mode yet offered to the public furnishes so much air as theirs, and practically there is no such thing as offensive odors, from the source he indicates, or from any other. Such is the experience of the passengers over the N. R. R. from more than a year's use of it; and we have had some severe trials of it. It would be more reasonable to object for such a cause to meeting a procession in an open street on a day when the air was still. The air rushes through the cars in such amount as to completely dilute beyond the perception of the keenest smell, all odors that have as yet arisen. This I say from experience and not from imagination. K.

Bridgeport 21. July '54.

(For the American Railroad Journal.)

Your remarks on my article relative to car ventilation, lead me to believe that I am misunderstood. It is not denied that a free circulation of air exists in Messrs. A. and W.'s mode of ventilation, but it is contended that all the air which circulates in the last car of a train must first circulate in the head car, and then in the second and so on till it reaches the car in question: that while thus circulating it becomes charged with all the obnoxious effluvia and odors of the bodies through and among which it is circulating, and thus becomes impure and poisonous.

As your correspondent understands the mode in question, and as he has repeatedly witnessed it operate, the air to circulate through the whole train is made to enter the head car and traverse the train to the last car where it makes its exit. The train is an air conduit half choked up with human beings through its whole length. If a body of smokers commence fuming in the head car their smoke will traverse each successive car till it reaches the last one. This result is inevitable, because the last car is the educt and only place of escape for the entering currents. Now if the smoke will so pass through the train, so will the

breath of the passengers, and I repeat that a passenger in the last car of a train will be obliged to breathe an atmosphere impregnated with all the exhalations of the passengers in the cars in front of his position. P. M. II.

Railways in Nova Scotia.

We were favored yesterday with a visit from Hon. Joseph Howe, late Provincial Secretary of Nova Scotia, and now Chief-Commissioner of Railways for that Province.

Mr. Howe is well known as a public man, having for the last twenty years been at the head of the liberal party in that Province, and for many years past at the head of its government, holding the office of Provincial Secretary. Mr. Howe resigned his political offices, and was placed by the government of Nova Scotia at the head of the Board of Railway Commissioners, under the law of the last session, providing for the building of railways in that Province.

Mr. Howe evidently enters with the same zeal upon his new vocation as he embarked his energies and his facile pen in the advocacy of the principles of "responsible government," years ago, when that question excited so much alarm in the minds of the "solid men" of Nova Scotia and Canada. We hope Mr. Howe may meet as much success in this new field of labor as attended his efforts in the carrying out of that great principle of "popular sovereignty," now so well established throughout British North America. We have formerly had doubts as to the policy of building railways through the agency or by means of, governmental management,—but this fact does not diminish or weaken our regard for those engaged in the carrying out of their respective portions of the European & North American Railway. Our desires in regard to the carrying out that work have been, that, in Nova Scotia, New Brunswick and Maine, each should adopt its own method for its accomplishment, while all should harmonize upon all questions affecting its structure or its future management.

Fortunately, all questions of the latter description are now adjusted. Nova Scotia and New Brunswick have both adopted the gauge of 5½ feet making it uniform with the line of the Grand Trunk Railway of Canada; and when the various sections, the "dissecta membra," in Canada, Maine, and in the Provinces east, become connected, they will form an unbroken line of railway, of uniform gauge, from Halifax to Detroit.

In 1853 Nova Scotia provisionally agreed to adopt the "Company principle," similar to that of New Brunswick, and six months time was allowed after the royal assent, for the organization of the Company. On the failure of this, "the government scheme" was to come into operation.

The war in Europe checked, and in fact defeated the plans of those who sought to inaugurate the Company within the six months, and at the end of that time Mr. Howe introduced and carried through Parliament his scheme for a government line.

The work was commenced on the 8th of June, 1854, at Halifax, and a section of some ten miles is under contract to be opened this year. An additional section of fifteen miles will be opened in 1855.

The first 25 miles forms a common Trunk for the lines running to Amherst, to Windsor and to Pictou, and we learn from Mr. Howe that they intend to push the Trunk line to the frontier of New Brunswick, so as to meet their line at that point, as soon as it can reach it, from St. John. They will then extend branch lines to Windsor and Pictou as occasion may require.

The Province of Nova Scotia has an overflowing Treasury, and is free of debt. For some years to come, the city of Halifax will furnish a ready market for her debentures, at 5 per cent, and as the line proposed will form an important link in the Great Trunk Railway from Halifax to the United States and Canada, no fears are entertained as to the paying qualities of the line.

Our people will recollect that Mr. Howe pledged

himself at our City Hall, in the fall of 1851, to complete that portion of E. & N. A. Railway in Nova Scotia, as soon as Maine should build her part of it, and as the work is now in progress from Halifax this way, we must be up and doing or forfeit our pledges thus mutually given. New Brunswick and Nova Scotia are both at work, and their lines under contract for a good portion of the distance. The line from Waterville to Bangor will be completed the present year, but from Bangor to Calais the means for building the 95 miles are still unprovided.

We have no doubt, however, that before the fall of the leaf the coming autumn, some action favorable to its accomplishment will be had. The visit of Mr. Howe, and the explanation by him given, have awakened a new and fresh interest for the carrying out of the European & North American Railway.—*State of Maine.*

Harlem Railroad.

The committee appointed to examine into the fraudulent issues of the stocks of this company by Kyle have submitted the following report:

NEW YORK AND HARLEM RAILROAD COMPANY.

At a special meeting of the Directors of the New York and Harlem Railroad Company held this day, July 20th, 1854, the following report was submitted by Nelson Robinson, Charles Denison, and W. C. Wetmore, Committee, appointed to investigate the stock-books, and accounts of the Company. The Committee engaged the services of J. T. Vandenhooft, Esq., assisted by competent accountants, who have reported to said Committee as follows:

New York, July 19th, 1854.

Nelson, Robinson and others, Committee of Examination:

Gentlemen—Having concluded my investigation of the stock-books of the New York and Harlem Company, for the purpose of ascertaining the amount of stock fraudulently issued, I beg leave to report, that there are standing in the names of various parties on the Stock Ledger (of old stock)..... 81,251 shares.
Certificate issued to Eliza H. Schuyler, (she having no stock in her name)..... 21 "

Total..... 81,272 shares.
The amount authorized..... 77,141 "

Amount over-issued..... 4,131 shares.
In relation to the Preferred Stock, I find standing in the name of various parties on the Stock Ledger..... 36,924 shares.
Certificates issued to parties having no stocks in their names as follows:

To A. Jenkins..... 112 shares.
To J. Ryerson..... 8 "
To F. W. Worth..... 130 "
To A. Kyle..... 315 "

Total..... 31,389 shares.
The amount authorized..... 30,000 "

Amount Preferred Stock over-issued..... 1,389 shares.

Yours respectfully,
J. T. VANDENHOOF.

Upon the receipt of the above, the following resolution was unanimously adopted by the directors:

Resolved, That in the opinion of this Board, it is just and right, that the Company assume, the whole of the over-issue, as reported, to this Board by their Committee, by purchasing preferred stock equal to the over-issue in said stock, and retiring the same; and by an increase of the old capital stock, equal to the over-issue in the old stock; and for that purpose, the Board resolve, that there be a meeting of the Stockholders called on the first day of August next, to be held at the office of the Company, No. 1 Centre street, corner Tryon row,

at 1 o'clock P. M., of that day, to consider and pass upon the subject.

It will be seen that the whole amount of stock (old preferred) over-issued, can be replaced for less than \$150,000 if purchased now, at the market value of said stock, at the time the transfer books were closed, which was, old stock 40, and preferred stock 95.

W. C. WETMORE, President, pro tem.

American Railroad Journal.

Saturday, July 29, 1854.

Stock and Money Market.

The stock market the past week has been depressed and has largely fluctuated. The course of several leading companies, particularly the New York Central, and the Reading, in postponing the payment of dividends has had an influence in checking an improvement which otherwise would have taken place, though the tendency will be to relieve the demand for money, and in the end, to advance prices.

The following table will show the fluctuations at the stock board for the week ending July 26th.

	Thursday.	Friday.	Saturday.	Monday.	Tuesday.	Wednesday.
New York Central	91 1/2	91 1/2	92 1/2	84 1/2	87	88
Michigan Central	50	50 1/2	50 1/2	48 1/2	49	50
Reading	95	95	94	91	92	92
Cleveland and Toledo	67 1/2	64	66 1/2	66	67 1/2	67
Cleveland and Colum.	70 1/2	70	71 1/2	70	69 1/2	69 1/2
Hudson River	100	100	100	100	100	100
Panama	96	96	96	96 1/2	95	95

Money on call is plenty on first class securities. The distrust which has prevailed has materially lessened the number upon which loans are accustomed to be made. The accumulations which are now going on, must, with the return of confidence, direct attention to railroad securities, and carry them gradually up toward their real value.

The Bank returns for the week ending July 22d, show the following result:

	July 22d.	July 15th.
Loans	\$92,017,878	\$90,437,004
Specie	15,720,309	15,720,093
Circulation	8,768,289	8,837,681
Deposits	75,559,082	75,227,333

Michigan Southern and Indiana Northern Railroad.

We invite attention to the circular of the Michigan Southern and Indiana Northern Railroad Companies to be found in another column.

Hempfield Railroad.

In the Wheeling City Council, on the 11th inst, a resolution was adopted, authorising the Mayor to subscribe \$250,000 to the capital stock of the Hempfield Railroad Company, the company to accept the bonds of the city at 25 years, at their par value, and agreeing to pay the interest upon the

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,978,700	5,978,700	254,748	113,520	none	88
Androscoggin and Kennebec.. "	55	824,863	1,043,540	2,036,140	177,003	80,058	none	30
Kennebec and Portland.. "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	6	95	24
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	96
Boston, Concord and Montreal. N. H.	93	1,849,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	103
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	85
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord .. "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	678,500	.....	.....	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	5 1/2
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	ent.	82	.....
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	none	.....	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,509	114,098	6	80
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100 1/2
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6 1/2	77
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	96 1/2
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern..... "	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	70
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	90
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	82 1/2
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central "	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,897	122,866	none	91 1/2
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	11 1/2
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western..... "	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	93 1/2
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	67
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	97
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	116
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	none	40	.....
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	50
Buffalo and New York City... N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	none	.....	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	none	.....
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	130	.....
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	49 1/2
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	52
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	.....
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	88
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,334	480,137	195,847	.....	10
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	.....
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	none	.....	.....
Rensselaer and Saratoga..... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,890	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	33	.....
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	none	.....	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,492	1,388,355	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	125	.....
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	.....
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	68 1/2

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102 1/2
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,083,420	798,193	7	50
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna.... "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,281	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7 1/2	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Monte and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga.... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	70 1/2
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	70
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	100
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102 1/2
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77 1/2
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley.... "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77 1/2
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati.. "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis.... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru. "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Terre Haute and Indianapolis "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	123
Michigan Southern and Ind. N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	92
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	86
Pacific..... Mo.	38	.....	non	In progres	Recently opened.	.....	.....	.....

bonds until the road is completed from Wheeling to Greensburg; and farther, that the said subscription shall be applied to Erection of Depot buildings in the city of Wheeling, and the purchase of rail to be laid between Wheeling and Washington, Pa.

Railway Traffic Returns.

Great Western of Canada 229 miles.

For the week ending July 21th 1854.

Received for passengers.....	\$11,869
" Freight.....	3,780
" Sundries.....	1,273

Total..... \$16,422

No. of passengers carried..... 6,411

Do. since Jan. 1st 1854..... 191,488

Total Receipt since Jan. 1st..... \$565,257

Grand Trunk of Canada 292 miles.

For the week ending July 8, 1854.

Received for 8,830 passengers.....	\$7,381
" 3,371 tons freight.....	7,148
" 503 M. feet lumber.....	1,070
" 1,265 cords wood.....	1,756
" Mails &c.....	779

\$18,134

Total receipts since July 1st..... \$20,938

Value of Real and Personal Estate in Buffalo.

The Buffalo Express publishes the following statement of the valuation of the real and personal estate in the city of Buffalo and the town of Black Rock, for the years 1853 and 1854, and the taxes levied thereon for those years:

	1853.	
Real Estate.....	\$4,764,026	\$3,456,023
Personal estate.....	427,000	456,700
Total value.....	\$5,242,625	\$3,755,732
Aggregate tax.....	20,938	14,234
BLACK ROCK. 1854.		
Real Estate.....	\$16,079,218	\$16,698,700
Personal estate.....	8,518,221	2,698,655
Total value.....	\$24,597,430	\$19,807,355
Aggregate tax.....	808,000	124,000

Pennsylvania Railroad.

The following statement exhibits the earnings of the Pennsylvania Railroad, and the expenses of its management during the half year ending June 30, 1854.

Months.	Earnings.	Expenses.	Net Earn'gs.
January.....	\$275,192 04	\$148,573 83	\$126,618 24
February.....	297,657 37	148,704 12	148,953 25
March.....	475,496 88	206,565 04	268,931 81
April.....	318,889 11	174,804 91	139,084 20
May.....	294,224 73	157,039 48	137,185 25
June.....	223,363 88	151,241 57	72,622 31

Totals for year.....	1,880,324 01	936,948 95	893,375 06
Same month in 1853.....	1,459,133 48	797,777 41	661,356 07

Increase..... \$421,190 53 \$189,171 54 \$232,018 99

From this it appears, says *The North American*, that the net profits of the company have been \$893,375 for the first half of the present year—equal to the interest at 6 per cent. per annum on \$29,779,167. If we deduct from the net revenue, as above exhibited, the half year's interest paid on the 1st instant, upon their five million loan, amounting to \$150,000, we have the sum of \$748,375 as the profits on the capital stock of the company, amounting, (including subscriptions to Western railroad) to about eleven and a half millions of dollars, or at the rate of nearly thirteen per cent. upon the whole capital stock.

Journal of Railroad Law.

LIABILITY OF RAILWAY COMPANIES FOR INJURY TO
NON-PAYING PASSENGERS.

Harrison vs. the Great Northern Railway.

The following case of much interest to Railroad Companies was recently decided by the Court of Common Pleas, London, England.

The plaintiff, Mr. Harrison was a reporter on *Bell's Life in London*, and was proceeding to some races in the country on the Great Northern Railway, having a pass made out in the name of Mr. Langley, the editor of the paper, which was stated to be "not transferable." An accident happened, Mr. Harrison was injured, and brought his action to recover damages. It was objected that there was no evidence to go to the jury, and that the plaintiff was not lawfully, but unlawfully, in the carriage. Mr. Baron Martin, who tried the case, held that there was evidence for the consideration of the jury, and left it to them to say whether the plaintiff was lawfully in the carriage. A verdict was found for the plaintiff. To this ruling there was a bill of exceptions rendered, and the matter was argued when this Court last met, but time was taken for consideration.

Mr. Justice Coleridge delivered the judgment of the Court. The question arose with regard to the issue on the allegation in the third count, that the plaintiff was lawfully in the carriage, the plea being that he was unlawfully in the carriage. The Court was of opinion that the ruling of the learned Baron was right. There was a practice existing between the railway company and *Bell's Life* that their reporters should go free. The reporter in this instance was supplied with a ticket having on it the name of a person in that department of the newspaper. That ticket had on it a memorandum, "Not transferable," and that if transferred the person using it would be liable to pay the penalty incurred by a passenger who traveled without paying his fare. The plaintiff was *bona fide* going a journey for the paper, and availed himself of this ticket, which he showed to the guard, and was put into the carriage. It appeared that the plaintiff and other persons had on several occasions before travelled with similar tickets, and there was evidence that the persons whose names were on the tickets were personally known to several of the railway officers. The question was, whether the plaintiff was in the carriage under such circumstances as to make him a trespasser. The Court thought the words on the pass ticket were not so conclusive as to make the other circumstances immaterial, but it was evidence for the jury as to the practice of the manner in which these tickets were used, and the jury were of opinion that the use of the ticket was known to the superintendent, and it would be wrong to say he was a trespasser. It was matter for the jury, and that was the reason for saying that the judgment ought to be confirmed.

RULE OF DAMAGES FOR NEGLIGENCE.

The following case against the same company, was recently decided by the Court of Queen's Bench in London.—

The plaintiff in this action, H. T. Gibson, is an attorney at Newcastle-upon-Tyne, and he sued the Great Northern Railway Company to recover damages for breach of contract, in not carrying the plaintiff and his luggage from London to Knottingley, pursuant to their contract. The defend-

dants denied the contract, and, among other pleas, pleaded, that the plaintiff's portmanteau contained papers and writings of the value of 10*l.* and upwards, and that the value thereof had not been declared, as required by the Carriers Act.

It appeared that the plaintiff, on the evening of the 29th of September, 1853, went to the station of the Great Northern Railway at King's-cross with the intention of going down to Huddersfield by the 9 15 train. He arrived at the station at five minutes past 9 o'clock, having a portmanteau and three or four small packages. He took a first-class ticket to Knottingley, the terminus of the Great Northern Railway towards Huddersfield, and gave directions to a porter to label the portmanteau for Knottingley and put it in the van.—The plaintiff then took his seat in the carriage with the smaller packages, and, seeing the porter pass the door, he inquired of him whether he had put the portmanteau safe in the van. The porter replied, that he had done so, but, as he spoke in a hesitating manner, the plaintiff got out of the carriage to assure himself that it was all right.—He then found that the portmanteau had not been placed in the van, but still remained in the office. The porter, in excuse, said, he thought he had put it in the van, and immediately set about placing it there. The plaintiff in the meantime proceeded to the carriage to resume his seat, but, on arriving at the door, he found the train was already in motion, and the officer in attendance would not allow him to enter. The train accordingly proceeded without the plaintiff, but his portmanteau went on. The plaintiff then complained to the clerk in the office of the negligence of the company's servants, and said that unless the company compensated him he would sue them. The plaintiff's fare was then returned to him, and he went and slept at the Euston Hotel, and proceeded next morning by an early train to his destination. On his arrival at Huddersfield he found that the portmanteau had not arrived, though it had not been labelled "Passenger to Huddersfield." The other packages were safe, having been taken care of by a friend who had taken his seat with the plaintiff in the carriage on the preceding evening. The plaintiff telegraphed to have the portmanteau forwarded to him at Huddersfield, but it did not arrive for several days, and the plaintiff, who had gone to that town on professional business, was compelled to wait there until it arrived. The portmanteau contained, among other things, two agreements and some accounts which were absolutely necessary to enable the plaintiff to discharge the business upon which he had made his journey. The present action was, therefore, brought to recover damages for the expense and loss of time which the plaintiff had incurred by reason of the defendants' negligence in not forwarding the portmanteau.

Mr. Bramwell, for the defendants, said, his defence was, that the plaintiff himself had been guilty of negligence in not seeing that his luggage was properly placed in the van. The portmanteau had been labelled "Knottingley," but in the absence of the plaintiff it was afterwards claimed by another passenger and labelled "Newark," to which place it was forwarded, and there remained for some time unclaimed. It was stated that the company would not have resisted the plaintiff's claim to compensation if he had not made an ex-

orbitant demand, which the company felt bound to resist.

Mr. Justice Erle interposed, and said, the delay in the delivery of the portmanteau appeared to have arisen from a mistake in putting one label on another, but he should tell the jury that if a passenger gave his luggage to a porter, and stated distinctly its destination, it was not negligence in the passenger to leave the care of the luggage to the porter and to attend to his own personal accommodation.

Upon receiving this intimation the learned counsel declined calling witnesses.

Mr. Justice Erle then directed the jury accordingly, and said, the main question for them was as to the amount of compensation which the plaintiff a solicitor, ought to receive for his loss of time.

The plaintiff ought to have four guineas a-day.

Mr. Justice Erle said that, allowing four guineas a-day for the three days the plaintiff was detained at Huddersfield, the total loss which he sustained, including his other expenses, would be 19*l.* 2*s.*

The jury accordingly gave their verdict for the plaintiff for the amount.

Latrobe and Knight's Rule for Equation of Grades.

{ ENGINEERS' & MECHANICS' COLLEGE.
Cleveland, O., July 20th, 1854.

In your issues for the 24th of June and 8th of July, two articles appear under the captions "Latrobe and Knight's Rule for the Equation of Grades," and "Curves on Railroad Tracks," on which I desire to make a few remarks. It is stated that Messrs. Latrobe and Knight assume the friction of each ton (of 2,000 lbs.) drawn is 10 lbs., equal to one-half the gravity of one ton on a grade of 52.8 feet per mile. The gravity of one ton (of 2,000 lbs.) on a grade of 52.8 feet per mile, being 20 lbs., and the whole resistance 30 lbs., it follows that three engines would be required on ascending such a grade, to do the work of one of equal power on a level. But on descending such a grade, it is assumed that one engine going with its train and two going empty, would cost no more than one engine exerting its power on a level. Consequently the disadvantage of such a grade is measured by the cost of keeping three engines going one-half of the time, and the cost of one engine for the other half, equal to the average cost of maintaining two engines all the time. By this result a rise of 52.8 feet in any distance, imposes an additional expense equal to the operation of one mile of level. Hence the formula $\frac{R + F}{52.8}$

= 1 mile additional length above that of a level. Here it is assumed that the friction of each ton (of 2,000 lbs.) drawn is 10 lbs. Now if this amount of friction be too great, it will materially affect the accuracy of the formula. Dr. Lardner states that "the estimate commonly adopted by engineers at present is 9 lbs. per ton (of 2,240 lbs.). I have no doubt, however, that this is too high.

I am now engaged in an extensive course of experiments on different railways, with a view to determine with precision this and other points connected with the full development of their theory; and I have reason to believe, from the observations I have already made, that even 7½ lbs. per ton (of 2,240 lbs.) is above the average force of traction upon a level." Now since 7½ lbs. is very

nearly the 300th part of a ton, it follows that if an inclination upon a railroad rises at the rate of 1 foot in 300, or, what is the same, $17\frac{1}{2}$ feet in a mile, such an acclivity will add $7\frac{1}{2}$ lbs. per ton to the force of traction. This acclivity, therefore, would require a force of traction twice as great as a level. In like manner a rise of 35 feet in a mile would require three times the force of traction of a level, $52\frac{1}{2}$ feet in a mile four times that force, and so on. Thus we see that according to Messrs. Latrobe and Knight, it requires only three times the force of traction to ascend a grade of 52.8 feet in a mile, whilst it will, according to Dr. Lardner, require four times the force of traction to ascend the same.

The article on curves presents some discrepancies which require explanation. The writer states that the resistance of curves depends not only on their radii and length, but also on the velocity. &c. And again quoting from Gillespie—"the amount of mechanical power absorbed in passing around a curve is altogether independent of the radius of the curve, and depends only on the amount of the entire angular change in the direction of the line." Now if the resistance of curves depends on their radii, as stated above, a certain amount of mechanical power is absorbed in overcoming that resistance, and yet we are told "the amount of mechanical power absorbed in passing around a curve is altogether independent of the radius."

These are subjects of great importance not only to engineers, but to railroad companies generally, and I am glad to find the JOURNAL devoting some of its pages to the discussion of scientific subjects, and that it does not confine itself exclusively to the commercial details of railroads.

Yours very respectfully,

E. NUGENT, C. E.

Illinois Central Railroad.

The Chief Engineer of this Company reports the following progress of the work upon the line of the above road.

Divisions.	Length. Miles.	Track.	
		Laid Jan. 1.	To lay July 1.
1st. Cairo to Muddy River	60	20	60
2d. To Junction	52	$7\frac{1}{2}$	$26\frac{1}{2}$
3d. To Runsey's Creek	43	none.	25
4th. To Decatur	49	none.	43
5th. To Bloomington	44	16	$32\frac{3}{4}$
6th. To LaSalle	60	$27\frac{3}{4}$	$16\frac{1}{4}$
7th. To Freeport	79	56	60
8th. To Dubuque	67	14	17
9th. Chicago to Kankakee	56	25	62
10th. To Urbana	72	56	40
11th. To Wabash Point	48	$40\frac{1}{2}$	72
12th. To Junction	74	none.	48
Total	704	$218\frac{1}{4}$	361

We copy from the Chicago Tribune a detailed statement in explanation of the above table.

On the First Division, from Cairo northwardly, 54 miles are completed, and there are but six miles near Cairo to be finished. This will be done by to-morrow.

On the Second Division, $26\frac{1}{4}$ miles were com-

pleted on the first inst., and the track-layers on the First Division will come upon the Second, and commence work next week. By this means the work will be finished at an early day.

On the Third Division, north of Centralia, no track is laid. As soon as the Ohio and Mississippi Railroad from Illinois Town reaches the line of this Division, which will be in September, the work of laying the track will be started both north and south to meet the track-layers from the Second and Fourth Divisions.

On the Fourth Division, 16 miles were completed on the 1st. inst. This Division is between Decatur and Vandalia, and is going ahead as rapidly as one company of track-layers can push it. Thirty three miles remain to be finished, and the grading is all ready for the ties and iron.

On the Fifth Division, between Decatur and Bloomington, 28 miles were finished on the 1st inst., leaving only 16 miles to complete. A heavy force is on the line, and the Division will be finished at an early day.

The Sixth Division, from Bloomington to LaSalle, 60 miles, was completed in 1853. The entire length of the main line is 302 miles, of which only 118 miles were unfinished on the 1st. inst. On this latter the work of track-laying will be prosecuted with the present force until September, when it is intended to increase that force largely. The additional facilities which will be given, when the Ohio and Mississippi Railroad shall be completed east to the line from Illinois Town, will enable the Company to close up the work rapidly. It is probable that the Third Division, which is untouched, will then have four sets of track-layers,—one at each end, and two working in opposite directions from the center. In view of this condition of things, therefore, it must be apparent that the whole line will be opened at a very early day, and the tide of travel pass uninterruptedly from Chicago (via LaSalle) to Cairo.

On the Seventh Division (Galena Branch) 17 miles are completed from LaSalle, north. This division lies between the latter city and Freeport, and is 79 miles long. The grading is far advanced and will not hinder track-laying, which will be commenced at Mendota and Freeport on the first of August. There is not so pressing a necessity for the completion of this as of any or all other divisions of the road, else the superintendent could have had it in a more forward state. His energies have been directly turned upon more important points.

The Eighth Division extends from Freeport to Dubuque, and is 67 miles long. Of the grading, 52 miles are completed, and 27 miles of track laid. Track-layers are busily engaged west of Warren, and will push the work without interruption to Scale's Mound, which is only 12 miles from Galena. The grading between the Mound and that city is very heavy, and has been partially suspended on account of the cholera, which broke out among the laborers. It is hoped that this will not last long, and that an improved condition of health will permit increased force to be put upon the work. The work between Galena and Dubuque is progressing, and will be finished when the track-layers from this end reach Galena. A locomotive and construction cars have been shipped to Galena, and will immediately commence laying down the track toward Chicago.

The Chicago Branch is divided into four divisions—9th, 10th, 11th and 12th. The ninth extending from Chicago to the Kankakee River—56 miles, is finished; and the tenth from that river to Urbana, 72 miles, will be completed this week, and opened for trade and travel within a few days.

The Eleventh Division extends from Urbana to Wabash Point, 40 miles. We believe all of the grading is finished and the track-layers will go on upon it as soon as the tenth division is completed to Urbana.

The Twelfth Division extends from Wabash Point to Centralia, 74 miles, at which latter place it joins the main line, 112 miles north of Cairo. On account of its isolated position, it is almost impossible to get laborers and iron to the line of the

Twelfth Division; hence track-laying cannot commence till it is reached over adjoining divisions. The grading is well advanced, and when the line is pushed to Centralia from the South, and Wabash Point from the North, the greatest possible amount of disposable force will be put upon this division, for the Company understand very well that the Chicago Branch is to be the great thoroughfare between the South and North.

It is impossible to tell, with certainty, the time that will yet be required to complete the entire work which the Illinois Central Railroad Company have undertaken. Their charter required the main line between Cairo and LaSalle, 302 miles, to be completed within four years, and the branches within two years thereafter. The former will be finished as stipulated, notwithstanding the epidemic and floods which so seriously embarrassed and interrupted operations during the first two seasons, to say nothing of the scarcity and unparalleled high price of labor. The Chicago Branch will be completed nearly two years sooner than agreed upon, and the Galena Branch at least eighteen months.

The grading and the completion of the great bridge at LaSalle, have been interrupted at various times by riots and cholera among the laborers. The last span of the bridge is now being put up, and it was hoped to have the whole work completed this month; but owing to sickness and the dispersion of a large part of the laborers, it will probably be delayed till August. We believe, however, that Col. Mason, who is exceedingly anxious to form a connection between the north and south side of the river, and thus avoid the detention and inconvenience which the traveling public is now subject to, has in contemplation a temporary expedient, which will permit an immediate connection, and yet not interfere with the completion of the work on the grade originally contemplated. Then the cars of the Chicago and Aurora Railroad will pass direct from this city to Bloomington, and to points below—passing on to Cairo when the whole line shall be completed, which will be during the coming autumn.

Unlike other railroad companies the Illinois Central has made the most ample preparations for the travel and transportation which it will be called upon to accommodate as fast as it is opened. It has contracted for 100 first-class locomotives, at a cost of \$109,000, and also 100 passenger and freight cars. All of its arrangements will be complete, and on a scale of unequalled magnitude. It is also its intention to establish a tariff of prices for transportation that will satisfy all reasonable persons. The Directory, like clear-headed men, see that it is to their interest to do so; for by such a course the value of their land will be enhanced, the country rapidly settled by an industrious population, and our rich prairies be made to increase, within a few years, ten-fold their present productions.

We have hitherto noticed the remarkable fact that the management of the Illinois Central Railway has made it very popular with the farmers along the entire line of the road. This is entirely owing to the liberality which has characterized the proceedings of its chief officer, Col. Mason, and the forbearance which has been exercised toward all who, as squatter's upon the Company's lands, were unable to redeem their homes as the law required of them. We trust that nothing will transpire to disturb this harmony, but, under the conduct of honorable and prudent men, as at present, the good feelings which now exist will remain, and continue to grow as their interests increase in magnitude.

Cleveland and Mahoning Railroad.

We are gratified to learn that Mr. JACOB PERKINS, President of this road, has been successful in negotiating the bonds of the company on favorable terms for sufficient iron to lay fifty miles of track, and that arrangements are completed for the purchase of all the iron which will be needed for the completion of this important work.

Baltimore and Ohio Railroad.

The regular monthly meeting of the Board of Directors of the Baltimore and Ohio Railroad was held the other day, when the official report of the business for the month of June was read, showing the receipts to have been as follows:

	Main Stem.	Wash. Br.	Totals.
For passen- gers.....	\$45,594 42	\$25,356 26	\$70,950 68
For freight.	271,207 92	6,522 72	277,730 64

Total. \$316,802 34 \$31,878 98 \$348,681 32

The receipts for the previous month of May, were:

	Main Stem.	Wash. Br.	Totals.
For passen- gers.....	\$49,802 37	\$29,397 40	\$79,199 77
For freight.	317,172 49	9,703 34	326,875 84

Total. \$366,974 86 \$39,100 74 \$406,075 61

A decrease was, as a matter of course, to be expected in June, compared with the very heavy receipts of May, as at this season of the year the freight as well as passenger trade generally falls off. The increase, however, over June of last year is quite large, being \$126,834 84 on the Main stem, and 1,236 14 on the Washington Branch.

The receipts of the Main stem for the six months of the present year, compared with the corresponding period of last year, are as follows:

	Main Stem, 1854.	Main Stem, 1853.
January.....	\$254,277 10	\$101,819 49
February.....	279,856 87	99,017 27
March.....	356,880 45	216,257 37
April.....	351,379 81	200,219 59
May.....	366,974 86	204,950 01
June.....	316,802 34	189,967 51

Total....\$1,926,171 43 \$1,012,241 24

Showing an increase on the Main Branch of \$913,930 19 for the six months of this year over the same period of last year.

Report of the Directors and Superintendent of the New York Central Railroad.

The following is the Report of the Superintendent of the New York Central Railroad to the Stockholders, as to its business for the fifteen months, which will end on the 31st day of July, inst.:

NEW YORK CENTRAL RAILROAD OFFICE, }
ALBANY, Saturday, July 22, 1854. }

To the Stockholders of the New York Central Railroad Company:

At a meeting of the Directors of the Company, held this day, the annexed report of the Superintendent, as to its business for the fifteen months, which will end on the 31st day of July, instant, was presented. The classification of the Superintendent's accounts had previously been examined by a committee consisting of Messrs. Richmond, Boody and Wilkinson, who found the same satisfactory. From this statement, it appears that the net earnings of the road, up to the 31st inst., after deducting the first dividend, show a balance of \$1,216,867 23, out of which a dividend of four per cent., amounting to \$952,024, has accordingly been declared by the Board, payable as hereinafter stated.

A circular containing a statement of the affairs of the Company having been submitted to the stockholders on the 31st May last, at the time the option of subscribing for \$3,000,000 of the Convertible Bonds of the Company were offered to them, it is unnecessary to recapitulate the facts it contained. As the stock of the Company was at that time above par, it was thought to be due to the stockholders to give them this option. Had this not been done, the issue could have been readily disposed of at par at that time.

The continued and increasing pressure on the money market, combined with other and most extraordinary causes, has prevented these bonds

from being taken. This unlooked for state of things, which no human sagacity could have foreseen, certainly not at the early day at which this issue was resolved upon, has entirely disappointed the Directors in their financial arrangements, and instead of finding themselves in funds for the prosecution of the improvements on the road, has left them no alternative but to loan to the construction account the current income of the Company, after paying its ordinary expenses, in order to meet the engagements arising from the work it had undertaken. The amount thus loaned will be refunded out of the first sales which may hereafter be made of the Convertible Bonds.

The accumulations of capital now going on will, it is believed, before long, begin to seek an investment, and it is confidently hoped that a sufficient amount of these bonds for this purpose will be disposed of at an early day. As soon as the requisite amount shall have been received from this source, or otherwise, the dividend of 4 per cent., declared as above mentioned, will be paid to the persons who are stockholders on the 1st day of August next, with interest from that day, of which due notice will be given.

The Directors are aware that by offering these bonds at a discount, a course which in the administration of the Company's affairs they have never in any way submitted to, their sale could be effected. There can be no question that much of the present difficulty under which the railroad system of the country is laboring, has been brought about by the sale of the bonds of railroad companies at a ruinously low rate. The Directors of this Company acting under the advice of many of those deeply interested in the road, will continue to hold the Company's issue of 7 per cent. Convertible Bonds, at par, assured that their intrinsic value and the safety of the investment is such as amply to warrant them in this course, and they trust and believe that the great body of the stockholders will support them in this conclusion. It is quite time, in their judgment, that an effort should be made in some quarter to prevent those sacrifices, the effect of which, when once made, is a perpetual charge upon the resources of the company submitting to them.

DIRECTORS.

ERASTUS CORNING, ALONZO C. PAIGE,
DEAN RICHMOND, DAVID WAGER,
JOSEPH FIELD, JOHN H. CHEDELL,
JOHN WILKINSON, AZARIAH BOODY,
RUSSELL SAGE, HORACE WHITE.

JOHN V. L. PRUYN.

[Messrs. Gibson and McIntosh, the remaining Directors, were not present at the meeting.]

To the President and Directors of the New York Central Railroad Company.

GENTLEMEN: In submitting the annexed statement of receipts and the disbursements on transportation account, for the fifteen months ending July 31, 1854, I beg leave to state that the several Companies now composing the Central line were consolidated in the spring of 1853, after an unprecedented pressure of business during the previous winter.

That many parts of the line of the road, and the rolling stock, consisting of locomotives, passenger, baggage and freight cars, were found to be so much out of repair as to require an extraordinary outlay to insure safety, and in order to meet the requirements of a rapidly increasing business. Some of the roads were also found to have an insufficient supply of fuel and materials for the necessary repairs of the road and rolling stock. Many of the machine and repair shops were not supplied with materials and convenience to do the work required. Improvements in this particular have been made, which will materially reduce the expenses in this department hereafter.

A large number of locomotives which were in bad condition, have also been put in good repair. The passenger, emigrant, baggage and freight cars have been thoroughly repaired and repainted. New trucks have also been put under a large number of the cars above specified.

The opening of new books and entire reorganization of the passenger and freight departments of the road, also occasioned extra expenditures.

In consequence of the improved condition of the road and rolling stock, resulting from the repairs and improvements alluded to, the expenses of operating are already diminishing; and I see no reason why they should not be materially reduced for the next twelve months, while we have the capacity of doing a still larger business.

It has, heretofore at least, been the practice with many companies to charge to the construction account, items which really belonged to the account of repairs. This was no doubt done unintentionally in some cases, and before the proper mode of keeping these accounts was determined. This method has not been followed in any way in our accounts, nothing having been carried to the account of construction which did not legitimately belong to it.

The importance of this matter, in order to prevent being deceived as to the true earnings of the road, cannot be over estimated.

The increased cost of labor and supplies, and of operating roads at the high speed required in order to meet public expectations, connected with a diminished rate of fare, has very much increased the per centage of the cost, (compared with the gross income) of operating all railroads, and points to the necessity of a general advance in the rates of passenger fares and freights.

Respectfully, &c.,
C. VIBBARD, Gen'l Sup't.

NEW YORK CENTRAL RAILROAD.

STATEMENT of actual and estimated Receipts from Passengers and Freight, and Miscellaneous Receipts, for the fifteen months ending July 31, 1854:

	Passengers.	Freight.	Total.
May	782,099 48	348,023 51	1,125,122 99
June	.....	.....	.....
July	.....	.....	.....
August.....	349,125 76	151,285 18	500,410 94
September.....	371,332 06	217,532 91	588,864 97
October.....	326,741 54	231,551 75	558,293 29
November.....	242,319 53	213,956 97	456,276 50
December.....	201,531 78	229,771 33	431,353 11
1854.	.....	.....	.....
January.....	161,233 87	167,456 28	328,690 15
February.....	145,030 02	164,618 73	309,648 75
March.....	205,045 62	224,024 73	429,070 35
April.....	251,786 54	268,922 18	520,708 72
May.....	294,948 68	216,583 12	511,531 80
June.....	313,672 65	180,191 00	493,863 65
July, est'd.	350,600 00	151,216 45	501,216 45

Total...3,994,917 53 2,760,134 14 6,755,051 67
Special Receipts as per detailed Statement of same..... 54,454 66

Total.....\$6,809,509 33

NEW YORK CENTRAL RAILROAD.

STATEMENT of Disbursements for Transportation Expenses for the 15 months, ending July 31, 1854.

	Transportation Expenses.
1853.	.....
May, June, July.....	\$563,415 34
August and September.....	397,693 91
October.....	223,955 41
November.....	250,532 06
December.....	284,606 50
1854.	.....
January.....	267,327 35
February.....	283,721 92
March.....	294,208 87
April.....	272,866 31
May.....	227,174 27
June estimated in part.....	228,000 00
July, estimated.....	201,000 00

Total.....\$3,494,501 94
Amount disbursed by Treasurer from August 1, 1853, to July 18, on Transportation account..... 60,592 35
Total.....\$3,555,094 29

NEW YORK CENTRAL RAILROAD COMPANY.

Total amount of actual and estimated receipts for the fifteen months ending 31st July, 1854, according to the foregoing statement.....\$6,809,506 33
Transportation expenses, same time 3,555,094 04

Total.....\$3,254,412 04
Deduct, as per statement from Treasurer's Office:

Interest on Debt Certificates, 15 months, on \$8,894,500, at 6 per cent.....\$667,087 50

Interest paid and accrued during the same time, on debts assumed for the old companies, and on the bonds given for Great Western, Canada, and Buffalo and State line Railroad Stock deducting amount of interest and income received from various sources..... 76,995 10

Debt Certificate Sink-in fund, for 15 months, at 14 per cent. per annum, on \$8,894,591..... 138,977 96
833,060 56

Total..... 2,371,351 48

1st Dividend, N. Y. Central Company, 5 per cent., (some stock not fully paid up).....\$1,125,505 75

1st Dividend, Rochester and Lake Ontario Railroad Company (under lease) 7,500 00

1st Dividend, Buffalo and Niagara Falls River Railroad Company (under lease,)..... 21,678 50

Total.....\$1,154,934 25

Total.....\$1,216,367 23

2d Dividend, N. Y. Cen., 4 per cent.....\$923,424 00

2d Dividend, R. & L. O., 4 per cent..... 6,000 00

2d Dividend, B. & N. F., 4 per cent..... 22,600 00

Total..... 952,024 00

Balance.....\$264,343 23

A Fast Railroad.

The Waukeesha (Wisconsin) Democrat has an editorial about the speed of cars on a certain Western railroad, of which the following is the closing paragraph: "Travelers of leisure, however, say they like this road much better than any other in the country; it is so much like the Erie canal!—they can jump off to pick strawberries, shoot pigeons, liquor up, &c., and occasionally return to sit on the cars to rest. Last week we conversed with a farmer, on the line of the road, who happened to have three sheep killed on the track. He informed us that he had spent ten days in vain, in endeavoring to find out who owned the road, that he might sue for damages; he then consulted an honest attorney, who informed him that he could not prove that the cars ever ran fast enough to overtake a sheep or anything else. A horse-thief, who was arrested in Fon du Lac a short time since, upon being informed that he was sentenced to the State prison, replied that he did not care if they sent him by railroad, as his time would expire before he reached there."

Saratoga Railroad.

It is gratifying to the people in this part of the State to see the rapid progress this great work is making. The difficulties which embarrass other public works this year, and which have caused many to be postponed, are indirectly promoting the success of others.

Laborers and materials are more readily obtained than when everything was going ahead. We perceive, also, that the work is done without much noise or boasting on the part of the Company as to what the Company intends to do. The contractors, as we sometime since noticed, advertised for five thousand laborers. Little armies of men, with steam-excavators, pick-axes, shovels, wheelbarrows, carts and horses, are being daily transported to the numerous sections where they have commenced, between this and Jefferson County. We think the Company must be expending a million of dollars this year; indeed, we have just been told it is going on at this rate. A contract for all the iron rails, we understand, has been negotiated within the last few days. They are to be made at the famous Adirondac Iron Works on the line. The negotiations for money were completed last autumn, before the work commenced. The secret of the Company's ability to obtain what it wanted lies in the value of the bonds it had to give. These have 25 years to run, at 7 per cent., payable semi-annually, and are secured by the first mortgage on the road with all its fixtures and what no other company in this State could ever offer, viz: on five hundred acres of selected lands along the line! The road being the most direct and eligible between the east end of Lake Ontario and tide-water at Albany or Boston Harbor, with more freight near it, now standing on the surface and in the mines at the surface, than it can ever transport to market, is regarded as worth twice its cost. From the center, where the freight is, the grades, toward tide-water, are level or descending. The only limit, therefore, to the quantity the road can carry will be the number of empty cars which the engine can carry back. There is no other public work in this State having such advantages, and of course, none so valuable in proportion to its estimated cost. The lowest estimate of the lands, long before the bonds will fall due, is three or four times their total amount. They are heavily covered with timber and wood, already bringing, on account of their scarcity, very extraordinary prices, and are the deposits of the most extensive mineral wealth in the State. As an additional inducement, we are informed that the Company gave to those who obtained the bonds the right to take, with each bond for \$1,000 three shares of its capital stock, which represents not only the road but these bonds. This Company could, therefore, get money on such terms, while other Companies would find it difficult, in a stringent money market with a want of confidence prevailing, to make any negotiations at all.

The stock was all taken last winter by parties who knew its prospective value, and now no considerable amount of it can be purchased at any reasonable price. Well, we are glad, it is so. If it were not for the commandment we should covet a portion of the road, and a portion of the half million of acres with the work done; nevertheless, we are glad to think that other parties who were fortunate enough to obtain this road and its lands while they could be had, are possessed of one of the largest estates in this country. We bid them God-speed.

The wilderness through which this road runs is nearly as large as the States of Connecticut and Rhode Island. It is pretty much as it was in Cromwell's time, and yet, owing to what its present advantages are found to be, it is probably the most valuable portion of this State. This wonder-working machine, called a railroad, will soon make it blossom as the rose. Those of us who are located on the outer rim of the forest will feel the effects of the nerve of industry touched in the center. Seeing what has been done by railroads elsewhere, any body can foretell what this will do here.—Saratoga Whig.

Michigan Central Railroad

The Michigan Central Railroad Company have elected the same Board of Directors for the ensuing year, as last year:—J. M. Forbes, Boston, D. D. Williamsom, J. C. Green, New York, Erastus Corning, Albany, R. B. Forbes, G. P. Upton, J. E. Thayer, Boston, Elon Farnsworth, J. W. Brooks, Detroit.

The following gentlemen were elected officers of the Board for the ensuing year:—

J. M. Forbes, President.

J. W. Brooks, Vice President.

Isaac Livermore, Boston, Treasurer.

Lawrence Scientific School,
HARVARD UNIVERSITY.

THE next term of this Institution will open on the thirty-first day of August, 1854, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical exercises, according to the nature of the Study, will be given in:

Astronomy.....by Messrs. Bond.

Botany....." Prof. Gray.

Chemistry, Analytical and Practical....." Horsford.

Comparative Anatomy and Physiology....." Wyman.

Engineering....." Eustis.

Mathematics....." Pierce.

Mineralogy....." Cooke.

Physics....." Lovering.

Zoology and Geology....." Agassiz.

For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

CAMBRIDGE, Mass., July, 1854.

[30 4t

For Sale.

A STATIONARY Engine, having cylinders 13 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New York.

Jul. 14 29 tf.]

Railroad Iron at Auction.

THURSDAY August 3d at twelve o'clock, at the sales room 54 William street:

1268 tons English Rails, New York and Erie pattern, about fifty six pounds linear yard, of approved quality, make and pattern.

These Rails are in the United States. Bonded warehouse at Brooklyn, and, convenient for shipments Sample Bars can be seen at Auction Room. July 29. 1t.

N. York and N. Haven R. R.

NOTICE OF SUMMER ARRANGEMENTS,



Commencing Monday, May 9, 1854.



TRAINS FROM NEW YORK.	TRAINS TO NEW YORK.
7 A. M.—Accommodation to New Haven.	5.30 A. M.—Special, from Port Chester.
8 A. M.—Express for Boston, stopping at Stamford and Bridgeport.	5.00 A. M.—Commutation from New Haven.
9.10 A. M.—Special for Port Chester.	6.15 A. M.—Accommodation from New Haven.
11.30 A. M.—Accommodation for New Haven.	8.15 A. M.—Accommodation from New Haven.
3.00 P. M.—Express for New Haven, stopping at Stamford, Norwalk and Bridgeport.	9.35 A. M.—Express from New Haven, stopping at Bridgeport, Norwalk and Stamford.
4.00 P. M.—Accommodation for New Haven.	1.07 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.
5.00 P. M.—Express for Boston, stopping at N. Haven.	4.00 P. M.—Special, from Port Chester.
5.35 P. M.—Commutation for N. Haven.	4.00 P. M.—Accommodation from New Haven.
6.30 P. M.—Special for Port Chester.	9.30 P. M.—Boston Express, stopping at Bridgeport, Norwalk and Stamford.

GEORGE W. WHISTLER, Jr., Supt.
New Haven, May, 1854.

Sewall & Crehore

CIVIL ENGINEERS,

ST. PAUL MINNESOTA.

JOSEPH S. SEWALL.

CHAS. FRED. CREHORE.

Henck's Field Book for Engineers.

SECOND EDITION.

D. APPLETON & CO. 346 and 348 Broadway.
JUST PUBLISHED.

FIELD BOOK FOR RAILROAD ENGINEERS
Containing Formulas for laying out Curves, Determining Frog Angles, Levelling, Calculating Earth Work, &c., &c., together with Tables of Radii, Ordinates' Deflections, Long Chords, Magnetic Variation, Logarithms, Logarithm and Natural Lines, Tangents, &c., &c. By John B. Henck, A. M., Civil Engineer. One vol., pocket book form. Price \$1.75.

The first edition of 1000 copies of this Work was sold off in four weeks, a sale almost unprecedented in works of this class. The Publishers have received letters from the following eminent Professors and practical Engineers, who commend it as the best practical elementary work on the subject of American Railroad Engineering:

Professor D. H. Mahan, West Point.

Professor M. M. Gillespie, Union College.

Professor H. E. Eustis, Lawrence Scientific School.

Professor B. F. Greene, Rensselaer Polytechnic School.

Professor J. T. Benedict, New York Free Academy.

W. J. McAlpine, State Engineer.

E. S. Chesbrough, City Engineer, Boston.

S. M. Felton, Philadelphia.

G. W. Whistler, New Haven Railroad.

Wm. E. Worthen, New Haven Railroad.

CRITICISMS OF THE PRESS

"This treatise presents one of those rare instances in which thoroughly scientific theory is applied, in an eminently practical and common sense way; the tables alone, if republished in a separate form, would be a valuable treatise to civil engineers in every department, and for architects, mechanics, and also to all persons engaged in practical calculations. The whole treatise reminds us of 'Bowditch's Navigator,' and seems to us destined to hold the same rank with railroad engineers that the 'Navigator' holds with shipmasters. It must become the indispensable *Vade Mecum* of every assistant engineer. It will be of great service to the intellectual character of the profession as well as a great means of diminishing their labors."—*Railroad Journal*.

"This book will be warmly welcomed by assistant railway engineers. It contains thorough treatises on curves, levelling earthwork, &c., &c. The tables have evidently been prepared with great care. The book, in fact, contains almost every thing that can be required by assistant engineers, either in the field or office. The author evidently knows what they require, and in what form it should be given."—*American Railway Times*.

"An invaluable book to a civil engineer, particularly if engaged in laying out railroads."—*Boston Transcript*.

"Much of the work is the result of original investigation, and has the zeal and commendation of a working man."—*Rochester Advertiser*.
29.3t

New York and Erie R. R.

PASSENGER TRAINS

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.

Dunkirk Express, at 7 a. m. for Dunkirk.

MAIL, at 8 1/4 a. m. for Dunkirk and Buffalo, and intermediate stations.

WAY EXPRESS, at 12 1/2 p. m. for Dunkirk.

Rockland Passengers, at 3.30 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

Emigrant at 6 p. m.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Supt.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF OSWEGO CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Fulton, until the eighth day of August next at 10 o'clock in the forenoon for the following described work:—

Section No. 1, with penalty in bond of \$10,500.	
" No. 2, " " " " " 10,000.	
Part do. 81 and 82 " " " " " 12,000.	
Section 83 " " " " " 9,000.	
Part do. 87 and 88 " " " " " 6,000.	
Oswego Dam " " " " " 5,000.	

The Oswego Dam to be completed by the first day of December, 1855, and the remainder to be completed by the first day of April 1856.

ENLARGEMENT OF CAYUGA AND SENECA CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Seneca Falls until the 10th day of August next, at 10 o'clock A. M., for the following described work:—

Section No. 1, with penalty in bond of \$5,500.	
" 2, " " " " " 5,000.	
" 3, " " " " " 4,500.	
" 4, " " " " " 5,000.	
" 5, " " " " " 4,500.	
Lock " 10, " " " " " 4,000.	
" 11, " " " " " 4,500.	

Towing Path Bridges on Sections 1 and 8, with bond of \$1000.

The Locks and Towing Path Bridges to be completed by April 1st, 1855, and the remainder of said work by April 1st, 1856.

ENLARGEMENT OF ERIE CANAL—WESTERN DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Rochester, until the twelfth day of August next, at 10 o'clock, A. M. for the following described work:—

Abutments of Genesee street Bridge, Buffalo, with penalty in bond of.....	\$1,200.
Iron superstructure of do., with penalty in bond of.....	1,500.
Completion of Culvert and Waste Weir Section 306, with penalty in bond of....	500.
Culverts on Sections 211 and 212 do. do.	1,600.
Culverts on Sections 215 and 216 do. do.	1,800.
Culverts on Sections 218, 228 and 229 do. do.....	1,500.
Bridge Abutments on Sections 212, 213 and 214 do.....	3,600.
Bridge Abutments on Sections 215, 216 and 217 do.....	3,000.
Bridge Abutments on Sections 218 and 219 do.....	5,700.
Bridge Abutments on Sections 228, 229 and 231 do.....	3,700.
Waste Weirs on Sections 215 and 218 do....	800.

The Culvert on Section 306 and Abutments of Genesee street Bridge to be completed by April 1st, 1855. The superstructure of Genesee street Bridge by June 1st, 1855, and the remainder of the above work by March 15th, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any

other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, July 9, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT, } Canal Comm'rs.
CORNELIUS GARDINER,
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to EDW. BECH & KUNHARDT, 62 Beaver St., Or, A. TOWAR, Agent Pokopepa Iron Works, Pokopepa, N. Y.

Railroad Iron.
300 TONS Old Wrought Staffordshire Rails, Bridge pattern, for sale by NAYLOR & CO., 99 John st.

FINANCIAL AGENCY.

Isaac Osborn Davis,

No. 38 Third Street,
CINCINNATI, O.

BUTS, SELLS AND NEGOCIATES LOANS ON BUSINESS PAPER,
AND ON ALL KINDS OF RAILROAD SECURITIES,
ON COMMISSION.

CINCINNATI REFERENCES:

Dunlevy, Atwood & Co, Bankers;
T. S. Goodman & Co.,
Chas. Stetson, Esq., Pres't Ohio Life and Trust Company;
J. P. Bishop, Esq., Cashier
Smead, Colliard & Hughes, Citizens Bank; " "
Geo. Mellen & Co., Bankers;
P. M. Gregory, Esq., "
Ellis & Sturges, "
McMiekin & Co., "
Ino. H. Groesbeck, Esq., Banker;
S. W. Torrey & Co.
C. A. Olmstead & Co., Ohio & Mississippi Railroad.

NEW YORK REFERENCES:
Atwood, Dunlevy & Co., Bankers;
Samuel J. Beals, Esq., 80 Broad str.

FOREIGN CORRESPONDENT:
De. Coppet & Co., New York.

To Railroad Companies and Contractors.

FOR SALE—Fifteen second hand Locomotive Engines of various sizes and descriptions and in good running order suitable for all kinds of work. For particulars apply to

CLARK & JESUP,
General Railroad Agents,
38 Exchange Place.

Also Railroad supplies of all kinds, 4t25

Prosser's Patent Lap-Welded Iron Boiler Tubes.

Tubes screwed together, flush on both sides, for Artesian wells, &c. Freejoint Tubes, for Core Bars, Awning Frames, Railings, Leaders, &c.

Brass Boiler Tubes.

Patent Wrought Iron Blacksmiths' WATER-TUYERES, WATER-BACKS, ETC.

Agents for KRUPP's celebrated CAST STEEL for SHAFTS, RAILWAY AXLES, TIRES, PLATTERS' ROLLERS, &c.

P. S.—All Tools necessary for the construction or keeping in order of Tubular Boilers.

24tf THOS. PROSSER & SON, 28 Plat street, N. Y.

To Chief Engineers.

A Gentleman who has had some Eight years Experience in construction of various Eastern and Western Railroads desires a situation as Resident Engineer upon some railway in the United States. The best of references as to Capability and Efficiency can be furnished. Address B. care of John Palmer Esq. East Cambridge, Mass. 17 tf

SEYMOUR, MORTON & CO. GENERAL R. R. AGENCY, Office, Metropolitan Bank Building. No 110 Broadway, have to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years
OHIO AND MISSISSIPPI R.R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of Railroads in any part of the country, including furnishing corps of engineers and contractors locomotive engines and cars, railroad bridges. McCallum's patent, railroad iron, chairs, spikes, switch irons, &c., &c.

MONTREAL & NEW YORK AND Plattsburgh and Montreal RAILROADS.

Open through from Plattsburgh to Montreal.

Passenger Trains leave Montreal for Plattsburgh at 6 30 a.m. and 5 p.m., arrive at 8 a.m. and 7 30 p.m.

Leave Plattsburgh for Montreal 7 30 a.m. and 4 p.m., arrive at 10 a.m. and 6 50 p.m.

Trains connect at Montreal with Steamers for Quebec, and the St. Lawrence and Atlantic Railroad for Sherbrooke and intermediate stations.

Trains connect at Moores Junction with Northern (Ogdensburg) Railroad for Ogdensburg and Lake Ontario Steamers for Lewiston, Niagara Falls and Upper Canada, and all ports on the Western Lakes.

Trains connect at Plattsburgh by Steamer to Burlington with Rutland and Burlington Railroad and connecting lines for Troy, Albany, New York and Boston, and all intermediate stations. Also with steamers for Whitehall to the Saratoga and Washington Railroad, and connecting lines of road to Troy, Albany and New York.

Passengers will find this route unequalled for comfort and dispatch, and attended with least fatigue and delay than any other. It possesses moreover the advantage of a short Ferrage of only fifteen minutes across the River St. Lawrence at Caughnawaga, which has never been known to freeze, and can be confidently relied upon at all seasons of the year.

Freight Trains run daily each way.

For particulars see Freight and Passenger Tariff.

BAGGAGE checked through.

H. W. NELSON, Superintendent.

SHANAHAN & LOEBER,

181 William-st,
(1st floor-Up Stairs.)
NEW-YORK.

MANUFACTURERS OF

THEODOLITES, TRANSITS, LEVELS,
Surveyors' Compasses, Drawing Instruments,
Chains, Scales, Levelling Rods, &c. 1y10

Railroad Companies and Contractors,

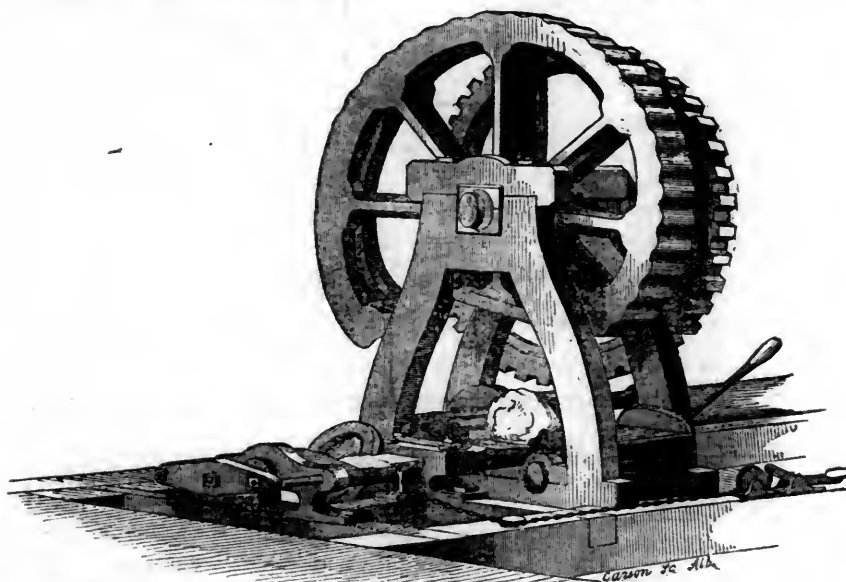
WANTING first rate German or Irish laborers for railroads and canal work, or mechanics of any kind, will find the undersigned a first rate office to give their orders to, as thousands of emigrants apply to them every season for employment. Satisfactory reference will be given to well known companies and contractors, and men are forwarded to any part of the Union.

MORRIS & COHNERT,

European, American Employment Office,
287 Broadway, corner Reade-st.

3m*10 Under the Irving House, New York.
And 102 Greenwich st.

Winslow's Puddlers' Ball Squeezer.



THE Subscriber's Puddlers' Ball Squeezer, or Shingling Machine, has now been in use for several years, and in every instance has given unqualified satisfaction, as is attested by many Iron manufacturers who use it in different parts of the country and in England. Its advantages are, great expedition in performing its work, freedom from breakages, no wastage of Iron while being compressed, the action of the hammer upon the ends of the ball or bloom to upset it while being reduced in its diameter; and the very small amount of power required to work it, coupled as it usually is to the end of the ball rollers or forge train. Rights to use these machines can be had by addressing the Patentee, who will likewise cheerfully submit the many testimonials in his possession of its efficiency, from some of the first men in the country.

Persons residing west of the Alleghenies can be furnished with information in relation to the foregoing, by addressing
28tf A. S. WINSLOW, Cincinnati, O.

Phoenix Iron.

THE subscribers having made extensive additions to their Works at Phoenixville, are now prepared to receive and execute promptly, orders for BAR IRON, of their own manufacture, warranted equal to the best English refined, for quality and finish.

They also continue, as usual, to furnish T and U Rails, of any required pattern and weight; or from any of the following patterns, for which they have the rolls on hand, viz: weighing per lineal yard—20lb, 28lb, 40lb, 50lb, 55lb, 56lb, 57lb, 59lb, 60lb, 61lb and 64lb, of the T patterns.

48lb, 69lb and 75lb of the U patterns.

75lb Groove Rail for streets.

Also, a superior article of Wrought Iron Rolled Chairs, with continuous lips, 7½ inches wide by any length required, weighing 1½lb per lineal inch, made to fit exactly the flanges of Rails, and ensuring a most perfect joint.

Also, Rolled Car Axles, of superior quality, cut to length. Dealers and Railroad Companies desirous of contracting, will please address.

REEVES, BUCK & Co.,

No. 45 North Water Street, Philadelphia.

28.6m

Railroad Iron.

THE "Montour Iron Company" is prepared to execute orders for Rails of the usual patterns and weights, and of any required length not exceeding 30 feet per rail.

Apply to
September, 1860. THOS. CHAMBERS,
President.

Engine Driver.

WANTED—A Situation by a Man of Great Experience in Engine Driving in England—Can produce first rate Testimonials—address, post paid, Box 1833, N.Y. Postoffice. 26tf

Welded Wrought Iron Tubes.

THE subscribers having lately added to their Cumberland Nail and Iron Works an establishment for making Wrought Iron Tubes, are now prepared to supply the trade with tubes two to twelve feet in length, furnished with screws and ferrules on their ends, of the following sizes—inside diameter,

¾, 1, 1½, 2, 2½, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000.

Warranted and fully proved, equal to the best Pipes manufactured.

All orders addressed to us will receive prompt attention, and liberal discounts from the list of prices will be allowed to the trade.

REEVES, BUCK & Co.,

No. 45 North Water Street, Philadelphia.

July 13, 1864.

28.6m.

To Civil Engineers and Surveyors.

TRANSITS, Level and Surveyors Compasses Manufactured on the most improved principle and of the Best Quality

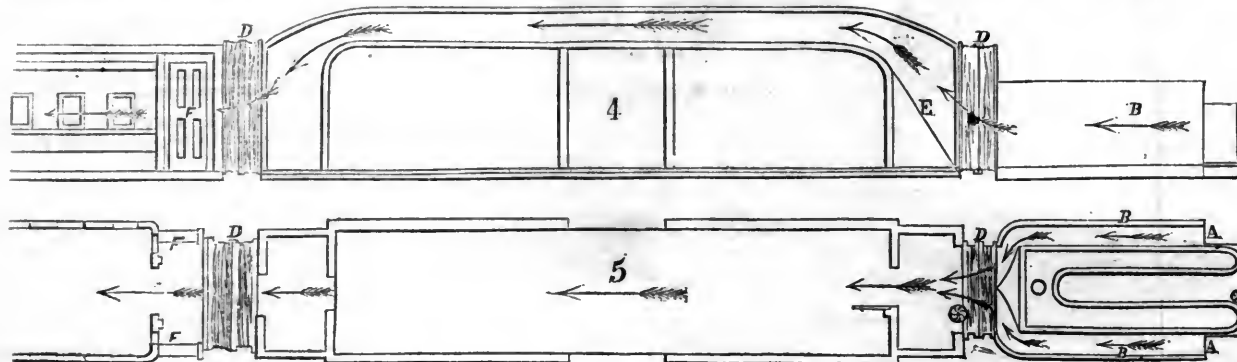
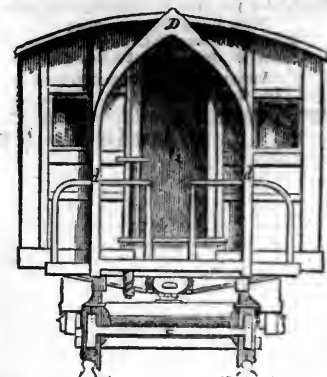
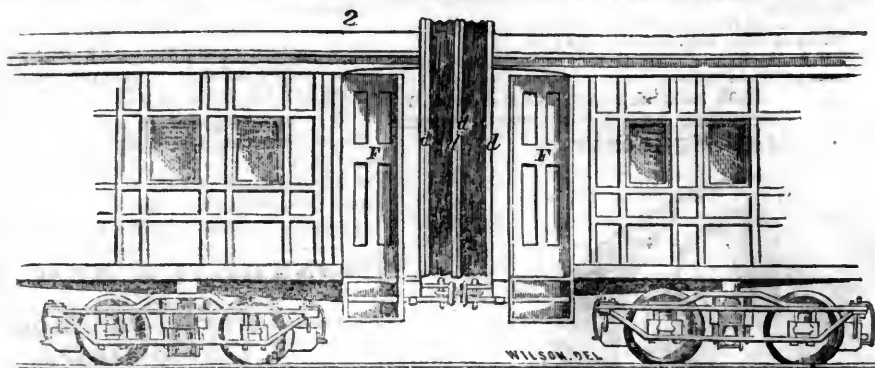
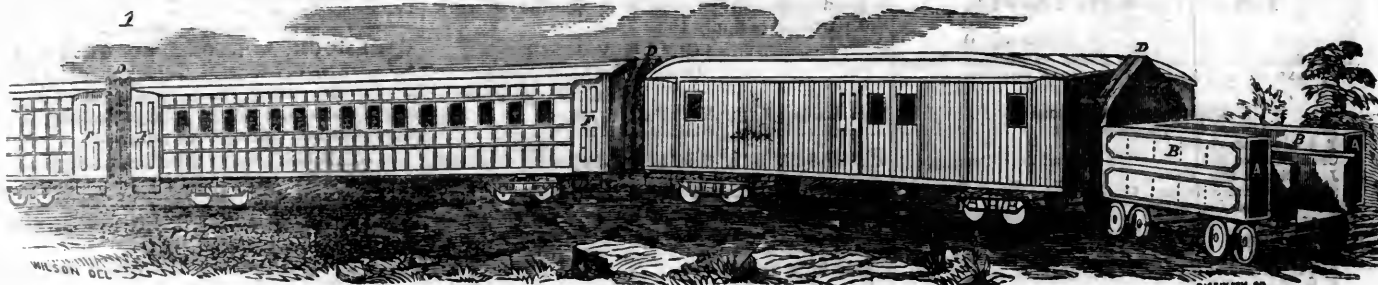
by THOMAS HUNT,

No. 63 Fulton Street,
New York.

1y10*

Waterbury and Atwood's Mode of Ventilating Railway Cars, and Excluding Dust, Smoke and Cinders.

CHARLES ATWOOD, Agent, BIRMINGHAM, CONN.



GROVE CAR WORKS, HARTFORD, CONN.

MANUFACTURERS OF

Railroad Coaches, City Cars, Freight, Coal, Gravel, and all other descriptions of Railroad Cars.

The above establishment has as great facilities, and turns out as large an amount of work, as any other Factory in the Union.
27tf

FOR SALE.

AN ALLIGATOR SQUEEZER, complete, entirely new, and in perfect order, to be put up at once.

It is of the most approved construction, with cam, cam shaft and pedestal, and with heavy driving gearing if required by the purchaser; and will be sold at a bargain.

For further particulars address

ROBERT BRIGGS, Jr.,

Supt. Rensselaer Iron Works, Troy, N. Y.

Also, for sale 7 Dimpfer Patent Fans, 2ft. x 9in. second hand. Apply as above.

Railroad Iron and Chairs.

The Lackawanna Iron and Coal Co., are now prepared with increased facilities to contract for Rails and Chairs at their works at Scranton, Penna.

Address S. T. SCRANTON Pres. at Scranton, or at the office of the Company in New York, 72 Beaver St.
26tf

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York,

19tf

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Lyon's Tables of Cubic Contents, Etc.

These valuable tables are of great assistance in obtaining the cubic contents of excavations and embankments. Table 1. gives correct mean heights of cross sections with either two or three cuttings taken. Table 2. finds the cubic contents, having the mean heights at each end of the section to be calculated given. These tables possess advantages in being applicable to every variety of bases and side slopes. Engineers and others may obtain them by application at the American Railroad Journal office, 9 Spruce Street, New York, by mail or otherwise.—
Price \$1.50. 21tf

Locomotive Engines.

FOR SALE, two Locomotive Tank Engines, 4ft. 8½ in. gauge, made by one of the most celebrated and extensive builders in Massachusetts, and ready for immediate delivery. These engines are admirably adapted for fast travel with light passenger trains; weight, 13 tons, with 4 ft. drivers, with leading and trail wheels; cylinders 12½ in. by 20, with a separate cut-off valve. Can be examined at the works of the manufacturer. Apply to H. V. POOR, Editor Railroad Journal, 9 Spruce st., N. Y. 19tf

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE SOUTH AND WEST.



Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$15 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	16 00

An extra charge will be made for meals and state rooms on board the boats.
27tf

L. S. SPAFFORD,
General Sup't.

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of

Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 31]

SATURDAY, AUGUST 5, 1854.

[WHOLE No. 955, VOL. XXVII.]

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

Remission of the Duty on Railroad Iron.....	481
Illinois Central Railroad.....	482
Blue Ridge Railroad.....	483
Finances of Texas.....	485
Ogdensburgh Railroad.....	485
Michigan Central Railroad.....	486
Journal of Railroad Law.....	487
Morris and Essex Railroad.....	487
Grand Trunk Railroad.....	488
New York Central Railroad.....	490
Portland, Saco and Portsmouth R. R.....	490
R. R. in Kentucky.—Hon. Ben Edwards Grey.....	490
Lexington and Frankfort Railroad.....	491
Milwaukee and Mississippi Railroad.....	491
Galveston and Red River Railroad.....	491
Richmond and Petersburg Railroad.....	493
Montgomery and West Point Railroad.....	493
Galena and Chicago Railroad.....	494

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, August 5, 1854.

The Remission of Duty on Railroad Iron. Would it be injurious to the Revenue, or to the American Manufacturer?

In our former article, we proved:

1. That the tax, or Duty on imported Railway iron was, at the present time nearly equal to five million per annum.

2. That this is equal to 22 per cent of the money actually paid by stockholders, or nearly 7 per cent on the entire cost of a railway.

3. That as stockholder's payments are distributed during three years, and this as a cash payment at once, is equal to 66 per cent. of the payments made by stockholders in one year.

It follows from this statement of facts, the tax on railway iron is a real and great burden on the construction of railways, which will operate seriously and heavily against the completion of works already commenced, and may arrest them altogether. On this state of fact, the questions,—for whose benefit is this tax laid? Is there any benefit arising from it? Are either the government, American manufacturer, or the people benefitted? If no one is benefitted, then why should the tax

continue? These are questions to be asked, and answered by a Statesman before he is competent to decide the case. They are reduced to these two. Does the Revenue need the tax? Do the American Iron miners or manufacturers need it?

1. Does the Revenue need it? The answer to this will be found in the statistics of the Treasury Department, and we propose to show precisely what has been the effect of the Duty on Railway Iron, on the Revenue. To do this we will show that the Treasury has had an increasing balance, during the whole period of this tax, and would have had a balance if not a dollar of this tax on railway iron had been paid.

Year ending	Balance of Receipts over expenditures	Duty collected on railway iron	Balance in the Treasury deducting Iron tax
June 30, 1852.	\$3,720,750	\$1,670,495	\$2,050,250
June 30, 1853.	7,310,656	3,721,600	3,589,056
June 30, 1854.	8,000,000	4,000,000	4,000,000

\$19,031,406 \$6,392,095 \$9,139,306

It thus appears, that if in the last three years, the entire railway tax, amounting to nearly ten millions had been taken out of the Treasury, there would still be about ten millions balance remaining! In other other words, the Treasury had no possible use for the money. But on the contrary it was a mere burden on the government for its safe-keeping—having no more value, than dry chips. That this may be put in a clear light we present the following official statement of the Treasury operations:

Balance in the Treasury July 1, 1851.	\$10,911,645
" " July 1, 1852.	14,632,136
" " July 1, 1853.	21,942,892
" " July 1, 1854.	29,000,000

The enormous balance of near thirty millions remained in the treasury July 1—after paying more than twenty millions of the public debt, and having also increased the expenses of government.

What then, has become of the ten millions of tax raised on railway iron, during the last three years? It has remained, untouched to the present moment without one cent of interest, and withdrawing that much in coin, from the mercantile interests of the country. It has not merely been taken from the use of railways, but it has taken away

the basis of full thirty millions of credit, from commerce; which this coin, when distributed would have furnished.

The Revenue, therefore, not only does not need this tax; but, it is a burden on the Treasury, while it injures commerce, in a two-fold way: 1. by depriving railways of it; and 2. by taking so much coin from the basis of credit.

2. But if this tax does the government, or the people no good, has it benefitted the miner, or the manufacturer? If it has, it may fairly be claimed to have compensated, in one form, the injury done in another; and, on the whole to have benefitted the country. This is the argument of a statesman, but rests entirely upon a matter of fact; and, if in fact, the tax does not benefit the miner, or the manufacturer, then the argument falls to the ground, and cannot fairly be maintained.—Now the facts of the case are obvious, and we propose to exhibit the precise bearing of the tax on Railway iron (if it has any) on the Iron Manufacturer. Let us premise an observation, on the common view of the iron duty. We should observe, that the duty on railway iron is not a duty on iron manufacture generally; but is a duty on a particular form of iron, viz: bar iron made for rails, coming under the general tax of 30 per cent. levied on bars. A remission of the duty on railway iron, would therefore only affect the Tariff on the particular form of iron; and leave the duty still on all the common forms of iron Manufacture. It would affect no American Manufacturer of iron whatever, unless he was engaged in the manufacture of railway iron and the number of that class is very small.

We will prove now, that the tax on iron has had its legitimate, and proper effect, in protecting the American manufacturer of iron, in all other kinds of iron manufacture, but has had no effect whatever on the manufacture of railway iron. We compare below the increase in five years of imported Railway iron, with that of all other kinds of Manufactured iron.

	Value of Imported bar iron	Value of other manufactured iron
Imported in 1848..	\$3,679,600	\$8,000,000
" 1855 ..	15,402,700	10,200,000
Increase	300 per cent.	25 per cent.

devilish suggestion, would have been cast out of his mind at the first blush. He very probably would have failed, but without disgrace or dishonor.

Had the means for the construction of the Illinois Central Railroad been furnished in the same manner as those for similar projects, Mr. Schuyler would have been not connected with it at all, or only as *contractor*. He was attracted to it by the opportunity of making a couple of million of dollars, by the payment of *one-tenth* that sum. But the scheme did not win popular favor as expected. Its owners were called upon to put their own shoulders to the wheel. Mr. Schuyler put into it not what belonged to himself, but others. Still the golden prize eluded his grasp. In attempting to leap the chasm that separated him from it, he fell irretrievably. To have prevented such a fall, which has shaken credit to its very centre, the railroad companies of the country might well afford to have paid the owners of the Illinois Central road *all* the profit they have figured out for themselves. Certainly the result in the present case shows the wide distinction between *speculative* and meritorious projects, and the danger of encouraging the former.

Blue Ridge Railroad.

The *Blue Ridge Railroad* is the work by which the city of Charleston and the State of South Carolina propose to secure to themselves a portion of the trade of the Mississippi basin. In building this road they are only acting in obedience to an idea which has led every city of any considerable importance, and any one that proposed *commercial* greatness as its future, to construct or undertake works of a similar character and for similar objects. The valley of the Mississippi is looked upon as the seat where is to be the greatest development of wealth, population, and trade on this continent, and the possession of the trade as the great source of wealth and prosperity of eastern cities. Between these and the great valley, the Alleghany range is interposed, which, without *artificial* avenues, is sufficient obstacle to force this trade to take its natural outlets, the Mississippi and St. Lawrence Rivers. Wherever this great barrier has been scaled by *artificial* works, results far exceeding expectation have been realised.— This trade can never be monopolised by one city. Each can command a considerable portion of that lying upon its own parallel; so that although some may secure more than others, from the superior attractions they possess, *all* are certain of that degree of success which justifies their undertakings. Charleston is now the only Atlantic city (with the exception of Richmond) that does not possess its appropriate and peculiar railway, extending to the Mississippi basin. This want she now proposes to supply by the construction of the above road, the condition of which, its objects, and its *financial* position are set forth in the following report of the directors, recently issued:—

REPORT.

The President and Directors of the Blue Ridge Railroad in South Carolina, respectfully report, that soon after the subscription made by the corporation of the city of Charleston to the capital stock of the company in July last, the preliminary contract entered into with Messrs. Anson, Bangs & Co. was executed, and it was agreed that the road was to be commenced on the first of November following, and entirely finished and equipped from Anderson to the Tennessee State line in three and a half years.

An agreement was also entered into with the Knoxville and Charleston Railroad Company, which was made to depend on certain aid to be obtained from the State of Tennessee, in which case the Knoxville and Charleston Railroad was to be included in the contract with Messrs. Anson, Bangs & Co., and the time for the completion of the entire line from Anderson to Knoxville extended to four and a half years.

An agreement was made at the same time with the Tennessee River Railroad Company, by which that Company was brought under the contract made with Messrs. Anson, Bangs & Co., and subsequently a similar agreement was made with the Pendleton Railroad Company. In conformity with the contract, the work was commenced on the 1st day of November, but embarrassments incident to the commencement of all enterprises on so large a scale, rendered the operations more preparatory than otherwise, and it was therefore agreed that the contract time for commencing the work should be extended to the 1st Jan.

In the session of the Legislature of 1852, the bill granting the charter provided for the endorsement of the bonds of the Company to the extent of \$1,250,000, the State requiring as security a first lien upon the road. This form of aid, while it might answer well the ultimate wants of a company, is calculated rather, when resorted to in the commencement of an enterprise, to cripple its resources, and to impair its credit; for it is manifest that should further capital or funds be needed to carry on or complete the work, a resort to loans, based on second mortgages, could not be otherwise than attended with great embarrassment and ruinous sacrifices. It was deemed best, therefore, to postpone the use of the State endorsement, and apply to the legislature to remove the difficulties which the aid, as granted, imposed upon the company; and to ask a direct subscription to the capital stock of the company of \$750,000; A bill was therefore introduced for that purpose, which passed the Senate, but failed in the House, as is already known to the stockholders.

The resources of the company remain the same, therefore, as they were at the date of the application referred to, so far as relates to this State, Georgia, and North Carolina, viz.:

City subscription.....	\$1,049,000
Individual and other subscriptions..	151,000
State guarantee.....	1,250,000
Contractors in stocks and bonds....	3,000,000

Making \$5,450,000, and leaving a deficiency of \$550,000, presuming that the roads in the three States will cost, as estimated, \$6,000,000.

Monies, however, borrowed under the guarantee of the State, and for which a first lien has been given, cannot be regarded as capital. On the contrary, the payment of interest on such loans during the construction of the road, constitutes an additional charge upon the capital. And, as it seems to be a principle universally admitted and recognized, that one-half of the estimated cost of a road should be secured in subscriptions to the capital stock of the company, to place it in a sound position, both as regards the cash capital, and the credit founded thereon, the Directors recommend that measures be taken to bring the subject again before the Legislature in a manner best calculated to secure the aid of the State, in a form that will free the company from all embarrassment, enable them to carry on the work with economy and energy, and as the wisest course to avoid difficulties and delays is always to meet firmly in the commencement the requirements of the case, they further recommend that the Legislature be petitioned to remove the existing lien, and to aid the company at once by a subscription of \$1,000,000 to its capital stock, and, further, by its endorsement to the extent of \$1,000,000 in lieu of \$1,250,000, taking as security for the endorsement a common mortgage with other bond holders. This is precisely the same application that was made to the Legislature originally, founded at the time on mature reflection, and which time has only tended to confirm, as the best measure both for State and the company, because it is the

the most efficient to enable the work to go on with out hindrance, in which both are equally and deeply interested.

As relates to the construction of the Knoxville and Charleston Railroad, the Legislature of that State has granted aid to the company different in form, but to a much larger amount than was expected. The contract with that company has consequently had to be modified. The State grants \$10,000 per mile for iron, and \$100,000 for each bridge that it may be necessary to construct; and it is supposed that under the construction of the act given to it by the Legislature, the amount of aid in the bonds of the State will be \$1,000,000, which, with county subscriptions in Knox and Blount counties, will make up a sum of \$1,200,000. This sum, with the bonds and stock to be taken by the contractors, and a subscription from the Blue Ridge Railroad Company in South Carolina, will be ample to complete that portion of the line.

There are now 228 individual subscribers, nearly all of them in Charleston. They are generally for small amounts, as they, and the citizens generally, consider themselves represented in the subscription made by the corporation. It is to be hoped, however, and it is expected, that in another year, when the pressure in the money market has been succeeded by easier times, that more liberal subscriptions will be obtained. In the meantime, the sub-contractors along the line of the road are receiving a portion of their pay in stock, so that eventually a large amount of shares held by the contractors will pass into their hands, creating stockholders and removing the objection frequently urged to the fewness of individual stockholders.

The Pendleton subscribers number —, and their instalments are now paid to the treasurer of the Blue Ridge Railroad Company in South Carolina.

The Treasurer's report is herewith submitted. It will be seen that there has been expended

For salaries of engineers and camp expenses and instruments.....	\$19,658 13
For printing, stationery, printing bonds, preparing mortgage, salary of treasurer, &c.....	3,242 57
For grading, &c.....	80,074 58
For land in Anderson.....	1,600 00
For interest on loans.....	296 49

\$104,868 77

The work thus far has progressed but slowly.— The contractors employed in the commencement white labor almost entirely, picked up in the mixed population of our northern seaports. It was not found to answer, and most of the work now in progress has been sub-let to parties chiefly on the line of road, and most of them having taken contracts since the planting season, their hands have been taken off to harvest the crops of oats and wheat, occasioning recently some interruption to the work. The entire line through South Carolina, however, being sub-let, except the tunnels, and a portion through Georgia, there will be a satisfactory force upon it so soon as the harvest is over. The grading and masonry of such portions as have been sub-let are to be finished at various periods of twelve and eighteen months, and the work thus far has been executed within the estimates of the engineer. The tunnels will soon be sub-let to parties experienced in such work; in the mean time the approaches to it are in progress.

The road in South Carolina, finally located, is fifty and a half miles in length. In Georgia it is finally located also, and will be seventeen and a half miles in length. Some thirty miles have been finally located also in North Carolina, from the Georgia State line beyond Franklin, and about thirty-four miles in Tennessee, from Knoxville eastward. The portions located in these two States, prove more easy, and will be less costly than was expected, but the most difficult portions of each, passing through the Smoky mountains, have not been reached. The entire line through will, however, be located in the next six weeks.

Soon after the adjournment of the legislature, at the suggestion, and by the request of Mr. Lythgoe, Mr. Benj. H. Latrobe, the distinguished Engineer-in-Chief of the Baltimore and Ohio Railroad, was invited to make an examination of the road that had been located from Anderson to the Locust stake, to revise the estimates, to make suggestions that he might think necessary, both as to changes of route and alterations of grade, and to report frankly the result to the Board of Directors. Mr. Latrobe was selected because of his high reputation and his experience on the Baltimore and Ohio Railroad, where there are grades of 116 feet to the mile, and some six or eight tunnels; and the examination was limited to the roads in South Carolina and Georgia, because in these States is encompassed the most difficult and costly portions of the work; and it was thought, that should Mr. Latrobe's examination be confirmatory of the surveys and estimates of our own engineers, it would place their correctness, and the practicability of the route, beyond all controversy, and tend to inspire in the legislature, and among the people of the State, a more universal confidence in the enterprise.

Mr. Lythgoe's letter to the board, the president's to Mr. Latrobe, and Mr. Latrobe's very minute and very able report are submitted, and the board take pleasure in stating that, except a difference in views in relation to the dimensions of the tunnels, the report fully confirms the survey and estimates of Mr. Lythgoe.

The board also take pleasure in communicating another fact of the highest interest in connection with the Blue Ridge Railroad. The Legislatures of Tennessee and Kentucky, in their late sessions, chartered companies to fill the gap between Knoxville and Lexington, Paris or Danville, from which points railroads are already in the course of construction to Covington, opposite to Cincinnati, and to Louisville, leaving the parties interested to select the passage through the Cumberland Mountains by Wheeler's Gap, Cumberland Gap, or by both, as they might deem best. The former route has been selected, founded on a survey recently made; a company has been organized, and with the aid furnished by the State of Tennessee, and liberal county subscriptions, the entire line has been put under contract. Thus link by link, and one after another, have companies been organized, which will open the great States bordering on the Ohio to the Atlantic seaboard. That which a combination of States failed to accomplish only a few years since, the force of circumstances is about to achieve. An object long and ardently desired by our own and the people in the distant West, and for which our State and people were ready, not 20 years since, to incur a responsibility of \$12,000,000. This great object can now be secured by a State responsibility of \$2,000,000, with her finances in a better condition, with the population of the great States, Virginia, Ohio, Indiana, Illinois, Missouri, Kentucky, Tennessee, North Carolina, to be brought into more direct and immediate intercourse with her, increased from 5,662,472 in 1840 to 8,779,003 in 1850, and according to condensed reports to 10,000,000 nearly in 1852, with their resources better developed and better known to us, and a connexion with them no longer an experiment.

The Erie Canal was the first great channel opened to the great and fertile regions of the West.—New York has now, in addition, the New York Central and the Erie Railroad; Boston, the Western Railroad; Philadelphia, her Pennsylvania Railroad half finished; and Baltimore, her Baltimore and Ohio Railroad, and the multiplication of these great highways to the West has in no way diminished the receipts. On the contrary, the receipts on the Erie Canal are larger than ever; on the New York Central Railroad they have increased to \$500,000 per month, the Erie Railroad to near the same sum, the Pennsylvania, half finished, to \$250,000 per month, and the Baltimore and Ohio to near \$400,000 per month, and Boston, New York, Philadelphia and Baltimore are advancing in population and wealth more rapidly

than ever. Nor is this prosperity and growth confined to these cities. The States, of which they are the commercial capitals, have increased in a like proportion, their lands and all other real and personal property have greatly augmented in value. Costly, therefore, as these great enterprises have been, mismanaged as many of them have been, they have fully justified the wisdom of their projectors, and proven that a connection with the great West is no longer an experiment.

The State may, therefore, in the opinion of the board, grant the required aid to the great enterprise in which we are engaged without risk or hazard. Will she do so? In answer to this question, the directors cannot consent to believe otherwise than she will. His Excellency Gov. Manning, with that sound forecast and practical wisdom for which he is so greatly distinguished, in his message the last session, notwithstanding this rivalry, commended this road to the particular patronage of the legislature. It has since lost nothing of its claims to an enlightened and liberal support—on the contrary, many of the objections then made made and which caused its defeat, have been removed. By the time the legislature meets, the entire line will be located from Anderson to Knoxville; all doubts as to the accuracy of the surveys and estimates have been, or should be dispelled—the work has been commenced, and will have made material progress, and the Legislature of Tennessee has granted an appropriation which insures the construction of that portion of the line. Opposition may still be made by those interested in proposed rival routes, but with charters obtained for the centre line through, with a subscription larger than any other company can command in its commencement, with a road actually in the course of construction, and which will, through its connection with the Greenville and Columbia Railroad, and the Wilmington and Manchester beyond, and through them with all the other railroads within our limits, distribute and diffuse its benefits through the very centre, and into every section of the State, and even to portions of North Carolina, it seems to the directors, that to an enterprise so general and so important in its character, all local opposition should now cease, and they are, therefore, not without strong and encouraging hope, that such aid will be granted by the legislature, as will place the company in a condition to press forward their great work to a speedy and triumphant completion.

The Blue Ridge Railroad has been erroneously regarded by many as exclusively a Charleston enterprise, got up by Charleston, and for her benefit alone. It has, however, been shown that every portion of our own State will participate largely in its beneficial influences. It may be added that to limit our conceptions of this great enterprise to Charleston or to South Carolina, is to take a narrow view of its character and magnitude. There are few passes through the mountains which separate the Southern from the Western States; and State lines are feeble barriers to the wants and demands of an already large, active and swelling population. The Blue Ridge Railroad from its position, must be the shortest great trunk line between a portion of the Great West and the larger portion of Georgia, Florida, and a portion of North Carolina. The Blue Ridge Railroad must, therefore, be "nationally Southern" in its character, the great highway between the great States of the West and the Southern Atlantic States seaboard, and the Gulf of Mexico and Florida, to be beneficial alike to all of them. And this fact, so far from being an objection, commends it more strongly to the fostering care of the State, because independent of that feeling of amity which should ever exist between communities adjacent to each other, and having similar institutions, the wider the area of support, the less will be the risk and the hazard to the enterprise in the construction.

It has been said also that, unlike our Northern cities and States, Charleston and Savannah and South Carolina and Georgia have not the foreign trade or the population to sustain a work of so

much cost, and that the railroad will pass through a thinly populated and poor country.

To establish a foreign trade, markets must first be opened for the sale of imports. A tithe only of the imports into our Northern cities are consumed by them, and in relation even to Charleston, three-fourths nearly of her sales of merchandize are made beyond the limits of the State. The Northern cities have scaled the mountains, and are multiplying their railroads everywhere, opening new markets as essential to the maintenance of their foreign trade. As yet Charleston and Savannah have hardly more than reached Chattanooga; and yet with the great West not yet reached, both Charleston and Savannah are increasing in population, and new life appears in their streets, after a long and palsied existence. And why may they not enter fairly into the lists with their Northern rivals? Why may they not have a foreign trade of their own? Why may they not bring to their own warehouses the products of the West over their own railroads, a few hundred miles in length, instead of drawing them by circuitous channels, over highways not their own? They have all the advantages of position. They lie in the very track of the West India and South American trade, and their cotton-loaded vessels for Europe, require as ballast the heavier products of the West, Indian Corn, Wheat, Copper ore, &c.; and as relates to distance, taking Cincinnati as the most unfavorable point of comparison, Cincinnati by the Blue Ridge, will be 632 miles from Charleston, and Cincinnati from New York is 850 miles over the shortest route, Philadelphia 750, and Baltimore about 720 miles; Baltimore will, however, soon be but within 580 miles of Cincinnati—but still Baltimore is 200 miles from the sea, and Philadelphia 100 miles. The comparison is still more in favor of Charleston from all points west of Cincinnati. Thus Louisville will be from Charleston 610 miles, while from all the Northern cities she will be further removed than Cincinnati. Geographically nearer therefore, with a climate permitting transportation and travel at all seasons, and with railroads of easier and lighter grades, Charleston, with the markets of the West, opened to her, may establish, in time, a large direct foreign import, as she already has a large export trade.—Looking also to the country through which the Blue Ridge Railroad will pass, there is nothing to discourage us.—Pickens and Anderson, in our own State, contain a population of 38,379, and with facilities for manuring their lands, are susceptible of vast improvement. A population of some 18,000 to 20,000 in Georgia will be tributary to the road; in North Carolina, 20,000; and East Tennessee, with vast agricultural and mineral wealth hitherto shut out from all the advantages of a market, with a population of 200,000, will at once pour upon us the fruits of their labors. Already her copper mines are extensively worked, and at no distant day will furnish a large business to the road and to Charleston—a trade that would be almost entirely lost to us by a road across the Blue Ridge further east. Charleston, by the Blue Ridge Railroad, will be 350 miles to the nearest, and 433 miles to the remotest of them, making her the nearest seaport.

A direct and more immediate connexion with the Western States is equally important to our home trade, which in the United States, is usually estimated at double the amount in value of the foreign. How vastly important is it therefore, to the entire South, that their supplies of Western produce, of which they are always, and in years of scarcity, very large consumers, should be brought to their own doors by the shorter route across the Blue Ridge, than by the way of New Orleans on the one side, or Baltimore, New York and Philadelphia on the other, burdened with a longer railroad transportation than by their own railroads, and as many miles besides, (and in most instances vastly more) of sea navigation.

The directors desire to bring to the view of the Stockholders also, the vast advantages which the Blue Ridge Railroad will possess over any other railroad that may be located east of it. In the

first place, it is now well known that the great copper ore region in Tennessee commences in Polk and extends north-east to Green county. The Blue Ridge Railroad will strike into the very centre of this region, making Charleston its very nearest market on the seaboard. And in the next place, a railroad is now being constructed from Chattanooga to Cleveland, and another from some point on the East Tennessee and Georgia Railroad to connect with the Blue Ridge Railroad at or near the Chilhowa mountain. This connection will enable the Blue Ridge Railroad to compete for the trade of North Alabama, Mississippi, and South Tennessee, centering at Chattanooga, as well as that which will descend from Nashville and the Nashville Chattanooga Railroad. A railroad further east would be beyond the reach of this trade, and as it would not shorten the distance, between Cincinnati and Louisville and the South Atlantic seaboard, the advantages in favor of the Blue Ridge Railroad, are conclusive. At the risk of being tedious, the Directors have deemed it their duty to place before the Stockholders, and through the Stockholders before the public, the true character and scope of the great enterprise in which they are embarked.

Enough probably has been said, but looking to the future where shall the South, and where shall Charleston be placed, if we do not identify ourselves with the great and growing fortunes of the West. The Hon. Robert J. Walker, in his celebrated report to the Treasury in 1847, states that, "our population doubles once every twenty-three years, and our products quadruple in the same period."

Now, the aggregate increase in the population of the States which will be brought into more direct and immediate commercial intercourse with us by the Blue Ridge Railroad, increased in population in the ten years ending 1850, near 49 per cent. and Alabama and Mississippi 30 per cent. and 62 per cent. respectively. The estimated population of the former States in 1852, as already stated, was near 10,000,000, and the value of their personal property was estimated at a value of \$2,377,392,369. The estimated population of Alabama and Mississippi in 1852, was 1,529,830, and the value of their real and personal property \$502,871,008. Now, applying the fact stated by Mr. Walker to the already existing population and wealth of the States referred to, and in another twenty-three years their population will be 23,039,660, and the value of their real and personal property, which it may be assumed will maintain a relative value to their productions, will reach \$11,521,000,000. Is it not evident, therefore, that the commerce of no State or city on the seaboard, North or South, can maintain its relative position without a direct and immediate intercourse with this vast section of our country; and that it is equally the duty, as it is the interest of each community, and more especially the commercial emporiums on the seaboard, in a laudable ambition to maintain its own commercial independence and equality, to appropriate and make tributary the trade of those great sections most adjacent to them. The Blue Ridge Railroad will accomplish this for our State and its commercial capital. It will restore to us that which, by proximity and geographical position, should long since have been ours. And it may safely be added, at little hazard, for its magnitude and the advancing condition of the country, furnish the strongest guarantee against failure or loss. Can the State, in view of all the facts stated, refuse its aid? To pause, while others are advancing, is to widen the distance, already too great, between us and our more enterprising Northern rivals. Charleston, by her subscription, has given assurance of her earnestness and deep interest in this great enterprise. And now it is for the Legislature to determine whether this great work, the necessity for which the living and the dead attest, originating in no private or public speculation, but founded on the broadest principles of the public good, shall be permitted to struggle through a long and protracted period of doubt and anxious uncertainty, dispiriting and discouraging to our people, or whether, by timely and efficient aid, they

will place it beyond the reach of casualty, ensure its rapid completion, and thus give new life to our commerce, expand the field of our industrial employments, and furnish scope within our own limits to the genius, the enterprise, and the ambition of our people. That she will do so, the Directors cannot permit themselves to entertain a doubt.

"In behalf of the Road."

HENRY GOURDIN, President
of the Blue Ridge Railroad
Company in South Carolina.

Nearly the whole distance from Anderson to the North Carolina State Line, where the waters of the Tennessee River are intersected, is through the ranges of the Blue Ridge. The route is consequently a difficult one. The following is the estimated cost of that portion of the road lying in the States of South Carolina, Georgia, and North Carolina.

	Graduation.	Rails.
50½ miles in South Carolina.....	\$1,981,110	\$404,000
17 miles in Georgia.....	686,525	140,000
74 miles in North Carolina.....	1,396,000	592,000
141½ miles.	\$4,063,635	\$1,136,000
Add for equipment.....	500,000	
" " interest.....	250,000	
	\$5,949,635	

There will be about two miles of tunnelling on the line.

These estimates are vouched for by Mr. B. H. Latrobe, the distinguished engineer of the Baltimore and Ohio Railroad who at the request of the company made a personal examination of the portion of the line above described.

The Texas Debt.

From the Washington Union, July 25.

The bill for the adjustment and satisfaction of the claims of the Texas creditors, to which we have already adverted, proposes a final settlement of a subject which has been pending for eight years, and which has proved to be full of embarrassment to all concerned. When Texas was annexed to the Union, her revolutionary debt was unpaid—its amount being, according to our recollection, something more than ten millions of dollars, and for the payment of it her revenues were specifically pledged. It has been maintained by very eminent statesmen and jurists, that one of the legal consequences of the incorporation of Texas into our Union was, that the Government of the United States became responsible for the payment of this debt. It is certain, however, that the revenues pledged were thereby made to inure to the United States, and not to the State of Texas.—When the question as to the boundary of Texas was adjusted, in 1850, the United States agreed to pay ten millions of dollars in bonds bearing five per cent. interest; and payable in 1864, for the relinquishment by Texas of her claim to the territory in dispute, five millions of which bonds were to be held by the United States until the creditors of Texas file full releases of their claims. The creditors declined to file releases because their claims amounted to more than double the sums so held by the United States. On the other hand, the State of Texas declined to recognize the claims of her creditors to their full amount, but insisted on scaling them and making a *pro rata* payment, according to a fixed rate of scaling.—The bonds have been returned by the Government in consequence of these embarrassing questions, and, together with the interest and premium, amount, on the 1st of January, 1855, to six and a half millions of dollars. This amount, it is universally conceded, the United States are bound to pay either to Texas or to her creditors; and if the payment is deferred until 1864, when the bonds

are payable, it is conceded by all that the United States will have to pay eight and a half millions. This is the amount which the bill proposes to pay now, in lieu of issuing the bonds and deferring their payment until 1864.

The only question which embarrasses the passage of the bill, as far as we are advised, arises from the proposition to pay eight and a half millions instead of the six and a half millions already due. The reasons on which the Senate bill was passed in its present shape, as we gather from the report of the finance Committee and from the debates on the measure in the Senate, may be stated in brief as follows:

It is a controversy between Texas, her creditors, and the United States. Texas is unwilling to satisfy the claims at their nominal amounts, but insists on scaling them. The creditors refuse to submit to the rate of scaling. So long as this controversy continues, the United States must hold the five millions of bonds, bearing an annual interest of 5 per cent. The Government cannot hand them over until releases are filed, and releases cannot be filed except upon an agreement between Texas and her creditors. Besides these difficulties, Texas and her creditors maintain, and with a force of legal and moral persuasion which it is very difficult to resist, that the Government of the United States is responsible not only for the five millions, but for the entire debt, which amounts to eleven and a half millions.

In this state of things, it is believed to be morally certain that Texas will not give her assent to any measure which merely distributes the five millions and leaves her liability for the remaining six and a half millions unsettled. On the other hand, it is equally certain that the creditors will not relinquish their entire claims upon the payment of less than half their amount. They believe that the United States are responsible for the entire amount, and in this opinion they are sustained by Senators who have examined the whole question; and they are, therefore, unwilling to lose more than half their claims. The case suggests the necessity for a compromise, and the bill is framed upon the principle of a compromise. It is to be submitted to Texas, and we have every assurance that she will give her assent. The creditors have already signified their assent, and it only awaits the sanction of the House to become a consummated adjustment. Texas will be benefited by having her revolutionary debt paid and her credit greatly elevated. The creditors lose three millions of their claims, but have agreed to submit to the loss in consideration of prompt payment, and because they have already sustained heavy sacrifices in the past delay. The United States are relieved from the question as to their liability for the eleven millions and a half, and, upon the supposition that they are responsible, save three millions by the debt.

As a financial operation, the bill before the House seems to us wise and desirable for the Government. Five million dollars of United States Bonds, bearing 5 per cent. interest, belonging either to the State of Texas or her creditors, are held in trust by the Government. They were issued, we think, in January of 1851. They are not redeemable by the Government, unless by the consent of the holders, till January, 1865. The principal of the Bonds, the premiums the holders could receive if they were to sell them in the market now, and the interest due up to January, 1855, amounts to about \$6,500,000. Now, as the Bonds are lying in the Treasury and drawing interest, which, together with the principal and premium, in January, 1865, would amount to \$8,500,000, and, as the Treasury is overflowing, and the money is lying idle in the Government vaults, and as, in 1865, the Government must pay the amount proposed in the bill, and, in the meantime, probably realize no benefit from the money, it would seem that, aside from the consideration of securing a release of upwards of eleven millions, it would be the part of justice for the Government to pay the amount, and thus put it in circulation for the benefit of honest creditors, and the partial relief

of the commercial interest of the nation. Hence, both as a financial operation and as a compromise adjustment of embarrassing and irritating questions, we can but hope that the bill will be as triumphantly passed by the House as it has been by the Senate.

Ogdensburg Railroad.

The annual meeting of the Ogdensburg Railroad Company was held at Ogdensburg this week. We find the following synopsis of the report in *The Boston Journal*:

"The financial statements and road operations are brought up to June 30, 1854:

The liabilities in Stock, Bonds and Notes payable and miscellaneous obligations are.....\$6,183,120 35
Cost of road and equipment..... 4,720,635 81

Excess of liabilities.....\$1,462,457 54
Property and credits connected with construction account...\$199,158 95
Bond Int. over Income 50,332 71
Interest..... 413,120 82
Discount on bonds.... 515,767 62
Outstanding due Traffic Department..... 248,007 44
\$1,462,557 54

"The amount of \$1,015,221, representing interest, bond discount and construction fund, applied in payment of bond interest, is carried to debit of profit and loss.

"The earnings in 1853 were \$548,381 76, being again of \$73,500 over 1852.

"The expenditures in 1853 were \$356,679 74, being an increase of \$56,000 compared with 1852. One item in the increase of expenses is new iron, to the amount of \$22,500.

"The half year shows a gain in earnings of \$27,000, while the increase in expenses was \$23,000, of which new iron was \$18,000.

"The traffic of 1852 and 1853 paid in gross 2.29 cents per ton per mile, while the expenses averaged, exclusive of depreciation, 1.49 cents per ton per mile. It is estimated that allowing for depreciation, the average net profit on the traffic has been 005.

"The tariff question is treated at great length. The prevailing system of low charges as a concession to public clamor, is referred to as ruinous, and it is urged to change the policy by abandoning all business which does not pay a fair and reasonable profit. To surrender non-compensating business will in the end promote the interest of the company. The productive basis is net, not gross income, and net income is not the difference between gross earning and payments. The computation must include an allowance for depreciation over renewals, if a reliable result is sought for.

"The bond liability is \$4,068,000, and in addition, there is in amount \$167,000 out as collateral.

"The floating debt to be provided for is \$350,000, having been reduced from about \$1,050,000 since the date of the last report.

"Arrangements have been made with note creditors for an extension to July 1, 1855.

"It is estimated when the floating debt is funded, the bonds issued will not be over \$4,500,000, to pay interest on which a net income of \$315,000 will be required.

"The suits with the estate of contractors Belknap and Mr. Parish, have been adjusted at a cost of about \$56,000.

"The work in the Malone shops was suspended in July, 1853. The amount expended is \$53,000. A further sum of \$133,000 is required to furnish them as originally designed.

"The contract with Mr. Horton of Malone, is alluded to as an obstacle to any change in the location of the principal business office and shop of the Company. It is thought that Ogdensburg is the most desirable place for the main station.

"The locomotives are reported in good condi-

tion, as are the passenger cars. The iron and freight cars are greatly depreciated. It is estimated that an expenditure of \$30,000 per annum during the next five years, will be required to maintain the track.

"An addition to the force of freight cars is necessary."

American Iron for Railroads--Iron Mountain Pig for Car Wheels.

The St. Louis Republican has the following on this subject.

The innumerable deposits of iron ore in the United States, furnish as great a diversity, and as good a quality, of that material as can be found in the world. Yet in malleable iron we make nothing like the Swedes; while in pig, we make nothing with either our bituminous, or our anthracite coal, equal to the Scotch. Our Juniata malleable iron is as strong as the Swedes; but being softer, will not wear half as long, in either a horse-shoe or a log-chain. The Tennessee iron is as good as the Juniata, and the Iron Mountain equal to either, though differing from both. For foundry purposes, there is no better pig than that made in Southern Ohio, and Northern Kentucky,—the cold blast iron for machinery,—the hot-blast, for stoves and hollow-ware. I greatly doubt whether any hot blast pig can be found equal in strength and excellence to that of Southern Ohio. But the supply for the last two years has fallen far short of the demand. This demand has made a market for millions of dollars worth of Scotch and English pig, and rails, that ought to have been made in this country. So great has been the call, that the capacity of those countries to produce them has proved unequal to the demand. This state of the iron market is the legitimate result of the new railroad and gold developments. The railroads diverted thousands of hands from agricultural, and other industrial callings, and these roads created the unusual demand for iron; hence it became scarce and dear. Tens of thousands flocked to the land of gold, and gold became abundant and cheap. But, measured either by gold or by labor—iron, has found a proportional value. It is worth more—it represents more labor and demands as an equivalent of exchange, more gold.

The relative change has caused the springing up of innumerable new furnaces in our own country, induced by the laudable attempts now making in various parts of the United States to manufacture iron from the ore, with bituminous, cannel and anthracite coal, and established new rolling mills to make rails for the various roads progressing in the United States. The Wisconsin ores, equal to any in the world, are yet undeveloped. The Missouri mines are in process of being worked.—They present a great variety of ores, and have required a largely diversified series of experiments to make them available. But they are now worked and will soon be extensively used.

The Pilot Knob makes a very good hot blast iron for stoves. The Mountain worked with cold blast is a very different article. It will not make stoves nor hollow ware. Its great proclivity to chill or to become carbonized, renders it unfit for light machinery, but when rightly mixed with other iron, it is the best iron for car wheels in the world. There is no stronger iron—none that is soft and strong that so readily chills, and hence none so well adapted to making wheels.

In making a car wheel, two things are indispensable—great strength and a hard "tread," or periphery. It must be strong, for a weak wheel endangers human life. It must have a hard tread or it immediately wears out. This is easily proved. A break is placed on each wheel of every car, and when the engineer sounds his alarm, the brakes are frequently put down so hard that the wheel slides on the rail. The point of contact between the wheel and the rail is but a point. The weight of a passenger car is nearly seven tons; with thirty five passengers it will be about nine tons, or over a ton to each wheel. The sliding of a wheel 20 or 30 rods with such a weight upon it, will soon wear a flat place on the "tread" unless it is very hard,

and when once it begins to wear it soon becomes ruined; inasmuch as this flat place is the stopping point when the brake is applied. In making the double plate wheel with the solid hub, the plates crack in cooling. To obviate this difficulty, the manufacturer anneals his wheels; but if the wheel is made of Iron Mountain pig, it may be thrown out of the moulds as ordinary castings are, without breaking. Hence, as soon as the excellence of this iron for making wheels is known, it will be eagerly sought after, and all that is made will be used for that purpose. I speak here of the charcoal iron. Whether a good iron can be made from any of the Missouri ores with bituminous, cannel or hard coal, or coke, remains to be tested. In its solution Missouri has a great and an untold interest, the importance of which few have fully considered,

JAMES L. GAGE.

Sr. Louis, July 6th, 1854.

Michigan Central Railroad

In the Journal of the 22 ult., we gave a portion of the report of the President of this road. We now annex the report of the Treasurer.

The annual accounts of the Company, for the year ending 31st ult., are herewith respectfully submitted.

The Account marked A, shows the standing, of the Company in General Account. By a comparison of this with the account of the previous year, it will be seen that the Capital Stock has been increased in the sum of one million four hundred and forty-seven thousand dollars. This increase has grown out of a creation and sale of Stock amounting to.....\$1,202,500 00 and by the conversion of Bonds on the first of January, amounting to..... 244,500 00

\$1,447,000 00

The Bonded Debt remains very nearly the same as the previous year, being only some ten thousand dollars less, and amounting in the aggregate to three million, nine hundred and eighty-five thousand, sixty-three dollars and thirty-three cents.

The proceeds of the sales arising from the increase of Stock, have been appropriated in payment as follows,—to account of "Construction No. 2," seven hundred and thirty-four dollars and seventy-one cents; to reducing the balance of the "Bills Payable and Receivable Account," in the sum of three hundred and thirty-six thousand, six hundred and six dollars and ninety-nine cents; to a further payment to the New Albany and Salem Railroad Company, of one hundred and fifty-two thousand, eight hundred and seventy-three dollars and three cents; to payment on account of new Steam Boats, of one hundred and thirty-eight thousand, six hundred and sixty-one dollars and ninety-four cents, and by an increase of the Cash on hand the remaining balance.

The paper marked B, gives the standing of the Company in Income Account, and shows a balance to the credit of this account, of twelve thousand, one hundred and ninety-one dollars and eighty-nine cents. The previous year's account gave a balance of fourteen thousand, three hundred and thirty-five dollars and forty-five cents against the account, so that the net earnings of last year have, in addition to the payment of the dividend of eight per cent., paid the previous balance against the account, and left the amount to its credit, as herewith stated.

The paper marked C, gives the gross receipts and the amount of Operating and Interest Accounts for the year.

Total Receipts being.....\$1,593,595 34
Receipts of the previous year..... 1,149,537 71

Increase.....\$439,057 63
Operating and Interest Account....\$1,173,532 00
Do. of the previous year..... 846,031 55

Increase.....\$327,500 45
The various Railroads with which the Company

is connected, growing out of its extension from New Buffalo to Chicago, and having relation to its future business whenever these arrangements shall be matured, have of necessity made it obligatory to carry a large amount of floating debt. Your Treasurer, in now closing his final Report as the financial officer of the Company, cannot doubt that these expenditures in the end will be found to have been judicious, and that the Stockholders will fully reap a benefit from all advances upon that account.

GEO. B. UPTON.

A.
The Michigan Central Railroad Company in General Account.

1854, June 1.	DR.	
To Capital Stock.....		\$5,681,000 00
To Bond Account—6 per cent. Sterling Bonds, unconvertible.....	463,618 33	
8 per cent. Bonds unconvertible.....	1,202,450 00	
8 per cent. Bonds, convertible.....	2,319,000 00	
		3,985,063 33

To Income account, balances of this account.....		12,191 89
To Bills payable and receivable, balance of this account.....		294,569 85
To Unpaid Dividend.....		488 00
		\$9,951,999 36

1854, June 1.	CR.	
By Construction No. 1, Purchase of road.....		\$2,000,000 00
By Construction No. 2, Expenditures since purchase.....	7,134,286 81	
By Cash on hand.....	56,329 71	
By Cash in hands U. T. Howe.....	140,886 81	
By Cash in hands E. Noyes.....	97,264 77	
By New Albany and Salem Railroad Company.....	405,883 03	
By Steamboats.....	138,661 94	
		\$9,951,999 36

E. E. \$9,951,999 36
Boston, June 1, 1854. GEO. B. UPTON, Treasurer.

B.
Income Account. Receipts of Road.

1854, June 1.	DR.	
The Receipts of Road, from June 1, 1853, to June 1, 1854, per statement C.....		\$1,588,595 34
To Balance of Income Account, this day.....		12,191 89
1854, June 1.	CR.	
By Balance of this Account, per Treasurer's Report of June 1, 1853.....		\$14,335 45
By Dividend declared December 28th, 1853, 8 per cent.....		388,536 00
By Operating and Interest Account, from June 1, 1853, to June 1, 1854.....		1,173,532 00
By Balance to new Account.....		12,191 89
		\$1,588,595 34

E. E. \$1,588,595 34
Boston, June 1, 1854. GEO. B. UPTON, Treasurer.

C.
Gross Receipts of Road for Year ending May 31, 1854.

1853.	Freight.	Passen's.	Miscel's.	Total.
June.....	\$27,322	\$55,934	\$5,573	\$88,830
July.....	43,433	71,008	2,500	116,942
August.....	68,154	54,814	.....	122,968
September.....	61,021	76,239	.....	137,260
October.....	70,089	101,547	6,026	177,662
November.....	92,075	116,130	50,000	258,205
December.....	42,255	40,193	.....	83,448
1854.				
January....	37,376	26,655	.....	64,032
February....	47,693	39,491	1,000	88,184
March.....	33,751	58,555	.....	92,306
April.....	40,757	64,180	391	105,329
May.....	98,876	135,727	18,818	253,422
	\$663,808	840,477	84,309	1,588,595

Journal of Railroad Law.

THE LIABILITY OF THE DIRECTORS OF CORPORATIONS FOR THE ACTS OF THEIR AGENTS.

The law relative to this subject is, substantially, summed up as follows in the standard Treatise of Angell and Ames on corporation.

The officers and agents of corporations, who abuse their trust, misapply the funds of such corporations or through negligence suffer the corporate property with which they are entrusted to be lost are personally liable for the injury thereby occasioned.

Yet no exemption from human error, no infallibility is to be enacted from the agents of corporations. They are not liable unless justly chargeable with negligence or with fraud, or with gross ignorance concerning their duties which they have undertaken to perform.

The directors or managers of a company are not to be regarded as *sureties* for the good conduct of their subordinate officers. Yet they would be liable for the damages consequent upon the appointment of an officer who should be notoriously incompetent to discharge the duties he had assumed, whom they should know to be unworthy of confidence.

The directors of corporations are bound to exercise the same care and vigilance which prudent men observe in regard to their private concerns. They are not expected to display any highly pre-eminent keenness of discernment. And if an officer should by means of forgeries or fraudulent alterations or entries in his book of account be able to conceal his misdeeds and to elude thorough scrutiny, the directors would not be liable for the losses which the acts of such officer should occasion.

In short there is no very material difference between the consequences of the frauds of agents, whether they derive their authority from corporations or from private individuals.

But next the following question suggests itself.

In the case of a party aggrieved by the negligence of the directors of a corporation, to whom shall he resort for indemnity? To the corporation concerned or to the directors by whom they have been compromised?

The general principle controlling this subject as laid down by Story and other leading writers upon agency may be stated thus:

An agent is liable to third persons for acts of *positive and wilful wrong*; but for mere mistakes and negligences in the course of his business and within the scope of his authority he is answerable only to his principal, and the principal is answerable even to any third party who may have been injured by those mistakes or negligences.

MODIFYING CONTRACTS BY WAIVER OF STIPULATIONS,

A decision touching this matter has lately been made by the Supreme Court at general term in the case of *Bailey* against *The Western Vermont Railroad Company*.—The plaintiff in this action agreed to ship to the defendants 5,500 tons of iron—500 in June, 1851, 2,500 in July, and 2,500 in August, if it were practicable within that time. The defendants agreed to give their notes for each parcel of iron that should be shipped, on receiving each bill of lading. No iron was shipped in June, and only part of what was required in July and August. By the 25th of October, only 2,900 tons

were shipped in all. These, however, were received by the defendants without objection, but they did not give their notes from that time until the 24th of April, 1852, when this action was brought.

The decision in this case was in effect as follows and was given by Judge Mitchell:

The defendants by accepting part of the iron, out of time, and without objection, waived that part of the contract which required that part to be delivered in due time, or admitted that it was delivered as soon after that time as practicable. In either case they were bound to give their notes. They neglected to do so. This discharged the plaintiffs from any obligation to deliver the rest of the iron until the defendants should furnish their notes for the parts delivered; and entitled the plaintiffs to commence a suit for the notes which should have been given, without tendering the delivery of the rest of the iron, although the time for the delivery of all the iron was past before the suit was brought. The contract may not be rescinded by the omission of the defendants to give their notes, but the obligation of the plaintiffs to deliver the iron, it suspended by that omission: and consequently it was unnecessary for plaintiffs to allege that they had tendered the whole amount of iron in accordance with the original bargain.

Morris and Essex Railroad.

The *Newark Daily Advertiser* gives the annexed particulars of the improvements going on for the junction of the New Jersey and Morris and Essex Road in that city:

The Morris Company has already laid a track nearly to the river, and are only waiting for the completion of the bridge to make the connection complete. A locomotive crossed upon the new track on the evening of July 3. The Broad st. crossing is laid with heavy "city rail" on a level with the pavement. The bridge is a stupendous work. Massive outside walls support a bed of earth in Ogden st., across which a wooden bridge will be flung. Thus far the work has been done by the Morris and Essex Railroad. Immense stone piers then uphold a series of iron tressle-work to the west end of the main bridge over the river. The bridge (which, with the track east of the river, are the work of the New Jersey Railroad) is in itself a great structure. The draw swings on a pivot with fifty feet to each opening. The streets in East Newark are crossed by viaducts high above them, and from the turnpike to the New Jersey Railroad track the grade descends till the tracks unite.

The Morris and Essex Company have cleared off the ground which they intend to occupy, and are proceeding with their improvements on the east side of Broad st. Two sets of tracks have been laid, and an additional one will soon be put down. A brick freight house, 150 by 20, with stone trimmings, and a slate roof, will be built on the corner of Spring st., and the alley between Division and Cross sts. A passenger depot will be completed as speedily as possible, and until it is finished, a brick house in Division st., will be used instead of it.

The passenger depot will be of Grecian architecture, 144 by 25 feet, built of the best brick, with stone trimmings, having a tower in the center, and Welch slate roof. It will be two stories high, the height of the eaves being 30 feet and the tower 60. It will front on Division st., and extend to the track, and passengers will be landed on a platform in the rear. Around the depot will be a wide space for carriages, and the whole business will be entirely withdrawn from Broad st.—The depot will itself be an ornament to that part of the city, and great attention has been given in the plans for securing every possible accommodation, both for passengers and the business of the road.

These improvements, so far as they are necessary to connect the two roads, will be completed this month, and the rest will be urged forward as speedily as possible. By the terms of the agreement between the two companies, both have the power of running trains over the bridge—the N. J. R. R. Co., absolutely, as they are owners of it, and the M. and E. R. R. Co., on certain conditions.

American Railroad Journal.

Saturday, August 5, 1854.

Grand Trunk Railroad of Canada.

We had an opportunity a few days since of passing over the *Portland* division of the Grand Trunk Railway, when we took occasion to examine with some minuteness, the condition of the road, and to inquire into its present and prospective sources of income.

The road is unquestionably one of the best constructed works of this kind in the country. Though traversing for nearly 100 miles the most mountainous portion of the Eastern States, it has an admirable line, with no grades imposing a serious impediment to a heavy traffic. There is no road in the United States, where, to a stranger, there are so many apparent obstacles, but which disappear one after another, as they are approached. Just the appropriate kind of solution appears to have been resorted to in each emergency, and a person riding over the road experiences a satisfaction similar to what he feels at the contemplation of any perfect specimen of *art*. The road is certainly one of our best specimens of engineering skill, and one in which *science* has contributed most in guiding and assisting *labor*. The work may be regarded as a *chef d'œuvre*. There is not a bad grade, nor a tunnel, nor an expensive cutting nor bridge, on the line. Every important road but this has its great work, its culminating difficulty. We are constantly on the look out for the *lion* on the Grand Trunk, but we never find it.

When the road was commenced, it was well understood that it could be accomplished only by the exercise of the most rigid economy of expenditure. The means for the first division of 150 miles were to be furnished by *Portland*, a city of about 20,000 people. The engineer had to "cut his coat to the cloth." He had to build an *inexpensive* road, or *none* at all. He saw the necessity of making a good one, to enable it accomplish the result predicated of it. He succeeded in fulfilling both conditions. It lay with the *engineer* to say whether the road should be built at all. His skill saved the project from an early defeat, and is to be the means of its future success.

Since the road has been merged into the great Canadian line, a large force has been kept constantly employed for the purpose of putting the track in perfect order, by ballasting and draining and in supplying additional accommodations to meet the increasing business. A great part of the road bed is of admirable material, and nearly the whole line is in excellent working order. It is intended to have all the improvements completed before the close of the season.

The earnings of the road which now average about \$17,000 per week are steadily and rapidly increasing. About one half of the lower, or *Portland* division, or 75 miles, traverses an excellent and *well* cultivated country, which will compare favorably with the extent of production and in

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equip'm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	88
Androscoggin and Kennebec.. "	55	824,863	1,048,540	2,036,140	177,003	80,053	none	80
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	41
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	95
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	104
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	85
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	51
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	82
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,509	114,098	6	81
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6 1/2	77
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	96 1/2
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern..... "	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	70
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	90
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,638	6	82 1/2
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central "	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,897	122,866	none	92 1/2
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	11 1/2
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western..... "	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	93 1/2
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	67
Providence and Worcester... "	40	1,457,500	300,000	1,791,939	291,417	120,892	6	97
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	116
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	50
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	none	.....
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	164	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	47 1/2
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	52
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	.....
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	87
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	51
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	.....
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	83
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	38	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	63
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	641,769	6	68 1/2

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.		Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton.....	"	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	"	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio.....	Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	50
Washington branch.....	"	38	1,650,000	.....	1,650,000	348,622	218,237	8	.....
Baltimore and Susquehanna.....	"	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....	Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	"	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	"	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	"	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.....	"	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.....	"	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	"	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	"	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	"	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.....	"	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.....	N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina.....	S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.....	"	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina.....	"	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester.....	"	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central.....	Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia.....	"	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western.....	"	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee.....	"	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western.....	"	50	586,887	150,000	748,525	129,395	71,535	8	.....
Alabama and Tennessee River.....	Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.....	"	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	"	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point.....	"	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern.....	Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia.....	Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga.....	"	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.....	Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.....	"	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.....	"	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.....	"	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.....	Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	59
Cleveland and Toledo.....	"	147	2,000,000	1,600,000	.....	.....	.....	.....	75
Cleveland, and Erie.....	"	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.....	"	135	3,027,000	408,200	3,655,000	777,793	483,454	12	100
Columbus, Piqua and Indiana.....	"	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.....	"	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton.....	"	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta.....	"	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western.....	"	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan.....	"	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	"	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami.....	"	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro.....	"	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami.....	"	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky.....	"	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.....	"	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central.....	"	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi.....	"	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania.....	"	187	1,750,700	2,460,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana.....	"	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley.....	"	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia.....	"	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois.....	Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central.....	"	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern.....	"	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine.....	"	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati.....	"	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis.....	"	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru.....	"	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Terre Haute and Indianapolis.....	"	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago.....	Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.....	"	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central.....	"	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago.....	"	92	.....	500,000	In prog.	473,548	286,152	.....	123
Michigan Southern and Ind. N. Mich.....	N. Mich.	815	.....	3,741,564	7,276,616	1,200,922	586,929	17	95
Michigan Central.....	"	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	87
St. Louis and San Francisco.....	Mo.	38	.....	non	In progress	Recently opened.	.....	.....	.....

business capabilities, with almost any agricultural section of New England. The balance of the line to Island Pond, traverses a country mainly covered by primitive forests, the transportation of the produce of which to market, is found to be the most profitable part of the business of the road. The area from which the road will draw its lumber trade is vastly increased by the proximity of the road to numerous large streams by which the lumber is floated to it. Twenty years will not exhaust the supply. During the next two years, we should judge that the amount of the lumber business will be quadrupled, that within that time, or within three years; the earnings of the Portland division would be doubled, from local traffic alone, without taking into consideration the probable increase of through business.

The road must command a large through business from its position. The Mississippi and St. Lawrence form the natural outlets of the great interior basin of the country. It has always been one of the first objects of all our leading commercial cities, to reach these outlets by artificial lines of improvement, which are thrown out as nearly as possible at right angles to the great water courses.

The Atlantic Division of the Grand Trunk Railroad is probably the most easterly work of this kind that will be constructed. It must therefore form the channel of communication between the West and the Canadas, and the State of Maine, and the Lower British Provinces. Between these widely separated sections of the country the most extensive and intimate business relations exist, based upon the great dissimilarity of their products. Maine, New Brunswick, and Nova Scotia draw a large portion of their supplies of food from the Western States and Canada. The above road must soon become the route through which it will be received. To pay for this food, the products of commerce and manufacturing, and foreign merchandise, will be sent over the road, west. In addition, a large trade will always exist between the Canadas and Great Britain to which the road will supply the convenient medium of transportation. All these sources of business must, we think, secure to the Portland Division of the Grand Trunk an income sufficient to pay six per cent at least upon its cost. The road appears to be under excellent management.

The success of the road is a gratifying complement to the sagacity of its projectors, and what is still better, there appears to be no doubt that its income will sufficiently reward the parties who have invested their money in it.

Belvidere Delaware Railroad Company.

A recent meeting of the stockholders of the Belvidere Delaware Railroad Company, elected Robert F. Stockton, Charles Bartles, Robert L. Stevens, Lewis Perrine, Edwin A. Stevens, Samuel D. Stryker, John R. Thomson, William P. Robinson, and Charles Sitgreaves, Directors. At a meeting of the Directors, Charles Sitgreaves was chosen President, and John P. Stockton Secretary and Treasurer.

Flemington Railroad.

The following gentlemen have been elected Robert F. Stockton, Edwin A. Stevens, Benj. Fish, John P. Stockton, Alexander Wurts, John G. Reading, Hugh Capner, Charles Bartles, William P. Emery, Directors. At a meeting of the Directors, Charles Bartles was chosen President, and Alexander V. Bonnell Secretary and Treasurer.

New York Central Railroad.

We gave last week, the statement of this company, showing the earnings and expenses of the road for the past 15 months, with other information of interest to the stockholders, who are notified that a *dividend* of 4 per cent. has been earned for the past six months, and will be paid, when the company find themselves in *funds*. The earnings have been used in *construction*, and as they cannot be replaced by borrowing at an interest of 7 per cent., the stockholders must wait till this can be done.

As a matter of general policy the step is perhaps a commendable one. As the stockholders recently received a *dividend* of some 33 per cent., payable in *bonds*, they have fared sufficiently well, and are not to be commiserated. If they are the same, as at the time of the consolidation, they have nothing to complain of; and the public certainly will not. The case is one of hardship to parties who have *since* bought into the road under a mistaken notion of its value, but their disappointment will teach them not to put too much confidence in great names, but to look with reasonable suspicion upon all movements similar to the consolidation of the Central line.

The statement of the Directors and the Superintendent is additional evidence that the road was in very different condition from what it was supposed to be at the time of the consolidation; that instead of being in good repair, the road and equipments were in a very dilapidated condition, and were estimated far above their value. The course pursued by the directors of the several roads was very much like that of a person who wishes to pass off a spavined and broken winded horse for a sound one. The trick succeeded well. The seller got the price of a *prime* article. He will commend himself on his *cuteness*. The purchaser will agree with him in this, though curse the morality of the transaction. But the public must have examples in the perpetration of great wrongs to drive them to the adoption of measures to prevent their recurrence. The Schuyler fraud is to day worth more than it has cost, for it will be the means of introducing a system of transfers by which similar frauds will be impossible. Without warning such frauds might have crept into twenty companies, instead of being confined to one or two.

But another step is foreshadowed in the report of the Superintendent, which we predicted some time since as the necessary result of the great increase of capital due to the consolidation, an increased tariff both upon persons and property passing over the road. The true end of every public work is to *reduce* the cost of transportation. The aim of every public spirited man has a similar object. *Cost* of transportation is the great tax in life. Upon no subject does human ingenuity labor with such zeal as to reduce it to its lowest point. Whether imposed by *human*, or *natural*, law, it is never cheerfully paid, only when the amount represents the smallest possible outlay. Now the course of the Central Company has been a direct violation of all this, and it has usurped a power which if exercised by a legislature, for selfish objects, would end in revolution. The language of the parties that compose the consolidated company was this—"We have by charter and location, the monopoly of route through Central New York,

the best route for business in the United States. Concerted action will enable us to tax this business, so as to derive a much greater revenue than the ordinary rates of interest on our investment." The authority to carry this scheme into effect was obtained under the plea that *consolidation* would greatly *reduce* the cost of transportation and increase the efficiency of the line, and in this way benefit the public in an equal degree. The effect has been exactly reverse of what was promised. The expenses of operating the line are largely increased. In addition, interest is to be paid upon the \$10,000,000 dividend made up of an extravagant and unwarranted estimate of the value, beyond par of the stock of the several lines, and by which the capital stock of the company has been increased in an equal degree.

The company now propose to quietly go to work to assess upon the public a *tax* for the payment of a dividend upon the fictitious stock.

Here, then, is an "*Imperium in imperio*," a power within the State greater than the State itself, with a vengeance. Here is a burden of some \$10,000,000 forever imposed upon the commerce of the Mohawk Valley, the key of the commerce of this country, just to fill the overflowing coffers of the managers of the Central Railroad.

We regret these things; partly because it impeaches our consistency. Our friends and readers will bear us witness that we have always held up the roads composing the Central line, as models of success, the result of an upright and capable management, as instances where parties in charge were influenced by sentiments becoming their positions as custodians of great public trust; and as men would not prostitute these positions to purposes of personal gain, but who valued a "good name above great riches."

Portland, Saco and Portsmouth Railroad.

The recent annual report of this company shows a total expenditure up to the fifth of June last, the date of the annual meeting, to be \$1,486,327 22; of which \$1,302,395 49 was expended upon the road, and \$182,931 72 for other objects. Of the latter sum \$100,000 were for stock in the Kennebec and Portland Railroad; \$37,000 for the construction of Commercial street, Portland, and \$32,000 for stock in the Portsmouth Bridge.

The capital stock paid in is \$1,367,000. Total liabilities \$119,237 22. The assets exceed the liabilities by \$63,604 50, and \$132,000 of the amount yields an annual interest of 6 per cent. per annum.

The receipts for the past year have been as follows:

From Passengers	\$185,537 81
" Freight	58,307 56
For Mail	7,744 18
Rents	1,740 77
Interest	6,000 00
	<hr/> \$259,330 30

The current expenditures have been \$135,291 87, of which \$7,154 65 have been on account of interest, and \$10,000 charged to renewal. The cost of maintenance of way has been \$33,685 14; motive power and fuel \$37,709 99.

Two dividends of 3 per cent. each have been declared for the year, amounting to \$81,110. There was also paid 14,926 75 damages on account of a collision which happened in 1851. Deducting charges of all kinds, a balance of \$25,658 56 remained, which added to the surplus at the end of

the previous year, leaves a total surplus sum of \$69,117 29.

The road appears to be in good condition and the necessary repairs can be provided for out of surplus earnings, without interfering with the regular six per cent. dividends of the Company, which, we believe, have uniformly been paid since the opening of the road.

The equipment of the road at the present time consists of—

9 Engines,	
4 first class Passenger Cars,	
2 second class do. do.	
59 Freight Cars,	
2 Baggage Platform Cars,	
18 Gravel Cars,	
3 Mail Cars,	
2 Stone Cars,	
13 Crates.	

Miles run by engines	156,876
Expense account per mile run	67 78-100
Receipts for each mile run	\$1 65 1-3
Average receipt for each passenger ..	92 1-2

Kentucky and her Railroads—Hon. Ben. Edwards Grey.

We are in receipt of a map, with a circular attached, illustrative and explanatory of the great internal improvements of Kentucky, from Hon. Ben. Edwards Grey, M. C. The circular is addressed to the constituents of the Hon. gentleman, the people and Editors of Kentucky. It is at once an appeal to their enterprise, patriotism and State pride, in favor of the great lines of roads necessary to be constructed through the State in order that it may form part of the great highway from the Atlantic to the Pacific.

The points made by Mr. GREY are strong ones and forcibly argued. Briefly they are as follows: The great preponderance of the travel and transportation from North to South, from East to West, from Northeast to Southwest or Southeast to Northwest, whether it is destined to reach the Pacific or not, will inevitably enter and traverse the Mississippi Valley. That valley, or some point in it upon the River from which it takes its name, must be a great point of centralization, for transshipment and distribution of persons and property. That such a point must be near the confluence of the Ohio and Mississippi as the dividing line between low and high water, and that the best and most appropriate place for it, the most favorable location, is in the State of Kentucky at Columbus. He contends that the people of Kentucky should make every effort to secure this great point for the centralization of trade and travel, for their state. To do so he proposes that Congress shall grant lands to the State, to aid in the construction of lines of Railway from Cumberland Gap to Hopkinsville and from the mouth of Big Sandy River to Hopkinsville, and thence west to Columbus on the Mississippi river; also from Cincinnati via Louisville to Hopkinsville; from Henderson towards Nashville, and the same quantity of lands per mile to the Mobile and Ohio Railroad for the portion of their route lying within the boundaries of Kentucky and Tennessee as was granted the same great line in Illinois, Mississippi and Alabama. This would insure the construction, within a very short period of time, of lines forming connections with every portion of the Union East of the Rocky mountains, by the short-

est possible routes, centering at the mouth of the Ohio. It is a policy which has been long and steadily advocated by Mr. GREY with a degree of energy and perseverance which should command success. It is moreover a policy which should be a favorite one with the people of the great rich and beautiful State of Kentucky.

With upwards of one million of inhabitants, six million acres of improved, and eleven millions of unimproved lands, rich in forests, in all the resources of agriculture, manufactures and of minerals, Kentucky requires but the means of their development to place her in the line of the wealthiest among the Western States. She has now but about one hundred and fifty miles of Railways in operation while she could profitably employ, at least, *ten times* that amount.

Another strong point in Mr. GREY's circular is the advantageous connection which he thinks can be formed at the mouth of the Ohio with the great Pacific route through Little Rock, Fulton and Texas, for which so much land has already been granted. His object is to prepare for this connection; to prepare the State of Kentucky for the great tide of travel which will soon be rolling forward from the Atlantic to the Pacific; by the construction of such roads as will constitute her routes the shorest in point of both *time* and *distance*, and cheapest in regard to expense.

Whether Mr. GREY be correct or not in all his assumptions in regard to a Southern route to the Pacific we think there will be but one opinion, as to his course, among the people of the State of Kentucky.

As a question of state policy it is the duty and should be the pride of every man in the State to use his utmost endeavors to make that State a part of the great highway for travel and traffic in all directions. It should be his pride to do something toward rendering his State the great central depot of distribution for the whole country East of the Rocky Ridge. But suppose this point is not gained; suppose *every body* does not go through Kentucky, are not her own immense resources equal to the support of these proposed roads?—Are they not needed for the development of those resources? To these questions there can be but one answer.

Mr. GREY has evidently given the subject of railways much thought. He has regretted the tardiness of his State in this matter and exerted himself to give her an impetus in the right direction. We are glad to find *one* member of Congress who has time to devote some attention to the immediate wants of his State and constituents. We hope there are many more engaged in the same laudable employments, though we may have but little evidence of it.

We doubt very much if there is another member of the House who has given the same labor to the investigation of this question as is exhibited in the circular and map put out by Mr. GREY.—He has been engaged in this project since 1849 and his constituents at least seem to appreciate his services. If the people of Kentucky would have their State prosper and exhibit the same degree of real, available, that she does of primitive wealth, let them follow the head of such of her sons as BEN. EDWARDS GREY, GEN. LESLIE COOMBS and others who are carrying forward their Railway projects.

Lexington and Frankfort Railroad.

The recent statement of this company gives the following result of the operation of the above road for the year ending May 1, 1854.

The total receipts for the past year have been \$109,534 64, derived from the following sources:

Mail service	\$1,997 15
Rents	473 10
Passengers	47,892 11
Freights	59,172 28
	\$109,534 64

The total expenditures for operating the road have been \$61,356 87; or 56.3 per cent. of the gross receipts. The principal items of expenditure were repairs of machinery \$15,215, repairs of road \$14,767 and wages and salaries 13,347. The total number of miles run by passenger trains, were 36,308, and by freight and repair trains 29,249. The receipts per mile were 1.6 6 cents; expenses per do. 93.5 cents; ratio of expenses to earnings 56.3 cents.

The net receipts for four years have been as follows:

For year ending May 1th, 1851	\$35,386
" " " " " 1852	40,794
" " " " " 1853	44,170
" " " " " 1854	47,704

The sum has been expended in construction, and stock dividends at the rate of 6 per cent. have been paid.

The following is the general balance sheet from the company's books.

Construction	\$568,648 22
Furniture	62,327 85
Real Estate	3,495 32
Bills Receivable	4,056 98
Deferred Interest	6,695 00
Cash	4,383 51
	\$649,606 88

Stock	\$430,926 55
Bonds Payable	\$70,000 00
Bills Payable	80,827 78
Legislative Bonds	10,000
	160,827 78
Dividend No. 1	1,317 06
Contingent Fund	15,251 10
Louisville and Frankfort Railroad Co.,	440 80
Profit and Loss	40,843 59
	\$649,606 88

Milwaukee and Mississippi Railroad.

The earnings of this road for the month of June, foot up as follows: Passengers, \$17,241 50; Freight, \$27,846 33. Total, \$45,087 83. This is the heaviest traffic for any one month since the road has been operated. The earnings for the first six months of this year and the last compare thus:

	1853.	1854.
January	\$10,801 25	\$23,224 29
February	8,930 86	26,192 33
March	8,143 35	20,773 98
April	8,944 38	18,321 42
May	13,967 90	41,700 00
June	18,585 24	45,687 83
Total	\$69,272 98	\$175,299 80

Last year the road was in operation only as far as Jattresville, (70 miles.) This year, up to May 24, it was in operation to Stoughton, 88 miles, and subsequently to Madison, (including branch,) 103 miles.

On the 1st of April, Mr. Brodhead, the indefatigable Superintendent of the road, made an estimate of its business for a current year, amounting to \$400,000, and yielding a dividend of 12 per cent. Up to July 1, (one-half of the year,) the

actual receipts exceed this estimate just \$31,105 42. Should no untoward circumstance intervene, the earnings of our Pioneer Road for the current year will reach *half a million of dollars.*—*Milwaukee Sentinel.*

Alabama and Mississippi Railroad.

A steamer at arrived the wharf on Sat'y evening last with another cargo of Iron Rails for the Alabama and Mississippi River Railroad. The Iron now at the wharf for this road, will lay the track some 8 or 10 miles. The bridge over Valley Creek will soon be completed, probably by the last of next week, and so soon as this is done Messrs. Donoho & Leach will at once proceed to laying down the iron, and continue it as rapidly as possible, the cross-ties sufficient to lay 16 miles having been already gotten out. The iron purchased and to be brought up by the steamer will be sufficient to build the road 20 miles, which will go several miles beyond the Cahaba River. Every thing looks cheering for the rapid progress of this great work, and the day is not distant when we will witness the fiery horse crossing with lightning speed the Cahaba River, bringing after it a long train laden with cotton and other products of the fertile lands of western Dallas, Perry, Greene and Marengo.—*Selma Sentinel.*

Statement of the Galveston and Red River Railway.

The project of the above Road offers to the capitalist and business man, strong inducements as a safe and profitable investment for capital.

The act of incorporation, approved 11th Febr'y, 1852, granting this company the right of constructing a railway of three hundred and eighty miles in length, from the city of Houston to Red River, which together with the supplemental act passed Feb. 8th, 1853, allowing this company the right of constructing a branch, simultaneously with the main trunk, to the city of Austin, one hundred miles in length, from the point of divergence near the Brazos River; and further empowering the company to extend their road to the city of Galveston, granting to each of these lines a tract two hundred feet in width of the public land through which they may pass, for a roadway, and endowing them for each mile of railway with ten thousand and two hundred and forty acres of the public land, reserving three miles from the exterior line on each side of the track, to the company, to locate their certificates in alternate sections, should they think proper to do so, make the princely grant of nearly Six Millions of acres of land to this company. The act passed in February, 1854, granting them 16 sections, entitles the company, upon filing with the Secretary of State a contract for the construction of the first twenty-five miles, to have set apart so much of the public domain as they may designate, upon which the company can locate eight hundred sections, of 640 acres each; the State reserving the alternate sections, and the company receiving their certificates upon filing the contract and giving bonds to the amount of ten thousand dollars for the faithful performance of the work.

Who can doubt, with the rapid increase of population which these fertile lands are attracting to this State, the immense value they must acquire. By the late report of the Land Commissioner, there are now vacant upwards of 102,000,000 acres.

The provision made by the legislature, reserving six miles from location, giving a preemption right to the land, we think an important feature, as many of the lands on the line and contiguous to it, are of as fine quality as the State affords.

A portion, of the line of the above road abounds with bituminous coal, marble of white, variegated and dove colors, and granite. Iron ore exists in several counties on the line, and in immense quantities, and water privileges equalling in extent those of Lowell, are abundant. Wheat is now being produced, and it only requires the facilities of transportation to enable us to supply, not only our home consumption, but an article destined soon to enter largely in our list of exports.

The line upon which our road is located may be justly considered the back-bone of our State, traversing the ridge, and as near the Brazos River bottom as practicable. The company have surveyed and located seventy miles, and in the course of a few weeks will have graded twenty-five miles, from Houston to a point across Cypress Creek near Mr. Boone. This section overcomes the flat and nearly level prairie, enabling the planter to get his crop forward as soon as ginned, or ready for markets. Even this section will become remunerative.

From this crossing the country becomes gradually undulating. The point next to be reached is in Austin County, distance 46 miles. From thence the road runs up the Brazos River to the Navisota, a further distance of 24 miles. The company have already secured the right of way for this line wherever the owners could be found. The land 200 feet in width has been granted thus far without cost. They have further extended their preliminary survey 84 miles, (reaching about the parallel of the great national highway, the Pacific road, which must pass near the 32°), securing a preemption to the vacant land for this distance. Houston, situated as it is, at the highest point of permanent navigation, offers the best place for a commencement of our railway, the city having a heavy business already established, as will be seen by the Committee of Directors' report appended to this Statement. From the terminus of the present survey, the road will diverge in a north-easterly direction, towards Fulton on Red River, connecting, by agreement with the Cairo and Fulton Road, through Arkansas, *via* Little Rock, at which point it will meet the Memphis and Charleston Road and its various connections. When this road shall reach Cairo on the Mississippi, there will be a continuous railway from the Atlantic and Western Lakes and States, to the Gulf Mexico.

The rivers of Texas, time has proved, cannot be depended upon. Other means of transportation must be formed, having no other competition than the ox and horse teams, over the natural prairie roads. The immense districts tributary to this railway, apart from the proceeds of sales of lots in towns that will of necessity spring up at the depots, with the Company's lands when they are brought into market, will make it one of the best, if not the first paying road in the United States. Starting from a point that nature designated, commanding already from its location, one-fourth of the entire business of the State of Texas which covers an area of square miles equal to some six of the older States of the Union, running to a point which enables it not only to command the trade of the finest portion of our State, but to intersect the several lines of road now in progress, *viz*: the New Orleans and Opelousas, also the road extending from Vicksburg to Shreveport, through Harrison, Rusk, Smith, Henderson, Navarro, and Limestone counties, placing us in communication with all the middle counties, where these lines must concentrate above the great falls of the Brazos, while our sister State Arkansas, by means of her Cairo and Fulton road now under contract, will, as soon as finished, place us in connection with the Illinois Central, together with a river communication of twenty thousand miles, and upwards of thirteen thousand miles of railway now completed. Missouri is pushing her line south to the Iron Mountain, and onward to Chalk Bluffs, meeting the road from Cairo to that place. An early completion of this road is of the first importance for a vigorous prosecution of the Pacific road, which, as is conceded on all sides, must pass through Texas. The facility forgetting rails, rolling stock and machinery over this line, *viz* Galveston, for that work is made manifest, upon examining the topography of this country. Aside from these considerations, which should weigh heavily, our line traverses every variety of soil, climate, and production. For the first hundred miles sugar, cotton, and tobacco grow luxuriantly, while the in more northern portion grow equally well, cotton, tobacco, wheat, and all the

cereal grains, together with the apple, pear, quince cherries, and other fruits and berries in abundance. Many of the tropical fruits have been cultivated successfully nearer the coast, where thrive the orange and lemon, fig, banana, and pine apple while the stream and river bottoms abound with a dozen varieties of grape, some of which produce a most excellent wine, which before long will be added to the list of exports of the State.

Perhaps there is no State in this Union where Railroads are more needed to develop the vast natural resources possessed than Texas, nor one where they can be constructed at less cost or traversed with greater speed. The Legislature at their last sitting passed a bill establishing the gauge five and a half feet, in conformity with those established by our sister States, Louisiana, Arkansas, and Missouri, which roads, when completed, will furnish a continuous line without change of car, or breakage of bulk, to the Mississippi.

It is beyond the power of human foresight to estimate the great increase in wealth and production to follow the construction of these works.—The President of the Nashville and Chattanooga road states, that the increased value of a belt of land, ten miles wide, lying on each side of that road, is equal to \$7 50 per acre, or \$96,000 per mile, for every mile of road, which cost 20,000 per mile; whilst the Georgia lands, that were selling in 1846, at 10 and 15 cents per acre, commanded in 1849, when the Chattanooga road was brought into operation, ten to twenty dollars.—The same road in its extension passed the counties of Franklin, Bedford, Rutherford, and Davidson, to Nashville in Tennessee. The auditor's books, for these counties, show an advance in the entire value of their property, of \$2,554,639, in one year.

The increased value of property in the counties bordering on the Vicksburg and Jackson road, has been estimated to be from \$700,000 to \$7,000,000.

If such is the result in other states what may we expect, when the virgin soil of such a state as Texas is brought under cultivation. Let us place the lowest limit to the land, five dollars per acre, when the road shall have been completed, and the six million acres preminum land derived from the State, will produce the enormous sum of thirty millions of dollars, apart, from the sales of lots in the various towns and cities that must of necessity spring into existence.

In this connection, it may be well to point to some of the leading features of the charter. The State grants 200 feet for roadway, and provides, that in passing through individual lands, in the event of the Company not being able to agree with the owner, a jury of freeholders are to appraise the damages, taking into consideration the value of the land before the construction of the road, and the present value; therefore the company will have to pay but in a few instances for roadway.

For the first division the right of way is already owned by the Company, and they anticipate but little expense will occur on the whole route.—When the road strikes Red River it will be important for the company to secure an eligible point, for a city of importance will spring up above the Raft. That stream being navigable for a distance of five hundred miles above this obstruction, all the commerce of this river, together with the fertile valley embraced, will give the road a heavy business of themselves, as well as accommodate all the South-western portion of Arkansas, together with the wealthy Choctaw Nations, affording them the means of obtaining their supplies and forwarding their products to the seaboard. A general idea may be formed of the prospective business of the first division, by an attentive perusal of the Committee of Director's report, founded upon facts, as at present existing, together with some extracts from the address of Hon. Ebenezer Allen, late Attorney General for the State of Texas, to the people of the State, on this subject.

P. BREMOND, President.

July 1, 1854.

Estimate for constructing and furnishing 70 miles of Railroad, extending from the City of Houston Texas, to the Navasota River, a branch of the Brazos River—viz:

For grubbing, clearing, ditching, embankments, bridges, and culverts, on 70 miles, at \$3,050 per mile.....	\$218,500
For 6,580 tons rails, 60 lbs, per yard, at \$75 per ton.....	493,500
For furnishing, and laying ties, sleepers, &c., at \$2,000 per mile.....	140,000
For laying 70 miles of rails at \$500 per mile.....	35,000
For erecting two depots, a machine shop, tanks, sheds, and sidings.....	50,000
For 5 locomotives, at \$10,000 each.....	50,000
For 6 passenger cars, at \$3,000 each.....	\$18,000
For 20 freight cars, at \$1,000 each.....	20,000
For 10 platform cars, at \$500 each.....	5,000
For 10 cattle cars, at \$700 each.....	7,000
	\$50,000
For engineering and office expenses.....	15,000
For contingent expenses at 15 per cent.....	157,050
	\$1,204,050

J. W. P. LEWIS, Chief Engineer.

Galveston and Red River Railroad.

Lancaster Locomotive and Machine Manufacturing Company.

This Company was organized May 31, 1853, under the General Manufacturing Law of the State, with the following officers and Board of Directors:

David Cockley, President; M. O. Kline, Secretary and Treasurer; John Brandt, Sen., Superintendent; Directors David Cockley, John Black, John N. Lane, C. Hager, Michael Malone, James Black, A. W. Russell, James B. Lane, Henry Muselman, Benjamin Eihleman and George T. Lane.

The capital of the Company is \$80,000, which is divided into shares, and is held by the gentlemen who act as Directors, and who are all residents of the city and county.

There are two main buildings, each 318 feet long, with a cross section of 55 feet, forming in shape the letter H. The buildings are all 50 feet in width; the ground floor containing 34,550 square feet, and affording ample room for the working of five or six hundred men. The building containing the engine and boiler, is 32 by 36 feet. Stack 100 feet high. That part of the building fronting the railroad, is two stories high, the second story being appropriated as a designing, drawing and pattern room. The engine now used for the propelling of the machinery, is 75 horse power, and although not very elaborately finished performs well. It was built at the Chesnut Street Works in this city, by Mr. Fellenbaum. The foundry for the casting of iron and brass is extensive, and not surpassed by any in the State. The day we visited the works' they ran 8000 lbs. of metal in one hour.

In this branch as in every other, the greatest order prevails, every man and boy has his place, and each attends to his duty. Although there is many daily visitors—many inquisitive—all curious—they glide about in the pursuit of their avocation as if unconscious of any but their fellow workmen.

The same admirable system of order—regularity and attention to duty exists in each department.

Each shop has its foreman who exercises supervision over its hands, and these foremen in turn are subject to the orders and control of the Superintendent. Of this Superintendent it is almost needless to speak—wherever worth is acknowledged—genius applauded or the "Iron Horse" known, the name of Brandt has been heard of. He is a native of this country, who by the dint of

industry, application and study, has carved out his way to distinction if not wealth.—Unaided—friendless—alone, from the humbler walks of life to the force of his own genius does he owe the position he occupies as one of the first machinists of the day. Prior to taking charge of the Lancaster works, Mr. Brandt was Superintendent of the Paterson works, N. J., whose locomotives hitherto have rivalled all opposition, combining as they do the strength and durability of the useful with the elegance and artistic effect of the beautiful.

The same experience, application and skill which gave a name and character to the Paterson works is now employed at the Lancaster, and that it will be with a like enviable result can scarcely be questioned. They are now building some first locomotives for the Philadelphia and Columbia railroad, two of which it is expected will be finished by the first of September—When these are done we think the fact will be established, which in advance we now claim, viz: that the Locomotives from this establishment will not and cannot be excelled!—*Lancaster Examiner.*

Cincinnati Wilmington and Zanesville Railroad.

The entire length of line of this road from Morrow to Zanesville is 113½ miles; to the city of Cincinnati, 167 miles. There are but four curves with a less radius than 1910 feet—eighty-eight per cent. of the road is straight, and seventy-seven per cent. of the grades are less than thirty feet to the mile. Eastward from Wilmington the line is a direct tangent for twenty one miles. The section between Lancaster and Zanesville is now in construction, work having been done thereon to the amount of \$400,000, and will be completed to the west bank of Muskingum at Zanesville, in December of this year. The largest pieces of masonry, and the tunnel, are already completed. The receipts of the company to May 1st, were \$2,335,674. Expenditures \$2,326,460.

Richmond and Petersburg Railroad.

The total earnings of this company made for the year ending April 30, 1854, were \$139,437 70, and the ordinary working expenses, \$92,435 52, being about 67 per cent. of the gross receipts, leaving a nett revenue of \$47,002 18 for the year. There have been purchased and paid for during the year, materials for the repairs of locomotives and cars and for repairs to bridges to the amount of \$7,324 02. This is an excess over the stock on hand last year, at the same time of \$3,600, which should be properly deducted from the gross amount of expenses, which would leave the real cost of working the road \$88,835 52 (or about 63 per cent. of the gross revenue,) leaving an actual nett revenue over the ordinary working expenses of \$50,602 18, which sum has been expended in payment of interest on the companies debt on construction, and \$15,000 of the same in the purchase of land).

The capital stock of the Company is \$685,000. Its total indebtedness \$272,086 67. The total cost of the road has been 1,337,862 84, of which sum \$397,872 47 has been defrayed by profits of transportation.

The company are now reconstructing their road, the work of which is to be laid with a heavy rail. This improvement will add some \$220,000 to the present cost of the road. To provide the necessary funds, the company propose to issue bonds to a sufficient amount, for which legislative authority has been obtained. It is expected that with the diminished amount required for extraordinary expenses, and for repairs of track, and with the ordinary increase of business, the amount of nett earnings applicable to interest and dividends will be in excess of those of the past year.

The following statement will show the financial condition of the company's affairs.

POST OF ROAD AND PROPERTY.

From Richmond to Petersburg, including interest per statement A 1..... 909,233 06
Of branch road to port Walthal, including purchase of land, wharves coal tracks, and cars..... 45,539 09

Reconstruction of road..... \$954,772 15
Land purchase..... 89,153 94
Land purchase..... 16,569 17

Debts due to the Company.

This company's stock taken for debt..... \$5,376 06
Open accounts..... 9,296 12
Cash on hand..... \$14,672 18
3,524 12
\$1,078,691 56

CAPITAL STOCK.

Subscribed by individuals, 2,000 shares..... \$300,000 00
Subscribed by the State, old stock, 3,000 shares..... 200,000 00
New do. 1,856 shares..... 185,600 00
\$685,600 00

Debts due by the Company.

Dividend bonds to the state, \$33,408 00
Coupon bonds, due 1st July, 1875..... 175,000 00
Certificates of debt for dividends..... 23,634 14
Amount to credit of individual stockholders..... 531 99
Unclaimed interest on certificates of debt..... 291 40
Bills payable..... 39,221 14
Profit and loss..... \$272,086 67
121,004 89
\$1,078,691 56

The following statement shows the extraordinary expenses, and other additions to the property of the Company, exceeding the Capital Stock actually paid, and loans, which have been defrayed out of the profits of Transportation, from 16th May, 1838, to 1st of May 1854.

Ten new locomotive engines..... \$60,194 86
Ten new passenger cars..... 20,348 09
Freight and baggage cars..... 9,555 00
Coal cars..... 26,572 00
Miscellaneous..... 27,073 38
Reconstruction of road..... 142,743 28
Land purchase in Richmond..... 89,153 94
Dividends to Stockholders, paid..... 43,142 17
Still due..... 24,166 13

Dividends on the State paid..... \$67,308 30
Still due..... 33,408 00
Cost of main road and property..... 33,408 00
Cost of branch road and property..... \$909,233 06
45,539 09
954,772 15

Deduct capital stock actually paid..... \$1,337,863 84
And amount of debts due by the Company..... \$679,873 94
Less available debts due to the company..... 8,946 12
And cash on hand..... 3,524 12
12480 24
259,616 43
939,490 36

Whole amount defrayed out of profits of transportation..... \$397,872 47

Cocheco Railroad.

The stockholders of this company held their annual meeting at Alton Bay, on Wednesday last, and elected William Hale, (President,) William Hill, Stephen S. Stone, Joseph H. Smith, Thomas H. Cushing, George M. Herring, and Andrew Pierce, Jr., for Directors, all of them of the old board except Mr. Pierce, who fills the vacancy occasioned by the resignation of J. H. Wiggins. The attendance was large and the meeting passed off with much unanimity and good feeling. A report of the year's business shows the net earnings to have been nearly 30 per cent. more than the previous year,—sufficient to pay the interest on the entire floating and funded debt of the company and leaving a surplus of about one and a quarter per cent. on the stock, to be disposed of as may be thought proper. The President stated that the receipts for June, 1854, exceeded those of June 1853 by about one thousand dollars; and he expressed the belief that the income for the year ending June 1, 1855, would be sufficient to meet all the expenses, pay the interest on bonds, and pay a dividend on the preferred stock. The report was accepted with much satisfaction.—*Dover Inquirer.*

Montgomery and West Point Railroad.

The receipts of this road for the year ending March 1st, 1854, have been \$230,046 05; of which amount \$133,393 81 were from passengers, \$72,314 80 from freight, and \$24,337 44 for mail service. The current expenditures for the same period have been \$122,950 77. The amount paid for interest on debt has been \$26,547 70, leaving as net earnings \$80,547 58, equal to 9 per cent. on the capital stock of the Company.

The financial condition of the company on the first day of March last was as follows:

Liabilities.

Amount paid in on capital stock... \$892,700 00

Debts due.

To the State of Alabama..... \$116,782 64
On bonds secured by mortgage..... 300,000 00
On bills payable..... 33,615 20
On open account..... 9,227 26
469,625 10

Profit and loss. Earnings of the road for the past year..... 80,547 58
\$1,432,873 68

Assets.

Road account—Cost of 88½ miles..... \$1,113,345 98
12 locomotives..... \$83,350 00
169 cars..... 82,500 00
Machinery in shops..... 17,780 50
Material on hand..... 25,563 61
Team and tool account..... 2,025 00
Real estate, depot..... 31,780 52
242,999 68
66 Negroes..... 36,850 00
4,800 acres of land..... 6,488 48
Steam mills..... 5,000 00
48,388 48

Debts due.

By Post office Department..... 4,056 24
By Bills, notes and accounts..... 8,059 32
Cash in treasury..... 16,074 03
28,189 59

\$1,432,873 68

The earnings of the road from March 1st, 1849, to March 1st, 1853, amounting to the sum of \$268,523 66, have been applied to construction, and an equal amount of stock issued to parties entitled to dividends. Out of the earnings for the past year, a cash dividend of 2 per cent. was paid, and one in stock equal to 7 per cent.

The total amount of outstanding indebtedness on the first day of March, 1853, was \$511,159 73, of which \$61,283 09 was paid during the year. As a portion of the debt, to the amount of \$300,000 will fall due within three years, and as the company will be compelled to make further purchases of iron to relay a portion of their road, they propose to make an issue of bonds to the amount of \$550,000; \$250,000 to be applied in payment of the debt, and \$300,000 in the purchase of rails. This issue would make the funded debt as follows.

Due State of Alabama, May 1st, 1860. \$116,782 64
Bonds issued to the Opelika R. R. ... 150,000 00
Bonds to be issued for rails, &c. 550,000 00

\$816,782 64

The net income for the coming year is estimated at \$200,000, a sum sufficient to pay the interest on the indebtedness of the Company, a dividend of 7 per cent. on the stock, and leave \$55,000 to a sinking fund.

The Opelika Branch, extending to the city of Columbus, so as to connect with the Muscogee Railroad is in progress of construction by the above company. Its length will be about 29 miles, and its estimated cost about \$350,000. The above branch will add much to the value and convenience of the main trunk.

We copy the following from the report in reference to the future connections proposed to be made.

I submit (says the President,) for your consideration a charter obtained at the late session of the legislature, authorizing the building of a continuous line of Railroad across the State; and authority is given by the charter to purchase the Montgomery and West Point Railroad. The connection with Selma and with the Alabama and Mississippi Rivers Railroad, which is now progressing west of Selma, and will probably open for use thirty miles of road to Union Town, in Perry county, by January, 1855, is a matter of great importance to the future prosperity not only of the Montgomery and West Point Railroad, but to the entire line of Atlantic roads. The Southern Railroad of Mississippi is under contract, and will be completed to the State line of Alabama within three years; by which time, we may rely on the completion of a very large portion of the Vicksburg and Shreveport road, leaving a distance of not exceeding fifty miles to provide for west of Selma, to give a continuous line of Railway connection to the borders of Texas. The Board have caused surveys to be made of the route from Montgomery to Selma, both on the east and west sides of the Alabama river; and as early as a successful movement can be made to interest the roads east of Montgomery in building the road from Montgomery to Selma, the Board will convene a special meeting of stockholders to consider upon such plans and propositions as may tend to a speedy completion of it; and they would now express to the stockholders in convention their opinion that the proposed connection is indispensable to the protection of the Montgomery and West Point Railroad, and should be constructed at the earliest practicable moment.

You will recollect that at your annual meeting in 1851, you authorized a subscription to the capital stock of the Alabama and Florida Railroad of \$100,000, whenever such other subscriptions should be obtained as would authorize the commencement of the work. It is hoped that the commencement of this important work will not be delayed beyond this fall. For if only means can be obtained to put in operation sixty miles of it in the direction of the Gulf, it will pay a handsome interest upon the investment, and greatly promote the prosperity of Montgomery, by drawing to it a large trade which now goes to the var-

ious landings on the Alabama river, between Centreport and Montgomery, and greatly increase the travel which passes through it. A road constructed from Montgomery to Fort Dale or Greenville, and extended fifteen miles below, would be on the direct route to Mobile, as well as to Pensacola, and by the use of a line of stages from the end of the Railroad to a point on the Alabama river, somewhere near Gainestown, which is about 100 miles above Mobile a most comfortable connection between Mobile and Montgomery could be made in twenty to twenty-four hours.

Say by Railroad 60 miles long 3 hours.
By stage from end of Railroad to Alabama river, 50 miles 10 hours.
By passenger line of boats to Mobile, 100 miles 8 hours.
21 hours.

With this road of 60 miles, at once put under contract and speedily completed, the completion of the entire line to Pensacola on the one side, and to Mobile Bay on the other, would certainly follow.

Galena and Chicago Railroad.

SEVENTH ANNUAL REPORT.

Gentlemen—With this, our Seventh Annual Report, we submit the reports of John Van Nortwick, Chief Engineer, and Wm. M. Larrabee, Secretary, of this company, together with tabular statements showing the business of the operating department. To these statements you are referred for detailed information in the several departments.

The main line of your road to Freeport, 121 miles, was all in operation on the first day of September last. The Beloit Branch was opened for business on the 14th of November; 45 miles of the Dixon and Iowa Central Route was laid in January last, but was not in a condition to be fully opened for business until about the 1st of May.

The receipts of the road the past year, including the surplus of \$93,433 75 on hand May 1st, 1853, were.....\$899,042 88

The expense of operating the road for the same time was.....\$359,199 04

The amount of dividends declared 1st August and 1st Feb'y was 353,154 68

Interest account, &c... 10,994 76

723,848 48

Leaving balance 1st May, of. \$175,694 40

The General Assembly, on the application of the Directors, have amended the charter of the company, so as to authorize the company to increase its capital stock to a sum not exceeding five millions of dollars, and to extend the Dixon and Central Iowa Route to Dixon, and, if they should deem it expedient, to the Mississippi River; or, to unite or consolidate with any other road on that route. Under this provision the company are now constructing and will extend their road to Dixon, 23 miles, and they have made a lease and agreement with the Mississippi and Rock River Junction Railroad Company by which a continuous and complete line of railroad will be made and operated, under the control and management of this company, from Chicago to the Mississippi River at Fulton, a distance of 135 miles. By the terms of this lease that company are to prepare the roadway for the superstructure and this company are to complete, stock, operate and manage it in perpetuity, paying that company seven per cent. per annum, semi-annually, on the expenditures made by them. The work and expenditures to be done by said company are placed under the supervision of John Van Nortwick, Esq., as President and Engineer of that company.

That portion of the Illinois Central Railroad which forms the continuation of your main line from Freeport to Galena and Dubuque is completed to Warren, 25 miles beyond Freeport, and is now operated by this Company.

It is expected that the remainder of that road will be completed during the ensuing autumn, when this company will derive the full benefit of a through line to the Mississippi river in the direction of Northern Iowa and Minnesota.

A permanent contract has been made for business connections by this and the Illinois Central Railroad Company with the Mineral Point Railroad Company. This road connects with the Illinois Central road 24 miles West of Freeport and extends to Mineral Point, a distance of 32 miles.—It is in a good state of progress.

A contract of like character has been made between this company and the Beloit and Madison Railroad Company, extending from Beloit to Madison. Twenty miles of this road will soon be laid and opened for business, leaving 28 miles to be done to complete the road to Madison.

A similar contract has also been made with the Fox River Valley Railroad Company which connects with this road at Elgin and extends to the State line, a distance of about 33 miles. This road will be opened for business the present fall. At the State line this road connects with the Central Wisconsin road, leading Northwesterly through that State, a portion of which is also in progress.

The favorable routes and location of your road and branches, (as may be seen by reference to the accompanying map); the business connections with roads before referred to, together with the arrangements previously made with the Chicago and Aurora Railroad Company, with its connections with the Illinois Central Railroad extending South, and the Central Military Tract and Northern cross Railroads, extending to Burlington and Quincy to the Southwest, will fully justify the directors in saying that your road is now in a position where it can be but little affected by the construction of any competing lines of road, and that the stockholders can rely upon good and satisfactory returns for their investments.

By order of the Board of Directors.

JOHN B. TURNER, President.

Chicago, June 7, 1854.

The Report of the Chief Engineer states that the pressure of business will require the construction of an additional track from Chicago to Cottage Hill the present season, a distance of 16 miles. The amount necessary for the completion of the straight line to Dixon, 70 miles from its intersection with the main track, and 28 miles from Chicago, is estimated at \$525,000. The cost of extending this branch from Dixon to the Mississippi River, a distance of 37 miles, or 135 from Chicago, is estimated at \$600,000. It is believed that the "straight line" will be completed during the present year.

Additional buildings are required at Chicago, to provide which it is estimated that \$250,000 will be required the present year.

The equipment of the road now consists of 80 locomotive engines, 84 passenger and baggage cars, 307 house freight, 96 platform freight cars and 132 gravel and hand cars; 9 locomotive engines and about 125 passenger and freight cars will be added to the above by September next. The additional expenditures for equipment the present season will be at least \$200,000.

Statement of the Affairs of the Galena and Chicago Union Railroad Company, to May 1st, 1854.

Construction, main line	\$2,030,494 31
Construction, Beloit Branch	379,767 89
Construction, Dixon and Iowa Central Route	797,533 16
Depot grounds and buildings.....	839,307 11
Equipment.....	596,553 67
	\$4,143,656 24

Cottage Hill and Elgin line, preliminary surveys.....	268 13
Materials, strap iron, timber, &c., on hand.....	31,342 88
Shops, tools, machinery and materials on hand.....	68,752 66
Wood, and wood-land on hand....	76,981 70
Townsend & Mather's purchase, including taxes.....	20,167 17
Real estate, miscellaneous land...	554 21
Stock owned by the company, for shares relinquished and forfeited	1,972 00
Debts due and obligations belonging to the Company.....	181,307 20
Cash in the hands of the Treasurer	41,337 99
	\$4,516,290 18

Capital stock, paid in.....	\$2,682,167 41
Bonds, 10 per cent., convertible, outstanding.....	26,000 00
Mortgage Bonds, 7 per cent., not convertible, sold.....	1,356,000 00
Bills payable and other liabilities.	215,256 62
Subscriptions to preliminary survey, convertible certificates issued, now outstanding.....	56 18
Income account, surplus earnings..	175,694 40
Stock, profit and loss, for forfeited stock.....	110 00
Dividends, unclaimed.....	8,249 48
Dividend certificates, outstanding..	8,658 28
New stock certificates of 1853, unconverted.....	44,097 81
	\$4,516,290 18

The net earnings for the several years during which the road has been opened have been as follows:

	Net earnings.	Miles open.	Net earnings per mile.
1851.....	\$78,781	42	\$1,875
1852.....	123,948	62	1,999
1853.....	286,151	90	3,179
1854.....	439,814	150	3,383

The total number of passengers carried the past year were 238,296. Total receipts from do., \$339,996 39. Total receipts from freight \$447,667 52. Mails and incidental receipts \$11,349 97. The total number of tons carried in the cars were 183,206, of which 86,579 went east and 96,627 west. The amount of lumber carried into the interior amounted to 33,842,153 feet. The very nearly equal amount of business in either direction, is one of the causes of the extraordinary success of the above road which has been unequalled, we believe, by any similar work in this country.

Chattanooga and Cleveland Railroad.

The Chattanooga Advertiser states that the recent surveys show the line of their road to be 29 miles long. The nature of the country is such that an air-line cannot be constructed, except at an immense outlay; but by repeated trials, a very direct and practical route has been attained, which, in a general sense may be termed an air-line. The country between Chattanooga and Cleveland is made up of numerous ridges and valleys, at right angles, with the bearing of this road, and hence slight deviations were necessary to reach certain gaps, through which only the line could be constructed. The first route taken involved two tunnels, the one through Missionary Ridge of 2,500 feet, and a second some distance from this, of 500 feet, with grades of 80 feet to the mile. This route was thrown aside and another more eastward, running through a gap on the land of B. F. Scott, Esq., in Missionary Ridge, which is passed by a tunnel of only 1,000 feet, and a grade of 50 feet to the mile. It then passes over House's

Camp Ground Ridge, which is the highest land between the two termini—Cleveland being only a few feet higher than Chattanooga. Beyond, a line is taken east of the first line, which is some longer, say 2,000 feet, but a tunnel is cleared and the curves and grades are much better, so as to make this route preferred.

Leaving Chattanooga, the C. & C. R. R. will cross above the Western and Atlantic Railroad at some 20 feet, so that no collision can occur.—This point is 9 miles from this city by the Western & Atlantic Railroad, but only seven miles by the Chattanooga and Cleveland Railroad, near which both roads cross Chickamauga Creek by a bridge. This bridge is the first on the C. & C. R. R. and the third on the W. & A. R. R., so that in running from the same city to this junction two miles of road and two heavy bridges are cleared in favor of the C. & C. R. R. route.

Between Chattanooga and Cleveland there will be only three bridges which is very favorable, for the country is full of streams, but the line selected avoids bridging the most of them.

The first locating of the road is now in progress, and before many weeks pass, it will be under contract, by Robert Gray Esq., of Opelika, Ga., proposes to construct the road on terms advantageous to the company, and his offer will probably be accepted. We understand that other responsible contractors have given in bids, for the entire road, so that there need be no delay in its construction.

Louisville and Frankfort Railroad.

The late annual report of this Company shows a total of gross earnings from June 1853 to June 1854 of \$267,070.03. These receipts show an excess of 301 per cent, on last year, and those of last year showed an excess on the preceeding year of 21½ per cent. The expenses during the last year have been \$153,918.92—leaving the net earnings \$113,151.11. The expenses are thus 67½ per cent, of the receipts. A dividend of 6 per cent, payable in stock, has been declared; the earnings of the road, which would otherwise have been appropriated to the payment of a cash dividend, having been applied to the construction of switches, new water stations, and for the purchase of real estate equal in amount to that sum.

The construction of the Newport branch, as also the construction of the Knoxville branch, have been abandoned for the present, owing to the money crisis.

The company endorsed bonds to the amount of \$100,000 of the Maysville and Lexington Railroad Company, but in consequence of increasing embarrassments they could not be sold. The President of the Maysville road had, however, pledged 57 of these bonds and 43 bonds of the city of Maysville for \$54,000 to New York bankers. To obtain \$100,000 bonds of the Louisville and Frankfort Railroad Company the President gave the New York bankers a bonus of 18,000.

The report of the Superintendent, Mr. Gamble, shows that many improvements have been made to the road during the past year. The company has 13 locomotives, 10 passenger and 123 freight and other cars. The Superintendent adds that the road is in better condition than it ever has been before.

Only one serious accident has occurred, which caused the death of a brakeman who carelessly attempted to get on a train while in motion.

Ontario, Simcoe and Huron Railroad.

The earnings of the Ontario Simcoe and Huron Railroad for June, 1854, were \$14,553, against \$5,791 in June, 1853.

For Sale.

A STATIONARY Engine, having cylinders 13 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New York.
jul.14 29 tf.]

To Railroad and Canal Co.'s Contractors, &c.

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics &c., of any description, and also inform them that they forward and deliver such men at whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELING & CO.
No. 86 Greenwich Street, New York.

26.4t

Lawrence Scientific School, HARVARD UNIVERSITY.

THE next term of this Institution will open on the thirty-first day of August, 1854, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical exercises, according to the nature of the Study, will be given in:

Astronomy.....	by Messrs. Bond.
Botany.....	" Prof. Gray.
Chemistry, Analytical	
and Practical.....	" Horsford.
Comparative Anatomy	
and Physiology.....	" Wyman.
Engineering.....	" Eastis.
Mathematics.....	" Pierce.
Mineralogy.....	" Cooke.
Physics.....	" Lovering.
Zoology and Geology..	" Agassiz.

For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

CAMBRIDGE, Mass., July, 1854.

{30 4t

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purpose, which will be sold at a reasonable price. For further information, apply to.

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York,

19 tr

Railroad Iron at Auction.

THURSDAY August 3d at twelve o'clock, at the sales room 54 William street
1263 tons English Rails, New York and Erie pattern, about fifty six pounds linear yard, of approved quality, make and pattern.

These Rails are in the United States Bonded warehouse at Brooklyn, and, convenient for shipments Sample Bars can be seen at Auction Room.
July 29. It

Lowmoor Iron.

W. BAILEY LANG & CO., 64 CLIFF STREET have in stock and offer for sale an assortment of Round, Flat and Square Bars LOWMOOR IRON, which they will sell by the ton or single bar. The attention of manufacturers, Railway Managers and Mechanics is particularly directed to the quality of this Iron, as its great strength, uniformity, and freedom from flaws, render it the best Iron in the market, where first quality is required.

W. BAILEY LANG & CO., being Sole Agents in the United States and Canada for the LOWMOOR CO., will execute orders at manufacturer's prices.

'6t.31

Power Planers.

THOSE in want of a small Power Planer which will plane 3 feet in length, 14 in. wide, and 12 in. deep, and made in a superior manner, will please call at the office of the MERIDEN MACHINE CO. 15 Gold-st. corner of Platt, New York City.

Any communication by mail directed to the office or Factory (West Meriden, Ct.,) will meet with prompt attention.

Universal Scroll Chucks.

THOSE in want of a superior article and of various sizes will please call at or address the MERIDEN MACHINE CO. 15 Gold-st. corner of Platt, New York City.
31.2t

Henck's Field Book for Engineers.

SECOND EDITION.

D. APPLETON & CO. 346 and 348 Broadway.
JUST PUBLISHED.

FIELD BOOK FOR RAILROAD ENGINEERS
Containing Formulae for laying out Curves, Determining Frog Angles, Levelling, Calculating Earth Work, &c., &c., together with Tables of Radii, Ordinates, Deflections, Long Chords, Magnetic Variation, Logarithms, Logarithm and Natural Lines, Tangents, &c., &c. By John B. Henck, A. M., Civil Engineer. One vol., pocket book form. Price \$1.75.

The first edition of 1000 copies of this Work was sold off in four weeks, a sale almost unprecedented in works of this class. The Publishers have received letters from the following eminent Professors and practical Engineers, who commend it as the best practical elementary work on the subject of American Railroad Engineering;

Professor D. H. Mahan, West Point.

Professor M. M. Gillespie, Union College.

Professor H. E. Eustis, Lawrence Scientific School.

Professor B. F. Greene, Rensselaer Polytechnic School.

Professor J. T. Benedict, New York Free Academy.

W. J. McAlpine, State Engineer.

E. S. Chesbrough, City Engineer, Boston.

S. M. Felton, Philadelphia.

G. W. Whistler, New Haven Railroad.

Wm. E. Worthen, New Haven Railroad.

CRITICISMS OF THE PRESS

"This treatise presents one of those rare instances in which thoroughly scientific theory is applied, in an eminently practical and common sense way; the tables alone, if republished in a separate form, would be a valuable treatise to civil engineers in every department, and for architects, mechanics, and also to all persons engaged in practical calculations. The whole treatise reminds us of 'Bowditch's Navigator,' and seems to us destined to hold the same rank with railroad engineers that the 'Navigator' holds with shipmasters. It must become the indispensable *Vade Mecum* of every assistant engineer. It will be of great service to the intellectual character of the profession as well as a great means of diminishing their labors."
—*Railroad Journal*.

"This book will be warmly welcomed by assistant railway engineers. It contains thorough treatises on curves, levelling earthwork, &c. &c. The tables have evidently been prepared with great care. The book, in fact, contains almost every thing that can be required by assistant engineers, either in the field or office. The author evidently knows what they require, and in what form it should be given."
—*American Railway Times*.

"An invaluable book to a civil engineer, particularly if engaged in laying out railroads."
—*Boston Transcript*.

"Much of the work is the result of original investigation, and has the zeal and commendation of a working man."
—*Rochester Advertiser*.

29.3t

New York and Erie R. R.

PASSENGER TRAINS

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, without change of baggage or cars.

Dunkirk Express, at 7 a. m. for Dunkirk.

MAIL, at 8 1/4 a. m. for Dunkirk and Buffalo, and intermediate stations.

WAY EXPRESS, at 12 1/4 p. m. for Dunkirk.

Rockland Passengers, at 3.30 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

Emigrant at 6 p. m.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Supt.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF OSWEGO CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Fulton, until the eighth day of August next at 10 o'clock in the forenoon for the following described work:—

Section No. 1, with penalty in bond of \$10,000.	
No. 2, " " " " " "	10,000.
Part do. 81 and 82, " " " " " "	12,000.
Section 83, " " " " " "	9,000.
Part do. 87 and 88, " " " " " "	6,000.
Oswego Dam, " " " " " "	5,000.

The Oswego Dam to be completed by the first day of December, 1855, and the remainder to be completed by the first day of April 1856.

ENLARGEMENT OF CAYUGA AND SENECA CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Seneca Falls until the 10th day of August next, at 10 o'clock A. M., for the following described work:—

Section No. 1, with penalty in bond of \$5,500.	
" 2, " " " " " "	5,000.
" 3, " " " " " "	4,500.
" 4, " " " " " "	5,000.
" 5, " " " " " "	4,500.
Lock, " 10, " " " " " "	4,000.
" 11, " " " " " "	4,500.

Towing Path Bridges on Sections 1 and 8, with bond of \$1000.

The Locks and Towing Path Bridges to be completed by April 1st, 1855, and the remainder of said work by April 1st, 1856.

ENLARGEMENT OF ERIE CANAL—WESTERN DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Rochester, until the twelfth day of August next, at 10 o'clock, A. M. for the following described work:—

Abutments of Genesee street Bridge, Buffalo, with penalty in bond of.....	\$1,200.
Iron superstructure of do., with penalty in bond of.....	1,500.
Completion of Culvert and Waste Weir Section 306, with penalty in bond of....	500.
Culverts on Sections 211 and 212 do. do.	1,600.
Culverts on Sections 215 and 216 do. do.	1,800.
Culverts on Sections 218, 228 and 229 do. do.	1,500.
Bridge Abutments on Sections 212, 213 and 214 do.	3,600.
Bridge Abutments on Sections 215, 216 and 217 do.	3,000.
Bridge Abutments on Sections 218 and 219 do.	5,700.
Bridge Abutments on Sections 228, 229 and 231 do.	3,700.
Waste Weirs on Sections 215 and 218 do.	800.

The Culvert on Section 306 and Abutments of Genesee street Bridge to be completed by April 1st, 1855. The superstructure of Genesee street Bridge by June 1st, 1855, and the remainder of the above work by March 15th, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any

other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, July 9, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT, } Canal Comm'rs.
CORNELIUS GARDINER, }
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to
EDW. BECH & KUNHARDT, 52 Beaver St.,
Or, A. TOWAR, Agent Pokeepsie Iron Works, Pokeepsie, N. Y.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 32.]

SATURDAY, AUGUST 12, 1854.

[WHOLE No. 956, VOL. XXVII.]

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

Chicago and St. Louis R. R.	497
Mobile and Girard R. R.	487
Grand Trunk of Canada.	499
Atlantic and St. Lawrence Railroad.	500
St. Louis, Memphis and New Orleans R. R.	501
Journal of Railroad Law.	503
Stock and Money Market.	504
Improvement of the Locomotive.	506
Car Ventilation.	506
Reciprocity with the British Provinces.	507
Mississippi Central Railroad.	507
Charleston and Savannah Railroad.	509
Cleveland and Mahoning R. R.	509
Equation of Grades.	509
Winchester and Alabama R. R.	510
Rochester Scale Works.	510
Columbia and Hamburg.	510
Summary of Congressional Legislature.	510
Railway Traffic Returns.	511
Railroads in New Brunswick.	511
Wabash Valley R. R.	511

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, August 12, 1854.

Chicago and St. Louis Railroad.

The opening of the Chicago and St. Louis Railroad for business, which took place last week, is more than an ordinary event in the progress of our railroads; ranking in importance with the opening of the first lines of road from the seaboard to the great Lakes and the Ohio; and from these, to the great interior towns of Indianapolis, Chicago and Cincinnati. Chicago and St. Louis are first class cities in the great valley, and are so far distant from each other, that the staples that form the basis of the commerce of each are mainly different in kind, and in the exchange of which commerce consists. St. Louis may be regarded as the depot for all the products, used north of the country south of the parallel of that city, as the great majority of such must pass through it to the points of consumption. Chicago occupies a similar relation to the country to the North and West of that city. The natural routes of commerce are upon the lines of longitude, as with every parallel

of latitude, products differ. The North supplies the South the cereals, provisions of various kinds and manufactured goods, which are exchanged for sugar, rice, and cotton, of the former: the wants of each individual requiring his portion of the whole circle of products.

Between such extremes is the above road the connecting link, and the shortest possible one. It also traverses a portion of Illinois second to none in that great State, for its fertility and extent of productions. The road for about one-half of its length passes through what is already one of the best settled, and best cultivated portions of the State, and through Springfield, the seat of government and the largest interior town. The country upon the northern part of its line is yet only sparsely peopled, but is equally rich with the southern in natural capabilities. The country for the whole length of the road will yield to it a liberal support, a business which can never be carried away by other roads, as the Chicago and St. Louis occupies the shortest practicable route, a fact which to a considerable extent must render every connecting road tributary to the former.

The entire distance between Chicago and St. Louis is about 280 miles. From St. Louis to Alton, a distance of about 20 miles, the present route is by the river. From Alton to Joliet, the point of junction with the Rock Island road, the distance is about 220 miles, and which constitutes the completed line of the Chicago and Mississippi Road. For the present, the Rock Island Road from Joliet to Chicago, a distance of about 40 miles, will be used. The saving effected over the route previously followed by LaSalle, is about 30 miles. As soon as the road can be placed in good working order, the time between the two cities will be reduced to 12 hours. A saving of another hour will be effected by the completion of the Alton and Illinois town railroad, now in progress.

In our view, the above line of road is one of the best in the West. It affords the convenient outlet in either direction for the country it traverses, which is one of the best in the West. Its directness must protect it from all competition for the business to which it may properly lay claim. As a through route it must always form an important avenue for the exchange of products of widely se-

parated portions of the country. With certain articles, such as sugar, rice and cotton, Chicago will always be supplied through the medium of the Mississippi River. Through the same channel will she also receive numerous other items of merchandize, such as iron, salt and manufactured goods. St. Louis is the convenient point at which the business designed for Chicago will leave the River, and the above road, the one which it will take to that city. The converse of the proposition is equally true of Chicago, and the produce and merchandize collected in that city for southern markets.

Chicago is the great city of the North west, and is to the territory north and west of it, what New York is to the whole country. It must always be the point of distribution of merchandize of a very large section of the Union. As extravagant as the estimate may appear, we believe the population of that city must reach 150,000 by 1860. The right arm which connects such a city, the commercial metropolis of the Lakes, with that portion of the country from which it must always receive some of the leading articles which constitute its commerce, cannot fail to be a first class road as measured both by its business and receipts.

Mobile and Girard Railroad.

Below we give the recent report of this company which presents its plans, the progress made up to the present time, and the means for the further progress of their road.

The above road is of first importance both to the region traversed, and to the railway system of the country. Connecting with navigable waters only at either end, it must command all the business of the country upon its line, a part of which runs through one of the best portions of Alabama. The city of Columbus, at its eastern terminus is connected with the railway system of Georgia, and through this with that of the Northern and Eastern States. The completion of the above road will carry this system to Mobile, whence a railroad is in progress to New Orleans, the commercial metropolis of the Gulf.

The Chief Engineer G. S. Runey, Esq., estimates the total cost of the road, moderately equipped for business, at \$4,232,780, or about \$22,000 to the

mile. The estimate for graduation is about \$8,000 per mile showing a favorable line. The cost of superstructure is estimated at about \$6,000 per mile. Timber of the best kind for ties and structures is abundant. The greater part of the line is very healthy.

From the route occupied by the above road we have no doubt it will prove a profitable work. We see no reason to doubt that its receipts would equal those of the Georgia roads, which are among the most productive in the country. It would be without a rival for the business at which it aims, which is certainly sufficient in our opinion to yield a lucrative income.

REPORT OF THE DIRECTORS.

At your last annual meeting a resolution was adopted, requesting the Directors to apply to the Legislature for an amendment of your charter, providing that the annual meeting of the stockholders should be held on the first Monday in July, instead of in March, of each year. The amendment was applied for and made, and you are now assembled agreeably to that amendment. Another amendment to the charter was, at the same time, passed by the Legislature, changing the corporate name of the Company to that of the Mobile and Girard Railroad Company. These, and other amendments made by the last Legislature will be submitted to you, and it is suggested that you adopt a resolution accepting the same.

During the last year the city of Mobile passed an ordinance making a subscription of one million dollars to the capital stock of our Company, upon certain conditions specified in said ordinance. This ordinance was subsequently submitted to the people of Mobile for approval or rejection, and was confirmed by a very large majority of the popular vote. As the subscription thus made was to be paid in the bonds of the city, the interest and principal to be met by taxing the citizens, it was necessary that it should be sanctioned by an act of the State Legislature; such an act was passed, and the subscription now stands confirmed. The ordinance making the subscription, with the act of the Legislature referred to, accompanies this report. The Board of Directors, at a regular meeting in July last, adopted a resolution accepting the subscription upon the terms proposed, and, subsequently, three gentlemen, residing in Mobile and indicated by the City Authorities, were elected Directors in the place of Messrs. Abercrombie, Gachett and Dawson, who resigned for that purpose. Although the Board have accepted this subscription by formal resolution, and have acted upon it, yet it is deemed necessary and proper that the same be submitted to the approval of the stockholders. Your attention is therefore called to this subject, and you are respectfully requested to pass a resolution accepting the subscription agreeably to its terms.

Prior to the making of this subscription, it was the determination of the Company to make the western terminus of the road on the Tensaw river. The acceptance of the subscription devolves upon the Company the obligation of crossing the Tensaw and Mobile rivers, and extending the road to the city of Mobile.

In addition to the subscription of one million dollars by the corporate authority of Mobile, about fifty thousand dollars have been subscribed by individuals in that city, since your last meeting and some ten or fifteen thousand dollars on the line between Columbus and Mobile. The Report of the Treasurer will exhibit the aggregate amount of cash and other subscriptions, as now exhibited by the books of the Company. A particular reference to the character and availability of these subscriptions will be hereafter made in this report.

In the year 1851 the city of Columbus subscribed one hundred and fifty thousand dollars to the stock of the Company, payable in her seven

per cent. bonds. This subscription was made with the express provision that it should be applied to the purchase of iron. At that time railroad iron could be imported into the United States at about forty to forty-five dollars per ton, and the subscription in question was intended and believed to be sufficient to purchase all the iron necessary to cover the road to Chunnuggee, a distance of 44 miles. In consequence of the delay of the City Authorities in issuing the bonds, and placing them in the hands of the Board of Directors, it was late in the fall of last year before any contract could be made for iron. In the mean time the article had risen largely in price, and what has been purchased cost the Company about \$65 per ton, delivered in Savannah. The Directors negotiated the city of Columbus bonds in payment for the iron, at ninety cents upon the dollar, which was the very best terms that could be obtained, and under the circumstances may be considered favorable. The one hundred and fifty thousand dollars thus subscribed by Columbus, instead of buying iron for 44 miles of the road, as contemplated, has only procured enough for twenty-two and a half miles.

A contract has been made with the Railroad Companies between this place and Savannah, to transport our rails at a very reasonable price, payable in the stock of our Company. A considerable portion has already been forwarded and has been transported across the river to our road.

The grading of the twenty-two and a half miles, to the Depot at Colbert, is nearly completed; the superstructure is ready, and a contract has been made with a responsible and energetic company, to put down the superstructure and the iron, and to have the twenty-two and a half miles finished by the 10th of October. If no untoward accident should occur to mar our prospects, we shall have that portion of our road open to trade and travel by the commencement of the cotton season. It is hoped and believed that the opening of the road, even for this short distance, will instil hope, infuse confidence, excite the energy and stimulate the exertions of the people from one end of the line to the other, and induce them to come forward promptly and liberally to the aid of an enterprise by which their convenience, comfort and interests are to be so largely promoted.

A portion of the line between Colbert and Union Springs is now being graded. The remaining sections are ready to be let, and the Board has authorized the Engineer to put them under contract.

From the best estimate that can be made of the probable cost of the road between Girard and Union Springs, it will require about one hundred thousand dollars in cash to complete the grading and superstructure. It is the intention of the Board, at an early day, to make an effort to obtain additional subscriptions. It is confidently believed that the necessary sum can be raised, and in anticipation of success, the grading, as before stated, will be let out to contractors during the ensuing fall. As to the iron, for the thirty miles between the above points, the Board rely upon an additional subscription from the city of Columbus of one hundred and fifty thousand dollars. The City Council, last year, passed an ordinance in legal form, authorizing such a subscription; no action, however, has been had upon the subject since, and as the last Legislature of Georgia passed a law, making it necessary that all subscriptions of that city, over ten thousand dollars, should be submitted to a popular vote, it will be necessary to obtain the approval of the subscription by the voters of Columbus, before it can be made available to our Company. The Directors do not entertain any doubt but that the intelligent and public spirited citizens of Columbus will at a proper time, confirm this subscription. If that subscription shall be made, and we are not disappointed in obtaining the proposed amount of cash subscriptions, we may safely calculate upon running our trains to Union Springs, 62 miles, by the fall of 1855.

The completion of our Road to Union Springs,

would, in our opinion, double the quantity of cotton received at Columbus, all or nearly all, of which would pass over the Muscogee, South Western and Central Railroads to Savannah. The very large increase which our road will bring to the business of these roads, and to the city of Savannah, gives us a strong claim for liberal subscriptions from these quarters. Application will be made in due time, and we rely with confidence upon success.

The subscription made by the city of Mobile is, by its terms, applicable only to that part of the Road between Mobile and Greenville. A large amount of the individual subscriptions on the line below Union Springs, are in like manner applicable to particular portions of the Road west of that point. The subscriptions in grading, between Union Springs and Mobile, amount nominally to one hundred and two miles, of which it is probable about one-third will not be available. There are also subscribed between the same points, fifty-two miles of cross ties, of which one-third will probably be lost. After a late trip, made by the President and one of the Directors with the Chief Engineer, up and down the whole line, and a careful enquiry into the condition of things, the conclusion is arrived at, that we may safely calculate upon having sixty-eight miles graded, and thirty-six miles of cross ties finished, for stock; leaving about one hundred and eight of grading, and one hundred and forty miles of cross ties, to be provided for by the Company in some other way, together with the bridging, culverts and track laying for the whole distance. It is believed that the grading, bridging and superstructure of the whole road, from Union Springs to Mobile, can be let to responsible contractors, at reasonable prices, payable one-third in cash, one-thirds in the bonds of the Company, and one-third in our stock. If such contracts can be made, there will be required about one hundred and seventy-five dollars in what are deemed good cash subscriptions, applicable to that portion of the road, leaving two hundred thousand dollars to be supplied. Every effort will be made to obtain this sum from the citizens of Mobile and the Counties adjacent to and through which the Road runs, and strong hopes are entertained that a sufficient amount will be obtained.

The final location of the Road below Greenville having been completed, it is the intention of the Board, as soon as the profiles and estimates are made out, to let to contract that part of the line from Burnt Corn creek to Mobile, about eighty miles, during the coming fall, so as to have the work commenced by the first of January next, and finished during the next year. They hope, also, to have a portion, if not the whole, of the sections between Burnt Corn creek and Greenville, and between Greenville and Union Springs, in the process of grading during the next year. The Board feel confident that if an additional sum of three hundred thousand dollars cash subscriptions can be obtained, payable within the next three years, in annual installments, the whole road, from Girard to Mobile, may be completed and put into operation by the first of January 1858.

In addition to the amount required for grading, bridging, &c., as above stated, it will require about one million and a half dollars for iron, equipment, and other necessary expenditures. For this purpose, we shall have one million dollars Mobile six per cent. bonds and one hundred and fifty thousand dollars of bonds of the city of Columbus, leaving a deficiency of three hundred and fifty thousand dollars to be supplied. If the bonds of these cities can be negotiated for iron, without a great discount, it will be the policy of the Board to use them in that way. It is very doubtful, however, whether bonds bearing so low a rate of interest would command a fair price; and it will probably be better policy to issue the bonds of the company bearing eight per cent. for the requisite amount, hypothecating the city bonds, as collateral security in part, and giving other security for the remainder. The eight per cent. bonds of the Company, secured by such a hypothecation and by a mortgage upon the Road, would probably command a par for iron and equipment. It will be

necessary also, to issue the bonds of the Company to an amount sufficient to cover one-third of the cost of construction, as heretofore suggested, which will not fall short of three hundred thousand dollars, and may be larger. In order to carry out this policy and meet any contingencies that may arise, it is respectfully suggested that you pass an order authorizing the Board to issue bonds to the extent of two millions, to be applied to the purposes indicated. The bonds issued for grading, &c., to be payable in not less than five, nor longer than ten years. Those issued for the purpose of iron &c., to have a time to run corresponding with the city bonds pledged for their security.

No doubt is entertained by the Board, that the earnings of the Road, as it shall progress to completion, will not only pay all the interest accruing on bonds issued, and which the Company shall be called upon to pay, but aid materially in the construction of the work, and finally be ample to meet the principal sums as they fall due. By the rule adopted by the Board in the establishment of depot stations, a considerable subscription to the stock of the Company may be anticipated as the Road progresses, to be applied to construction or payment of interest.

The estimate of the probable earnings of the Road is believed, by the Board, not to be extravagant. For one hundred and fifty mile west of Girard, the Road runs through one of the most beautiful, healthy, and productive countries in the Southern States, capable, when taxed to a reasonable capacity, of trebling its present agricultural products, and greatly enlarging its present population. From the almost impassable nature of the wagon roads heretofore used in transporting cotton and other articles to Montgomery, and other points on the Alabama river, during the winter season this whole country has been comparatively locked out from market. The construction of the Mobile and Girard Railroad, affording the planters a speedy, safe and cheap conveyance of their products to the most favorable markets, will invite settlers from other quarters, fill up the country with a thriving and healthy population, and greatly enlarge the wealth and resources of the people. The country near Mobile, through which the road passes, although what is usually termed a pine barren, yet is not unproductive in an agricultural point of view, while it is covered with a dense growth of pitch pine, capable of furnishing large quantities of lumber, and scarcely less important and desirable than the richer lands upon the eastern line of the Road.

The Mobile and Girard Railroad, in connection with the Mobile and New Orleans, (certainly to be built at an early day,) and the Roads east of Girard, now built and to be built to the northern cities, affords the quickest and cheapest avenue for the vast horde of travellers which must pass between the Atlantic States and cities, and the Gulf States and ports leading to the Pacific coast. Our Road, when completed, must form an important link in the great mail line from the northern cities to New Orleans and the South-west.—Through travel generally accompanies the United States mail, and we venture little in expressing the opinion, that in a few years our road will be one of the most important thoroughfares, both of through and way travel, in the Southern States.

To build a road of such length and importance, promising such liberal returns for our labor and money, and conferring such important benefits upon the public, encourages us to renewed efforts and unwearied exertions to complete the magnificent enterprise which we have undertaken.

All which is respectfully submitted.

ALFRED IVERSON, President.

Gallipolis, Jackson and Chillicothe Railroad.

At the election for Directors of the Gallipolis, Jackson and Chillicothe Railroad Company, the old Board was elected to-wit: Wm. H. Langley, Charles Henking, Simeon Nash, John Hutsiniller, Robert Black, Isaac B. Calohan and John N. Kerr.

The Grand Trunk Railway Co. of Canada.

FIRST ANNUAL REPORT OF THE DIRECTORS.

The period for holding the first meeting of the Shareholders of the Company having arrived, the Directors desire to place before them a full report of the progress of the undertaking since its formation.

The amalgamation of the several Companies now comprised under the title of the Grand Trunk Railway Company of Canada, was completed in July of last year; immediately afterwards the necessary steps were taken for issuing the shares and debentures to the holders of the Provincial certificates of the A series of Grand Trunk Shares, and by the conversion into Grand Trunk Shares of the paid up in full Shares of the St. Lawrence and Atlantic, the Quebec and Richmond, and the Toronto and Guelph Companies.

It may not be inopportune to state here that the system adopted and carried out, with reference to the preparation and issue of these documents, as well as to their registration and transfer, and to the payment of interest and dividends on them, is of the most complete and satisfactory character.

Immediately after the amalgamation, the necessary organization of the Company in the traffic department, under the control of Mr. S. P. Bidder, its General Manager, was effected. His report is attached hereto. The system of Audit of all receipts from traffic was also brought into operation on the principle of the London Clearing House—the experience of several years, acquired in English railways, demonstrating this as a complete and effective check on all payments on account of traffic. Its working on the section of railway between Portland and Montreal has shown the advantage of its adoption in this country. Arrangements have been made for its extension as the several sections of the Grand Trunk Railway are completed from time to time.

The St. Lawrence and Atlantic and Atlantic and St. Lawrence Railways, forming the line from Portland to Montreal, are 292 miles in length.—They were delivered to the Company in July, 1853, in a state unfit for working, and the locomotive and carriage stock was equally deficient.

Engagements, however, had been entered into which rendered it necessary to keep the line open so as to get through one train a day during the winter.

Notwithstanding the adverse circumstances under which the line was worked, the traffic has gradually increased from £1644 8s 9d Stg., which it was on the week ending the 7th January last, to £3,627 1s 9d for the last week of the half year ending 30th ultimo. The total receipts for the half year were £73,112 8s 2d Stg. To earn that sum an expenditure of £58,122 14s 0d was incurred.

This large amount for working expenses will naturally attract attention, but it has to be remembered that the railway was kept partially open to fulfil the engagements already referred to, as well as the solicitation of flour and lumber merchants, who had made contracts in the belief and understanding that the railway from Montreal to Portland would be in effective working order during the winter. It must also be borne in mind that the last winter was the severest known in Canada East for several years, and that, in addition to the short supply of engines and other rolling stock, there were neither work shops nor tools for the necessary repairs. The half year just expired, therefore, forms no criterion for the future as regards working expenses.

The line is now in good working order. The ballasting throughout its entire extent is nearly completed. The number of engines has been augmented to 64, and more than the ordinary proportion of them is in complete and effective working order. The necessary workshops and tools have been provided, and every arrangement has been made, or is in progress, for rendering the line capable of conveying as large an amount of traffic as can be carried on a single line of railway, at or about the ordinary rates of working expen-

ses. Since the 1st instant, "Through" trains accomplish the distance each way between Montreal and Portland in 11½ hours, and the number of passengers carried by them would have been greatly in excess of their present amount, had not the unfortunate prevalence of cholera checked the immense travel from the United States that usually flows into Canada at this season of the year. The ordinary trade of Montreal has likewise been diminished to a considerable extent in consequence of the prevalence of this disease.

Although the sea service of the Canadian Steam-Packet Company was not carried on in an effective manner during the past winter, the experience acquired by merchants and others has convinced them of the advantages of the communication; and there is no doubt that if a weekly passage were established between England and Canada, and that the sea service were performed with average regularity in vessels of large tonnage, the receipts on the line from Portland to Montreal alone would be increased between £1,500 and £2,000 a-week from this source.

Up to the date of the last advices from England, the 6th instant, £1,848,845 sterling had been paid on account of the A series of shares of the Grand Trunk Company and the debentures to which such shares are entitled.

£490,865 sterling have been paid in advance of future calls, a satisfactory proof of the confidence entertained by the English Shareholders of the Company as an investment.

It is intended that the next call of £2 10s. per share and of £10 on each class of debentures be made in October next, to be followed by calls for the same amounts in February and June, 1855.

Owing to the prospects of a general war in Europe, and the consequent probable depression of all securities, the Directors deemed it prudent, during the autumn of last year, to apply to the Provincial Government to grant, under the Guarantee Act 14 & 15 Vic. Cap. 73 Section 22, the same privileges with reference to the Province Bonds, to be issued to this Company, as had been afforded to other Railroad Companies in Canada entitled to the guarantee.

The Government assented to this proposal, and transmitted to Messrs. Baring & Glyn, the Agents of the Province in London, £905,700 of debentures, with instructions that they be issued to such Shareholders of the Grand-Trunk Railroad Company as paid 40 per cent on their A shares, and in full on the Province Bonds to which they are entitled.

The amount paid in full on these debentures to the 6th instant, is £492,300 sterling. The works completed by the contractors to the 14th instant (at the rate of 40 per cent on the works to which the debentures apply) have entitled the Company to £311,000, and a further amount of £317,500 is held on account of those sections of the line hitherto known as the St. Lawrence and Atlantic and the Quebec and Richmond Railways. It therefore, appears that the Company have not yet received from the Government the amount of Provincial aid to which it is entitled. The debentures are, however, in the hands Messrs. Baring & Glyn for disposal to the Shareholders of the Grand Trunk Company under the conditions before stated.

Should a larger sum be received by Messrs. Baring & Glyn in payment of these Debentures, than the amount to which the Company is entitled on works executed, it will be held by these gentlemen and will be only handed over by them to the Company, as it becomes entitled thereto from time to time by order of the Government of Canada.

A similar arrangement will be carried into effect with the B series of these Debentures as the works progress. The amount of this issue will be £905,800.

In accordance with the arrangement announced by the London Board on the 6th of May last, the Directors have entered into the following arrange-

ments with reference to the progress of the work:—That they be actively proceeded with from St. Thomas, 40 miles below Quebec, [to join the Quebec and Richmond line,] and between Montreal, Kingston, Toronto, Guelph and Stratford, so that the line shall be opened from Montreal to Prescott, and between Toronto and Stratford, a distance of 210 miles, in the autumn of next year, and the other sections giving a total length of 867 miles in October, 1856.

The works postponed under this arrangement comprehend 245 miles, and an outlay of about two millions sterling.

The capital accounts submitted herewith, show that the expenditure under that head to the 30th ultimo, has been £1,860,265 5s. 6d. sterling, of which £237,793 sterling was on account of works on the line between Montreal and Portland, providing it with additional locomotive stock, workshops, &c., £589,425 for works and materials supplied between Montreal and Toronto, £363,396 19s., between Toronto and St. Mary's £537,350 between Quebec and Richmond, £63,172 for the line East of Quebec, and £57,020 13s. 9d., for the Victoria Bridge.

The Directors refer with satisfaction to the full and detailed report of Mr. A. M. Ross, the Company's Chief Engineer, herewith subjoined, on the progress of the various works now in the course of construction. It cannot fail to be read by the Shareholders with the deepest interest.

On the subject of the Victoria Bridge the Directors desire to state that its necessity and advantage become daily more apparent.

The explicit Report of Mr. Robert Stevenson, recently published, has convinced all persons interested in the subject, in an engineering point of view, of its practicability and propriety, and the perusal of Mr. Ross's Report will show the successful manner in which the works have progressed to the present time.—Viewed in relation to its commercial importance the Directors are more than ever impressed that, without it, the large and comprehensive traffic system involved in the construction of the Railway, could only be partially and by comparison ineffectually carried out at a very great cost. Montreal is the terminal point of the Ocean Navigation connected with the St. Lawrence on the one side, and of the great Canadian and American Lakes extending 2,000 miles into the heart of the Continent on the other. It is also the centre from which lines of Railway at present radiate to Portland, Boston, and New York, Ottawa and other rich, though as yet, only partially developed districts, of Canada. Without the Victoria Bridge the Grand Trunk Railway would, in fact, be two Railways involving the cost and expensive working of two separate plans, whereas by its construction, under the perfect system of management which the Directors believe they will be able to introduce, not only will the immense traffic both of persons and of merchandise which now flows through Montreal continue with the natural expansion consequent upon the opening of Railways in surrounding districts; but it is the firm conviction of the Board that by means of the Bridge a better, more rapid, and cheaper communication will be afforded for the magnificent district of Western Canada and of the North Western States of America, including Michigan, Illinois, Wisconsin, Minnesota, Iowa, &c., to the Atlantic Sea-board, and for the supply of these districts with imported goods than by any other route on this Continent. With reference to the cost, it should be observed that if its amount be distributed over the Grand Trunk Line, it will add about £1,200 a mile to the expense of construction, making the total cost of the Railway (to be finished in every respect equal to a first class English Railway) about £9,500 a-mile, which amount includes the necessary Locomotives and other Rolling Stock for working the Line. In addition, the lines of Railway, independent of this Company, which converge at Montreal are about 1,600 miles in length.

All these will pay toll to the Company to pass their traffic over the Bridge, as it must be obvious

that it will be cheaper than to ferry the river by steamboats in summer or by sleighs in winter.

The Directors are happy to announce that the agreement entered into in London between this Company and the Great Western Railway Company for each to suspend until 1856, such portions of the respective lines as excited mutual jealousy, has been confirmed by the Canada Board of that Company. In consequence the works on the Great Western Line from London to Sarnia, and this Company's Sarnia Extension have been deferred.

The Board has every reason to hope that before the expiration of the present agreement, terms of a friendly alliance will, under the decision of Mr. Stephenson, be arranged between the two companies, by which all the evil incident to any apprehended competition will be avoided.

The election of three Shareholders of the Company as auditors, is likewise required by the terms of the amalgamation agreement.

Certain shares in the Quebec and Richmond Railway are now in arrears for calls. A resolution will be submitted to the meeting to empower the Directors to forfeit such shares two months after a notice has been published in the "Canada Gazette" and in the other newspapers.

JOHN ROSS,
President.

Quebec, 27th July, 1854.

Atlantic and St. Lawrence Railroad.

The following is the report of the Directors of the Atlantic and St. Lawrence Railroad submitted at a meeting of the stockholders held at Portland at the first instant.

To the Stockholders of the Atlantic & St. Lawrence Railroad Company:

The Directors submit the following Report for the year ending June 30th, 1854:

During the past year the road has been run by the Lessees, in connection with their line in Canada.

They have retained in their service most of the former employees of this Company, and in other respects, their management of the road has been generally satisfactory and successful.

The road itself has been very much improved, and much more extensive expenditures have been made, for gravelling, wood sheds, water stations, and coverings of bridges, than we could have made with our limited means.

At Fish Point, in Portland, a great improvement has been made in reducing the curve round the hill, and in grading for additional tracks; and additional depot grounds have been made by filling the flats.—The foundations are laid for a new passenger building at the foot of India street, so that on its completion, the present building may be used entirely for freighting business.

All the obligations entered into with this Company by the Lessees, under the contract of lease, have been punctually and satisfactorily performed.

The interest on our funded debt, dividends to shareholders, and amount due to the Sinking Fund, have been promptly paid.

The floating debt of this Company has been paid, as it became due, by the Lessees, and our bonds, on twenty-five years, to the amount of four hundred and eighty-four thousand dollars have been issued therefor, in conformity to the provisions of the contract of lease.

The amount of floating debt remaining unpaid June 30th, 1854, is \$89,518 34, which includes the amount of interest scrip due 1st of August next.

The Lessees have agreed upon terms of settlement with Messrs. Wood, Black & Co. in relation to the amount due under the contract for building the road, but this settlement has not been acted on and recognized by the Directors, some disputed land claims remaining to be adjusted before a final settlement with them can be made.

The whole number of shares of capital stock standing on the books of the Company, June 30th,

was sixteen thousand nine hundred twenty-two making sixteen hundred ninety-two thousand two hundred dollars.

The amount of stock to be issued to Messrs. Wood, Black & Co. on final completion and settlement of their contract will make an aggregate of shares, issued and to be issued, 18,091 shares, amounting to \$1,809,100 00.

The funded debt of the Company is as follows

City Bonds loaned to the Company for which it is liable.....	\$2,000,000 00
Bonds of the Company dated April 1, 1851, and redeemable in fifteen years.....	980,300 00
Bonds of the Company dated Nov. 1st, 1853, on twenty-five years, payable in Sterling Currency.....	484,000 00

Making an aggregate of funded debt.....\$3,464,300 00

Amount of floating debt outstanding June 30th, 1854.....\$9,518 37

The sinking Fund, provided for in acts authorizing the city of Portland to loan its credits, amounted on the 30th June to \$119,315 40.

The Report of the Commissioners of this fund is hereto annexed.

The business upon the road has steadily increased during the year, requiring large additions to the equipment and more frequent freight trains, and we have no doubt the increase will continue till the business is equal to the capacity of the road to accommodate.

The Parliament of Canada is expected to meet for business on the first of September next, when the Grand Trunk Railway Company will doubtless be fully empowered to take the lease of this road, and make the necessary contract therefor in its own name.

All which is respectfully submitted.

In behalf of the Directors:

JOSIAH S. LITTLE, President.

Office of At. & St. L. R. R. Co. }
Portland, July 25th, 1854; }

The Commissioners' Report states that the aggregate amount of the two funds is \$119,315 40, viz:

Fund of 1848.....	\$85,525 93
Fund of 1850.....	33,789 47
	\$119,315 40

Total principal.....103,750 00
„ interest.....15,565 40

\$119,315 40

The present investments of both funds are as follows:

Invested in City Scrip of the Railroad	
Loans.....	\$64,000 00
Mortgages of real estate.....	55,220 00
Cash.....	95 40
	\$119,315 40

We copy from the *State of Maine* the following notice of the meeting.

After the reading of the report, Mr. Little made a verbal explanation as to the reasons of the delay in Canada in perfecting the lease. He then introduced to the meeting Hon. A. T. Galt, who entered into a brief explanation of the state of railway matters in Canada, fully comparing and sustaining the report of the Directors, and the statements of Mr. Little.

Mr. Galt said the Parliament of Canada would not probably meet as early as September 1st, but at some time during that month, and that within a month or six weeks thereafter the needful authority would be granted to the Grand Trunk Railway to accept the lease of the Portland line. (Cheers.)

The several reports were then unanimously adopted.

John B. Brown, Esq., President of the Board of Trade, then offered the following resolutions:

Whereas, the experience of the past year has demonstrated the advantages of Portland harbor, as the steamship terminus for the trade between Canada and Europe, and has also shown the great value and importance of a regular line of steamers from Liverpool to this port—now sufficiently made known to warrant an annual subsidy from the city of Portland for the purpose of securing such a line upon a permanent basis—therefore

Resolved, that the Directors of the Atlantic & St. Lawrence Railroad Company be advised to make application to the city of Portland, requesting the city government to render such aid as may be necessary to secure such a result.

Resolved, Further, that the Directors, at their discretion, be requested to invite the authorities of the State, the several railway companies, and other parties interested, to join in such an undertaking.

Mr. Galt said, as a stockholder in this company he took great pleasure in seconding the resolutions, and he desired to offer a few remarks in their support, feeling as an inhabitant of Canada, the most lively interest in the subject. No one could question the correctness of the preamble to the motion, that steam communication between Portland and Europe was an object of the highest importance: and those who had witnessed the advantages to this city of the arrival of the steamships last winter, could not fail to appreciate the still greater benefits that would flow from their continuing to ply to Portland during the entire year.

Mr. Galt stated his belief that the Grand Trunk Railway would be disposed to give every support in their power to a constant line of steamships to Portland, but added that this city and its commercial inhabitants were the parties who would derive the most benefit, and therefore it was quite within the province of the shareholders in the Atlantic road to urge their Directors to bring the subject before the proper authorities. He said no one could look around and see the improvements in this city without feeling that their onward march demanded an uninterrupted communication with Europe. The population of Canada, now exceeding two millions, must have a regular channel for their business, and he did not believe that it could be found better than by the Railway with Portland for its terminus. It must be manifest to every business man, that the progress of Portland depended upon its facilities for despatching business; they could not expect the products of the west to come here, unless there were the means of sending them away; nor could produce be sent here with economy, if no back freight were provided for the railway, as the freight one way had to pay the cost of returning the empty cars. To give full effect to the benefit of the railway, Portland must be made a place of import as well as of export,—and unless this were done, the anticipations of advantages from the railway west, must be more or less disappointed.

He did not consider this as a question which ought to be regarded by the Atlantic stockholders with indifference, because they had no longer an interest in the future prosperity of their road. As their original design in building their road was to benefit their State and city, and these objects remained equally important whether they received six or ten per cent. and he did not doubt that the same public spirit and unanimity would be shown in supporting the steamship project which had marked all their proceedings.

His object in now addressing the meeting, was to impress on the public here the importance of taking prompt measures to secure a constant steam communication—and especially to point out that though the object was undoubtedly, in a favorable position to be attained, still it would require a greater effort than had already been made by the city and Railroad Company. Inasmuch as the Canadian government could not be expected to devote the same aid to the line to Portland as to the St. Lawrence, and the differences must be more or less made up by others, who would most benefit by the change. Undoubtedly, those

were the inhabitants of Portland, and he trusted they would come forward with alacrity in urging on their authorities the adoption of such a course as would prove of lasting benefit, as well as to the city of Portland as to the State of Maine, and to the whole province of Canada.

Mr. Galt's remarks were received with great applause.

The resolutions were unanimously adopted.

The following gentlemen were chosen for the Board of Directors for the current year:—

J. S. Little, Wm. P. Preble, A. T. Galt, Phineas Barnes, St. John Smith, John A. Poor, J. B. Brown, A. W. H. Clapp, Samuel Jordan, Solomon H. Chandler, George F. Shepley, Thomas Crocker, Thomas Hammond.

St. Louis, Memphis and New Orleans R. R.

When the Mississippi Valley Railroad, to connect the city of New Orleans with the Falls of St. Anthony, was projected, in October, 1852, we presented the claims of three routes, south of Missouri, viz: the Little Rock, the Memphis, and the Helena route.*

The country from Missouri to Memphis, and from Missouri to Helena, had been unexplored by railroad engineers, and a merely preliminary survey had been made by the government of the U. S. from St. Louis to Fulton via Little Rock.

We, however, obtained information of the peculiarity of Crowley's Ridge extending from Missouri to Helena, 150 miles, with an almost unbroken firm and high surface on its side above the swamp and overflowed lands, with which it was surrounded. Helena was also in a nearly direct line from St. Louis to New Orleans. The Arkansas country on each side of Crowley's Ridge was mostly abandoned unreclaimed and overflowed lands. The Helena route was considered shortest, cheapest, and was therefore preferred.

The Memphis route, it was thought, might be established by the construction of that portion of the Memphis and Little Rock railroad from the Mississippi to the St. Francis, 40 miles across the swamp; and although it was considered impracticable to build a road from Old Indian Ford to Memphis through the lakes, swamps, &c., 140 miles, on the east side of the St. Francis; yet it was then declared that "Memphis might hold out inducements to make its route preferable" to the Helena route.

In regard to the Little Rock route, it was considered that "advantages might be gained by and from Little Rock and the country along its route, to produce a great preponderance in its favor," although the Little Rock route was estimated 95 miles longer than the Memphis route. The Little Rock route has been earnestly and uniformly advocated by us; and although violently opposed by a strong political party in Arkansas, as a "visionary scheme too wild for a respectable man," and "worse than a man's trying to hold himself out at arm's length," this scheme has become more respectable than its adversaries, and stronger than their strength, and is progressing with reasonable speed, by the impetus given to it by its friends, combined by its own intrinsic merits.

We will now present the claims of the Memphis route, together with newly discovered evidence in its favor, hoping soon to obtain yet further evidence of a commercial character, which will place this route on a commanding position.

The final survey of the Railroad from St. Louis to the Iron Mountain reduces the distance to 80 miles from Hazel street, on the route which is now located in every part, which is under contract, on which 350 men are now working, and \$35,000 have been paid to the contractors for work done to 1st June 1854.

The extension of the Iron Mountain road towards Arkansas reaches the Swamp District near Indian Ford, 150 miles from St. Louis. The route of this extension was found to be far more practicable than its warmest friends anticipated, the grades

* See Western Journal & Civilian, vol. 9, page 36, October, 1852.

being easier, and the cost averaging \$10,000 per mile less than that of the portion between the Mountain and St. Louis, whereas, from the estimates of Barney's survey, it was apprehended that the relative cost would be much greater below than above the Mountain. Considering the mountainous character of the country, this line of 70 miles from the Mountain to the Ford is remarkably straight. It is the only good line that could be obtained south of the Mountain towards Arkansas, and furthermore is in the direction of Memphis.

The Indian Ford may become a fixed point in the Mississippi Valley Railroad, which ever way the road may be extended towards the South, and this point, though on the verge of the Swamp District, is destined soon to rise and become a point of great distinction. Therefore it may be well to designate it now with reasonable distinctness.—Old Indian Ford is on the St. Francis river, near, though south of the junction of Wayne, Butler and Stoddard counties. It is equidistant from Cairo, Hickman, and the Arkansas line in Grand Prairie, Dunklin county, being about 60 miles on an air line from each. It is also nearly equidistant from New Madrid and from Point Pleasant on an air line, being about 45 miles from each; and it is just 30 miles from Arkansas line in Ripley county, where the best route is found along the northwestern border of the Swamp Region in the direction of Little Rock and Fulton in Arkansas. Three routes have already been surveyed by the Iron Mountain Co. radiating from Old Indian Ford, one to Cairo, one to Arkansas line in Ripley county, and one to New Madrid, the last mentioned to Point Pleasant. A great variety of other experimental surveys were made throughout the Swamp Region; and it is believed from indications discovered in these discursive experimental surveys, that one of the most practicable routes from Old Indian Ford towards New Orleans would be almost in a straight line in that direction; that is, on the east side of the St. Francis river through Stoddard and Dunklin counties to the Arkansas line, in Grand Prairie, which is also in a direct line toward Memphis.

A powerful argument in behalf of this route in Missouri might be built up, based on the reasonable presumption, that a railroad bed, constructed along the eastern shore of the St. Francis in Stoddard and Dunklin Counties, would be the best embankment to prevent the occasional overflow of this river in these counties, and further that such an embankment may be essential to reclaim the swamp lands in these and the adjoining counties of New Madrid and Pemisco, as also of a large part of the country in Arkansas east of the St. Francis. This branch of this subject is well worthy the careful consideration of the Swamp Land Commissioners of Arkansas, as also of the above mentioned swamp counties of Missouri.

That the probable feasibility of this route may be still more highly appreciated, and the ignorant prejudice against building a railroad through the Swamp District may be more thoroughly advised and fairly enlightened, it is proper to state, and it should not be forgotten that while the cost of the construction of the railroad from St. Louis to the Iron Mountain, ready for rolling stock, averages \$40,000 per mile along its 80 miles, and that while the cost of construction of railroads from the Iron Mountain to Indian Ford, ready for rolling stock, averages \$30,000 per mile along its 70 miles, the cost of construction of railroads from Indian Ford through various portions of the Swamp Region, ready for rolling stock, averages in general only \$18,000 per mile, being only about $\frac{1}{2}$ as much as the average from St. Louis to the Indian Ford.

That the length and cost of the Missouri portion of the St. Louis, Memphis, and New Orleans Railroad, may be somewhat minutely yet concisely shown, we may conclude from the data above stated, as the distance from Indian Ford to the Arkansas line in Grand Prairie, Dunklin county, is 60 miles on an air line and as the average deviation from an air line may be fairly represented by one-sixth, that the length of Indian Ford and Grand Prairie line is 70 miles, and that the cost of construction of this link, ready for rolling stock,

averaging \$18,000 per mile is \$1,260,000; and placing the links in tabular form we find

The length of the St. Louis and Iron Mountain link	80 miles
Iron Mountain and Indian Ford.	70 "
Indian Ford and Grand Prairie link	70 "

Total length of the Missouri portion..... 220 miles

Cost of 1st division 80 miles, at \$40,400 per mile	\$3,200,000
Cost of 2d division, 70 miles, at \$30,000 per mile	2,100,000
Cost of 3d division 70 miles, at \$18,000 per mile	1,260,000
	<hr/> \$6,560,000

By adding cost of rolling stock, together with buildings and fixtures for same at the rate of \$4,000 per mile, 220 miles. 880,000

We find total cost in Mo. in running order..... \$7,440,000

Touching the Arkansas portion of the St. Louis and Memphis Railroad, on the route above indicated, as it may become a link of vast importance in the Mississippi Valley Railroad, and as it was originally and almost universally thought to be utterly impracticable, it is but justice to Mr. W. D. Ferguson, of Arkansas, to fix the fact that he is the man who first projected and earnestly advocated this route. One year ago from this date at the Memphis Convention in June, 1853, in conversation with the author of this article, he presented the claims of this route, and urged them with the light of his experience on the ground, and with the warmth of his enthusiasm in the prospect. Not one word could we then hear in its favor excepting from him.

Since then but little has been said or done on this subject until the first day of March, 1854, when G. W. Underhill, of Arkansas, E. H. Porter, of Tennessee, and L. M. Kennett, of Missouri, with their associates in each of said States formed themselves into a corporation under the general law of the State of Arkansas by the name of *Memphis and St. Louis Railroad Company*, for the purpose of building a railroad through Arkansas from a point opposite or near Memphis, "on or near a direct line between the same and the city of St. Louis, Missouri, and running thence as nearly as said company may deem it practicable in the direction of St. Louis, so as to reach a point on or connect with the St. Louis and Iron Mountain Railroad, or any other railroad or point thereon, in that general direction."

The charter was filed in the office of the Secretary of State of the State of Arkansas on the 6th day of March, 1854, and on the 18th day of the same month the Board of Commissioners of said company met and organized by the election of Ethel H. Porter, President of the Company, and J. T. Swayne, Secretary.

As the legal provision is thus obtained for building the Arkansas link of this road, we will now proceed to inquire into the probable length and cost of the same.

For the sake of avoiding circumlocution, we will designate the point on the boundary line between Missouri and Arkansas east of the St. Francis river, where this railroad will probably cross, by the name which is given to the strip of country there extending both into Missouri and Arkansas, that is Grand Prairie, although the village of Grande Prairie is not exactly at this point.

From this point to Memphis, the distance on an air line is about 60 miles, being the same distance as from this point to Indian Ford. By the reports gathered from the experimental surveys of the Iron Mountain Railroad Company throughout various portions of the Swamp District, and from the facts stated by Mr. Ferguson, of Arkansas, the general character of the country from Indian Ford to Grand Prairie seems to be about the same as that

from Grand Prairie to Memphis, and as the air line distance is also the same, therefore it is reasonable to make the same allowance for the length and cost of a practicable route from Grand Prairie to Memphis, as from Indian Ford to Grand Prairie.

Calculating then on this hypothesis, the length of Grand Prairie and Memphis link is 70 miles, and the cost of construction of the same, ready for rolling stock, is \$1,260,000. Calculating the cost of rolling stock together with buildings and fixtures for same at the rate estimated for the Missouri portion, to wit: \$4,000 per mile, 70 miles, it is \$280,000 making the total cost of the Grand Prairie and Memphis road in running order..... \$1,540,000

To which add the total cost of the St. Louis and Iron Mountain road to Grand Prairie in running order..... 7,440,000 And we find the total cost of the road from St. Louis to Memphis..... \$8,980,000

The total distance from St. Louis to Memphis by this route according to the above estimates is 290 miles, which, with a speed on the road of 30 miles an hour, brings St. Louis and Memphis within ten hours distance of each other.

Having ascertained the probable length and cost of the St. Louis and Memphis Railroad, we will proceed to an examination of the Memphis and New Orleans road.

The distance from Memphis to New Orleans on an air line is 342 miles. These two points are connected by a road in process of construction composed of three links, which are the "New Orleans, Jackson and Great Northern Railroad," reaching from New Orleans to Canton, the Mississippi Central Railroad," reaching from Canton to Grenada, Miss., and the "Mississippi and Tennessee Railroad," reaching from Grenada to Memphis.

The distance from New Orleans to Canton, air line, is..... 175 miles.
Do. Canton to Grenada, air line 78 "
Do. Grenada to Memphis, do. 93 "

Total distance by deviating links, do... 346 miles.
Do. without deviating, do... 342 "

Amount of deviation by the links, do... 4 miles.

By allowing on the sum total a deviation of 44 miles.
from the air line distance of the links.. 346 "

The length of the practicable route from Memphis to New Orleans is 390 miles.

In order to show the progress and prospects of this combined enterprise in Louisiana, Mississippi and Tennessee, we will quote a paragraph from the memorial of the Mississippi and Tennessee Railroad Company to the St. Louis and Iron Mountain Railroad Company, dated 18th March, 1854:

"The greater portion of this route is already provided for. From New Orleans to the Mississippi State line the "Great Northern and Jackson road" is nearly completed, and will soon be finished all the way to Canton, Miss.;—thence the "Mississippi Central road" to Holly Springs passing Grenada, Mi., is under contract to be completed in 2½ years. From Grenada our road, the "Mississippi and Tennessee" completes the line to Memphis; and the means at our command warrant us in the confident expectation of its early consummation."

It will thus be seen that the southern and larger portion of the St. Louis, Memphis and New Orleans Railroad is rapidly progressing with brilliant prospects of entire completion long before the Memphis and St. Louis portion can be done, according to present indications.

But the presentation of these facts should stimulate the public mind with renewed activity in behalf of the St. Louis and Iron Mountain Railroad, that while this work is being built to the Mountain, means and spirit may be gained to drive it on to Memphis, that a respectable portion of the 2,000,000 acres of swamp land in South-east Missouri may be applied to its construction, and thereby to their own reclamation; their net pro-

ceeds remaining a school fund vested in the stock of the railroad company. This is doubtless the best thing that could be done with a large portion of the swamp lands, both in Missouri and Arkansas; and it may be that half enough could be realized from these lands in Missouri and Arkansas together to build the road from Indian Ford to Memphis, 140 miles, the amount necessary to complete this portion, being, according to the above-mentioned estimates, only \$3,080,000. Means may be gained to prosecute this enterprise by arousing a spirit in Congress in behalf of a grant of lands for the Mississippi Valley Railroad, the St. Louis Convention having sent them a memorial on this subject in December, 1852, and the Memphis convention having endorsed the memorial in June, 1853. This grant of land by Congress should be made liberal enough to meet one-half the cost of building this road from St. Louis to Indian Ford, 150 miles. Then, the length of this road being the same from St. Louis to Arkansas, as the length of the North Missouri Railroad from St. Louis to Iowa, each one being by a singular coincidence just 220 miles, and as the cost of construction of the Iron Mountain Railroad is also equal to that of the North Missouri Railroad, and its value to the State also fully equal, it therefore follows that an equal amount of State credit should be granted to each. But the North Missouri Railroad has received..... \$2,000,000 while the Iron Mountain Railroad has

received only 750,000

Leaving the claim of the Iron Mountain Railroad for..... \$1,250,000

of State credit, which it is but just and reasonable to suppose will be allowed by the Legislature as soon as it convenes.

Let then this swamp land grant, this Mississippi Valley Railroad grant, and this grant of \$1,250,000 State credit be gained, while the contractors are building the road from St. Louis to the Iron Mountain, then means and spirit enough will be realized to drive this work on with energy to Memphis.

The people of St. Louis have already acted with a noble liberality towards their railroad enterprises. They have given \$2,805,000 to the Pacific Railroad, and more than \$2,700,000 to the Mississippi Valley Railroad, about one-half of the last sum to the North Missouri portion, and the other half to the Iron Mountain portion, making the amount given by the city, county and private subscriptions of St. Louis to these railroads over \$5,500,000. Besides, the people of St. Louis have given liberal aid to the railroads in Illinois, and all these works are progressing in every direction. And although the people of St. Louis have raised these means and shown this spirit, they would be ready and willing in case of an emergency to raise and show more. But, for what they have already done, they manifestly deserve the applause of the whole country, from the lakes to the Gulf, from the Atlantic to the Pacific, and should, at the earliest possible moment, receive generous assistance from the State and National Governments, worthy of the magnanimity they have displayed.

The means of the St. Louis and Iron Mountain Railroad Company are as follows, to wit:

Subscription of the city of St. Louis... \$500,000

" " " county of St. Louis 500,000

Other corporate and private subscriptions 500,000

\$1,500,000

To this add State credit granted 750,000

Total amount of means at command. \$2,250,000

And to this add the amount of State credit, which, as above shown, may be reasonably anticipated 1,250,000

and then we realize the amount of... \$3,500,000

enough to complete the Iron Mountain. To this add the Mississippi Valley Railroad grant and the Swamp Land grant, and thereupon the Company will soon gain means and spirit enough by their own credit, which will then be firmly established on a high and commanding position, to build up

the whole line from St. Louis to Memphis with dispatch and ease.

When this is done, the railroad connection from New Orleans to St. Louis will be complete, while at the same time the North Missouri Railroad Company together with the Iowa and Minnesota interests will be extending this connection to the Falls of St. Anthony, reducing the distance from New Orleans to the Falls by railroad to the same number of miles, New Orleans is from St. Louis, by the river, to wit: 1,200 miles.—*Western St. Louis Journal*.

Journal of Railroad Law.

OVER-ISSUES OF STOCK.

The legal consequences of the late over-issues of railroad stock are still earnestly discussed.

On one side it is argued as follows:

If the Transfer Agent of a Company fraudulently issues stock beyond the amount authorized by law, he thereby wilfully abandons the line of his duty, and by that very act ceases to be the agent of the company which he had previously served, and the stock certificates which he puts forth are wholly spurious and void as would be those of any forger who was entirely a stranger to the company in question. Such so-called stock certificates are not the certificates of the Company. They did not emanate from an authorized agent of the Company. The stock of the Company having, by an act of the Legislature, been limited to a fixed amount, common prudence required that parties purchasing stock should inquire whether the shares offered to them were genuine or spurious. For an Act of Legislature is notice to the public, in relation to the provisions it contains.

There is a broad distinction between mere carelessness on the part of an agent, and wilful fraud. A company in appointing agents is bound to select those whom they have good reason to believe fully competent to discharge their appropriate duties. If such agent proves to be unskillful or negligent, and consequently damages another, the principal is liable to the party damaged. The agent stands in the place of the principal. The damage done by an unskillful or negligent agent, is virtually done by the principal who appointed him. But although a principal may be able to ascertain beforehand with reasonable certainty his proposed agent's qualifications in respect to *prudence* and *ability*, how can he gauge and test the *morality* of such agent? Human nature is mutable and frail, and sometimes shoots madly from its appointed orbit under the influence of peculiar temptations. Few men have sounded the depths of their own hearts, much less those of others. A principal therefore only guarantees that his agent shall be *amplly intelligent* and *discreet* for the execution of his trust. He does not engage that the agent may not possibly abandon his trust and rush into crime, thereby subjecting himself to the penalties which the law inflicts upon all wrong-doers. The principal is not implicated in the hidden criminality of his agent, nor in the absence of express Legislation, is he liable for the pecuniary damage flowing from crime which human vigilance can only very partially prevent. *In fine*, if a principal in choosing agents, selects those who are fully *competent* and *prudent* and *unblemished* in regard to moral reputation, then the duty of the principal so far as this matter is concerned *is done*. Nothing farther is to be required of him, in regard to the delegation of his authority. If principals were the guarantors of their agents in all respects,

great carelessness would be induced on the part of those having dealings with such agents.

In regard to the enormous amounts of over-issued New York and New Haven stock, which were offered for sale by a late Transfer Agent, they should of themselves have awakened the suspicions of buyers. Those who bought such stock, should have first ascertained whether it was spurious or genuine. And not having done so they should suffer the consequences of their own rashness.

But on the other hand it is urged, that when a Company declares an individual to be the Transfer Agent of their stock, they must be considered as sanctioning whatever acts he performs *under color of his office*. If A then is the agent of a Company for the purpose of transferring its stock, it follows that whatever stock he transfers, be it genuine or not, is virtually transferred by the Company which appointed him, and whatever money was received therefor was virtually received by the Company. While dealing with a *bona fide* purchaser of stock, the Transfer Agent is to all intents and purposes, *the Company*, and the Company cannot repudiate his acts to the prejudice of innocent third parties. The Transfer Agent may, it is true, exceed his authority so far as the Company is concerned, but strangers are not thereby of necessity prejudiced. For the Company having once *accredited* the Transfer Agent to the world are responsible for the consequences of such act, however disastrous to themselves. Purchasers cannot scrutinize the acts of Transfer Agents, for the books of Stock Companies are closed as to them. And, indeed, only professional accountants can ordinarily trace the history and origin of certificates, and that with much time and labor.

Although a principal may not be liable for his agents acts, when the latter *absolutely renounces his agency*, and perpetrates a wilful wrong, yet when the agent acts within *what the public have a right to believe the scope of his legitimate authority*, and in so doing defrauds an innocent third party, the principal is responsible to the sufferer, for it was through the principal's instrumentality that the unfaithful agent was appointed. And if a transfer agent has been for a long time practising frauds which might have been checked by due supervision and scrutiny on the part of the Directors, the Company is liable for such negligence of such Directors, whom they appointed mainly for the purpose of watching their subordinate officers. It cannot be admitted that a Company and the purchasers of spurious stock issued by its officers are equally innocent. The Company enabled the officer to do the wrong. Accordingly if the Cashier of a Bank, corruptly issues a certificate in favor of a party having no funds in Bank, and this certificate comes into the hands of an innocent purchaser, the bank is liable for the amount. And the same is true of Bank notes issued over and above the amount limited by laws. It is true that a principal is not generally presumed to assent to any wilful wrong committed by his agent, *aside* from his official duties. But he is presumed to assent to and to ratify what the agent does under color of his office. On this ground, if an agent is negligent in discharging his duty, the principal is identified with him, and answerable for consequences. In regard to the rights of third parties who have had dealings with agents, the highest

legal authorities declare the question to be, with *what powers had those third parties the right to suppose the agents to be clothed?* If they had good reason to suppose those agents to be authorized to sell what purported to be stock certificates, they were justified in buying them, and can claim indemnity, from the principal whom those agents profess to represent.

A Pennsylvania decision in the case of the Bank of Kentucky, reported in *Parson's Select Equity Cases*, is cited in support of the foregoing view of the case. The Schuylkill Bank of Pennsylvania was the Transfer Agent of the Bank of Kentucky. The stock of the former was limited to 50,000 shares. The Schuylkill Bank, as transfer agent, issued over 13,000 spurious shares.—The Bank of Kentucky relieved most of those who had suffered by means of the over issues, by buying in such spurious shares, and then filed a bill in the Philadelphia Common Pleas against the Schuylkill Bank to compel it to refund the money which they had so expended. The Schuylkill Bank insisted that the Bank of Kentucky were under no liability to pay for the spurious stock.—The question was argued by the oldest Counsel of Pennsylvania, and decided in favor of the Bank of Kentucky, and on appeal to the Supreme Court of Pennsylvania this decision was affirmed, and the claims of the purchasers of spurious stock to be indemnified were individually sanctioned. So the Bank of England is said to have been declared by the Queen's Bench to be bound by the transfer of Consols by its transfer agents, although such transfer was based upon a forged power of Attorney.—*vs. Birmingham* 461.

Such is a general sketch of the present state of the controversy concerning over issues of stock, which will soon probably occupy the Courts.—Like the subject of mistakes, as Sir Roger De Coverly said, "much may be said on both sides."

Memphis and Charleston Railroad.

We understand that the Directors of the Memphis and Charleston Railroad have sold \$400,000 of their 7 per cent. bonds to their own stockholders and other capitalists of the Tennessee Valley on the terms proposed by them. This we understand will enable the Company with their other means to lay their track through Alabama (150 miles) except 25 miles of iron West of Tusculum.

This is as it should be; our people are able and they should be willing to come up and put a part of their means into such important Internal Improvements as this; especially so, when the security offered is so ample, and the rate of interest is so good. Let every man who can come up and take a few of these bonds; the Company yet need more money to finish and fully equip their road, and the more means they get the sooner they will be able to finish the road and make the stock in it profitable, and give the country the advantages of the road.

Let our people divide their capital more; think less about land, negroes and cotton bales, and they will soon find themselves and their country more independent. Let us rely upon ourselves, build our own roads, keep the interest on the capital in our own country, and give to our Railroad companies the enormous rates of interest, commissions, guarantees, discounts, &c., which most of them have heretofore paid to Northern brokers and which have absorbed so much of the permanent capital of our Companies.

Let us begin to rely on our own resources, and then we can begin to feel independent, and not until then. Let every man take this home to himself, and come up and do his own individual duty

and not wait for some one else to do what he ought to do.—*Huntsville Democrat.*

American Railroad Journal.

Saturday, August 12, 1854.

Carhart's Turntables.

We are pleased to learn of the continued success of these turntables and that they are rapidly gaining their way to the confidence of the managers of important lines of road in all parts of the country. We know of many new roads both at the South and west which are now engaged in putting them down and many others which have had specimens of them on trial for some months that have now decided to equip their entire lines with them to the exclusion of other plans.

Mr. CARHART is a very worthy and ingenious mechanic who superintends the construction of his turntables in person and we are glad to be able to say he has done so thus far with the most flattering success. Increasing demand for his tables which has arisen from the great satisfaction they have given to engineers and Superintendents who have used them is the best evidence of the character of his work and the utility of his plan. We have no hesitation therefore, in commending Mr. CARHART to the attention of railway managers, on new or old roads, in any and every part of the country. His list of references comprises many of the best managed roads, and the names of engineers and Superintendents of the largest experience throughout the Union.

Stock and Money Market.

The past has been an inanimate week in the share market. Prices have fluctuated somewhat, but, on the whole, are weaker. There is no speculative feeling in the street, and only few operators as nearly all who can leave the city have fled to escape the extreme heat which prevails. August is usually the dullest month of the year, and this year business of all kinds is unusually slack.

We have returns of the earnings for July from one or two roads only.

We annex those for June as far as received.

	1853.	1854.	Increase.
Cincinnati, Hamilton & Dayton.....	\$32,301	\$39,975	\$7,572
Baltimore and Ohio, (main stem).....	189,967	316,802	126,835
Washington Branch....	30,639	31,879	1,240
Michigan Southern....	148,346	185,653	36,706
Michigan Central....	119,433	171,359	51,925
Macon and Western....	15,592	19,750	4,158
Cleveland and Pittsburgh.....	35,828	47,229	11,903
Chicago and Rock Island.....	new	113,008	113,008
N. York and N. Haven.....	59,738	70,254	10,519
Pennsylvania Central....	156,928	227,652	70,674
Norwich and Worcester.....	26,411	25,780	.....
New York Central....	382,654	492,734	111,079
New York and Erie....	336,018	398,750	62,731
Ohio and Pennsylvania.....	55,244	82,059	26,815
Hudson River.....	94,978	128,073	33,094
Milwaukee and Mississippi.....	18,585	45,078	26,490
Detroit and Pontiac....	5,407	6,118	1,410
Sixth Avenue.....	.....	21,976	.....
Eighth Avenue.....	.....	25,758	.....
Kennebec & Portland..	12,176	17,700	5,524
Stonington.....	21,244	20,966	.....
Galena and Chicago....	49,010	120,879	71,869
Indiana Central.....	new	27,205	27,205
Rome and Watertown..	31,334	39,506	8,172
Cleveland & Columbus..	91,366	117,144	25,778

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	86
Androscoggin and Kennebec..	55	824,863	1,043,640	2,036,140	177,003	80,053	none	32
Kennebec and Portland.....	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	42
Port., Saco and Portsmouth..	51	1,355,500	123,884	1,459,384	208,669	.....	6	95
York and Cumberland.....	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	160,538	79,659	none	27
Concord.....	35	1,485,000	none.	1,485,000	305,805	141,836	8	105
Cheshire.....	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern.....	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence....	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan.....	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,000	550,000	1,745,516	.....	.....	none	21
Rutland.....	120	2,486,000	2,429,100	5,777,467	495,397	266,539	none	9
Vermont Central.....	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	5
Vermont and Canada.....	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	ent.	82
Western Vermont.....	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley.....	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	81
Boston and Maine.....	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100
Boston and Providence.....	55	3,160,000	402,326	3,579,041	509,326	226,639	6	77
Boston and Worcester.....	69	4,500,000	590,541	4,850,754	887,219	413,289	7	96
Cape Cod branch.....	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River.....	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern.....	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	65
Fall River.....	42	1,050,000	6,208	1,050,000	294,183	126,589	8	90
Fitchburg.....	67	3,540,000	191,500	3,716,870	626,659	214,633	6	85
New Bedford and Taunton... Conn.	20	500,000	none.	522,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,316	35,214	none	50
Old Colony.....	45	1,964,070	295,038	2,293,534	374,897	122,866	none	92
Taunton Branch.....	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts..	77	2,233,939	1,139,615	3,207,818	244,328	13,144	none	11
Worcester and Nashua.....	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western.....	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	93
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	67
Providence and Worcester.. Conn.	40	1,457,500	300,000	1,791,999	291,417	120,892	6	97
Canal.....	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	689,529	294,269	10	116
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill..	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven....	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	.....
Naugatuck.....	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven..	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	50
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progres	.....	.....	none	.....
Buffalo and State Line.....	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F..	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira.....	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna....	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)....	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	45
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,788	none	52
Harlem.....	130	4,725,250	977,463	6,102,935	681,445	324,494	4	.....
Long Island.....	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central.....	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	91
Ogdensburg (Northern).....	118	1,579,969	2,963,760	5,133,834	480,137	195,847	.....	10
Oswego and Syracuse.....	35	350,000	206,000	633,598	92,353	46,072	.....	.....
Plattsburg and Montreal....	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga....	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington....	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington....	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston.....	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,492	1,388,385	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey.....	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central.....	63	986,106	1,500,000	2,379,890	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster..	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading....	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	62
Philad., Wilmington and Balt.	98	5,000,000	2,399,166	8,067,285	868,038	541,769	6	68

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	50
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	...
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	...
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	...
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	...
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	...
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	...
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	...
Charlotte and South Carolina..... S. C.	110	.....	.....	.....	.....	.....	.....	...
Greenville and Columbia..... "	140	1,004,231	500,000	In prog.	.....	.....	.....	...
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..... "	.....	.....	.....	In prog.	.....	.....	.....	...
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	...
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	...
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	...
Alabama and Tennessee River..... Ala.	55	.....	.....	In prog.	.....	.....	.....	...
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	...
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	...
Montgomery and West Point..... "	88	688,611	.....	1,330,960	173,542	76,079	8	...
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	...
East Tennessee and Georgia..... Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	...
Nashville and Chattanooga..... "	125	2,093,814	850,000	In prog.	.....	.....	.....	...
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	...
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	63
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	80
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	...
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	59
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	77½
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	...
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	100
Columbus, Piqua and Indiana..... "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	...
Cincinnati, Ham. and Dayton..... "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	...
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	...
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	...
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	...
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	...
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	...
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	...
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	Recently opened.	.....	.....	...
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	...
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	...
Indianapolis and Bellefontaine..... "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati..... "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	.....	.....	...
Madison, Indianapolis & Peru..... "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Terre Haute and Indianapolis..... "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	...
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	...
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	...
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	123
Michigan Southern and Ind. N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	94
Michigan Central..... "	232	.....	3,977,563	8,618,505	1,145,598	582,816	8	87
Pacific..... Mo.	83	.....	non	In progress	Recently opened.	.....	.....	...

The earnings of the Erie Railroad were largely reduced by the strike of the engineers in the employ of the Company. The amount of travel the present season is much less than was expected. Owing to the very general prevalence of the cholera we presume the western roads will be much more afflicted than any others. Still the result will probably show a large increase over a similar period for the past year. There does not appear to be any good reason for the present low prices of railway property in the receipts of our companies. Roads that unquestionably are earning, and in fact paying, dividends, ranging from 7 to 10 per cent. are very much depressed for no fault in the securities themselves, but from the fact that the market is overstocked, or that the public does not take a fancy toward railway investments. Confidence in the productiveness of railroads does not appear to be shaken, as the receipts of these works have more than justified expectation and have exceeded what was claimed for them.

The coinages of the Philadelphia Mint for seven months of 1854 have been \$28,911,559 against 35,879,927 for the same period of 1853. The deposits for the same period compared with those for 1853 have been as follows.

	1853.	Gold.	Silver.
January.....	\$4,962,097		\$14,000
February.....	2,548,523		13,560
March.....	7,533,752		70,000
April.....	4,766,009		2,550,000
May.....	4,425,000		1,447,000
June.....	4,545,169		1,447,000
July.....	3,505,331		611,000
Total.....	\$23,285,882		\$6,152,560
1854.			
January.....	\$4,215,579		\$108,000
February.....	2,515,000		1,166,000
March.....	3,982,000		147,500
April.....	3,442,000		129,000
May.....	4,000,000		196,000
June.....	4,000,000		100,000
July.....	3,910,000		310,000
Total.....	\$25,659,579		\$2,156,500

The exports for the same period have been \$20,368,436, of which \$14,738,371 have been in bars.

Syracuse and Binghamton Railroad.

We learn that the work of laying iron on this road is making rapid progress, some 45 miles of the 80 being already completed. The balance of the work will be vigorously pushed forward, and the entire road will be ready for business in the fall, and in season to supply Syracuse and Oswego with their winter supply of coal. An abundant business awaits the opening of the road, which, with the low cost of the former, must render it a highly productive work.

New Railway Map.

Our new Railway map showing all the roads projected, in progress, and in operation in the United States and Canada at the present time, is ready for distribution. Price by mail ONE DOLLAR—Railway Companies supplied with copies to illustrate reports with their lines and connections colored on them at reduced prices. Address American Railroad Journal 9 Spruce st. New York.

Improvement of the Locomotive.

By ZERAH COLBURN.

As an engineer and author, constantly engaged in the development and illustration of the locomotive, I have been often solicited to prepare a connected treatise upon its history, present condition and possible future improvement.—I have already supplied much descriptive matter in illustration of this subject, in a special treatise, now admitted as the only purely practical work on the American Locomotive. I have also often indicated many disconnected details of a system of improvements, and have urged their adaptation and adoption, and in such efforts am best known by the readers of this Journal.

The locomotive is, and, since its origination has always been in an intermediate and not in an ultimate state of improvement. In the early periods of steam locomotion, when the steam engine was in a primitive state, the relative merits of different arrangements could not always be clearly comprehended, and in the absence of improved standards of discrimination, the plans adopted by different builders were of very dissimilar character.

As experience, acquired in active competition among railroad companies and engine builders, developed superior arrangements and proportions, these were gradually adopted, and thereby was initiated an assimilation of the style of locomotives throughout the country; so that the engines of the present day approach a general standard, recognized by similar characteristics, in engines of different origin.

This tendency still exists, inasmuch as it has not yet perfected the locomotive. Efforts for improvement, and consequent assimilation of style, have still an ample field for success. Preferences, based upon a primitive practice of engineering, still operate in the construction of engines.

With this view, I shall make the present the introduction to a connected series of future articles, devoted to the consideration and analysis of a consistent system of improvements in the locomotive steam engine; not reaching altogether beyond the standard of present attainments, but discussing also the differences which occur in actual practice, with engines of different paternity.

With this purpose, I shall not enter into the description of details of machinery, any further than to indicate or establish principles, assuming that my readers are conversant with the construction and mechanical arrangements of locomotives as generally built. But although dispensing with "popular description," as characteristic of an elementary work, the tone of my discussion will be of an essentially practical character, and fully comprehensible by any who have observed the general structure of the locomotive.

It is always and already time to measure the means at our command for increasing the efficiency and economy of locomotives. The most effective and economical arrangements possible, may not be supplied as soon as the occasion may arise to change the plan or proportions of engines. The Hudson River, New York Central or any great trunk road in any part of the country may yet have an accession of business beyond the capacity of the engines at present in use. Were there occasion, to day, to put upon the narrow gauge an engine of double the power of the average of those

in use, what engineer would accomplish the result at first trial, and preserve all the excellencies of the present system of motive power?

In anticipation of such a problem, engineers will do well to prepare themselves by every possible consideration of strength, weight, compactness, connection, and proportion of every material and member of the locomotive.

Car Ventilation.

This subject continues to engross considerable of the public attention and deserves far more of it than it receives. The following communications evidently represent two distinct theories of ventilation, the respective parties considering their own superior. Would it not be much better for the advancement of the cause of healthy ventilation, for each one of our correspondents to state what he deems the cause of the difficulty, and then state explicitly how he expects to overcome it by his mode of ventilation, than to spend so much time in demonstrating why any particular mode will not answer. Let experiments decide the utility of all, if the proprietors are willing and able to experiment, for that is the only process by which an inventor can be satisfied.

Correspondents should endeavor to be brief as possible, avoiding repetitions, and contradictory statement. If they must needs be critical or controversial they owe it alike to themselves and their opponents, to make themselves thoroughly acquainted with the plans they criticise and discuss: Had "P. M. H." carefully examined Mr. LANCASTER's plan as described in his advertisement. We think he would not have used the expression "when a window or blind is opened." If he had closely observed the very first paragraph he would have discovered that the outer windows were not intended to be opened.

(For the American Railroad Journal)

If P. M. H. had not seen fit to repeat twice or more in his short article his chief objection to the Naugatuck Valley ventilator—that while passing through a train the air becomes charged with obnoxious odors from the bodies through and among which it circulates, and thus becomes impure and poisonous, it should have passed without further notice from me; but as such a reiteration may do injury to what I believe to be the best plan yet devised I must ask room for a few figures, which most persons who read your Journal know how to appreciate when set against random assertions.

Experiments with a very delicate anemometer have shown that from 8000 to 15000 cubic feet of air will enter the first car per minute, varying according to the speed of the train.

A person breathes one fifth to one sixth of a cubic foot of air per minute; but the physiologists as they study the subject of healthy respiration become very exacting or squeamish and insist that each exhalation we vitiate 10 to 12 times as much as we breathe, thus they make out that each person vitiates 2 cubic feet a minute. According to this required supply Atwood and Waterbury's mode furnishes enough air for the healthy respiration of 4000 to 7500 passengers.—But a train of ten cars has only 500 to 600 passengers. Comment is unnecessary.

The writer was one of those present on experimental the trip 20th inst., on the New York and

New Haven Railroad to test this invention. Two or three persons were smoking in the first car when his attention was called to the fact and that the smoke could not be smelled in the rear cars. All the other smokers had the consideration to go to the rear of the train, for doubtless an addition of two or three more would have rendered the smoke perceptible. This experiment demonstrates the propriety of the intimation in my former communication, that the supply of pure air is so abundant as to render it much like riding in the open air. All odors likely to arise are so diluted and dissipated as not to be perceptible.

As a proof of the perfection of this mode of ventilation I wish to state that in cold weather, when the moisture of the breath would condense and run down the glass in the cars supplied with air in the old way, no moisture would collect on A and W's cars, though if the front and rear door of one of their cars were closed it would appear in ten or fifteen minutes, but it would disappear in about the same time it took to collect when their mode was applied.

K.

Bridgeport 31st July '54.

(For the American Railroad Journal)

Your correspondent "K" in replying to P. M. H. has made some statements with reference to "Paine's system" that I feel called upon to correct, not merely for the sake of my bantling, or the disproving of "K's" position, but because I believe the discussion of the matter will bring out facts which new experimenters are not aware of, and thus, while saving them from expense and disappointment, furnish the elements of future success. "K" is wrong in assuming that Paine uses injectors or that the air is injected into the car.

The currents entering the car do not owe their velocity to the motion of the car roof through the air; the air currents always passing through the apertures in the roof, with eight to ten times the velocity of the trains' motion, and consequently do have a velocity of "300 miles per hour." Seven eighths of the velocity and quantity of air entering the feeds in the roof is due to the *exhausting properties of the windows*, and it is the peculiar feature in the windows which draws the air out of the car, which constitutes Paine's patent. I am pleased that "K" has made the matter one of figures, and here are mine. If the induct or feed of an air pump be one twelfth of the area of the piston, the velocity of the entering air will always, be twelve times that of the piston. Now according to "K," Paine's feeders or "injectors" have a capacity of 2.2 and according to Paine each window has an aperture or exhausting area of 90 square inches, which multiplied by 32, the number of windows in a car, gives us about 20 square feet of piston, or exhausting surface to 2 feet of feed duct, and it follows that the air entering has a velocity as ten to one compared with the car's motion, which allowing it to be 30 miles per hour, will be "300 miles per hour." But an ocular demonstration has been, and can be made at any time, that the car is emptied 30 times in a minute. Make a smoke in the center of the car, and in two seconds of time it will reach the window.

The action of the windows in drawing air from the interior of the car is such that if but a simple hole is made in the roof a strong current of air will be drawn down into the car and out through

the windows. The only use of the projections above the roof being to manage the entering currents so as to free them from cinders; there is no injection about the matter, and "K" does not comprehend the subject he has criticised.

It may be asked, if so simple and perfect a mode exists why do not Railroad Companies adopt it?—

There are two replies to this question: First, too much is asked for the patent; second, under certain conditions smoke and the hot gases from the stack enter the feed on the roof. The last objection is a valid one, and if any mode can be devised to get rid of the smoke before it reaches the train, there is no difficulty in making a train as comfortable as a boat, and that too without any other fixtures or appendages than belong to the ordinary car-windows and ventilators.

H. M. PAINE.

(For the American Railroad Journal.)

The tenor of your last article on car ventilation seems to invite my opinion of Mr. Lancaster's mode of ventilation. As regards my opinion and its value in those matters permit me to remark, that it is predicated of practical experiment, not of theoretical supposition, and I am responsible for what I write as statements of facts. I am impatient to see perfect ventilation accomplished, and I cannot tamely witness time wasted, and railroad companies hardened against some good plan that may come up, by experiments that past experience have exploded. Your Journal is the oracle of railroad interests in this country, and if a few plain facts stated in its columns can serve the purpose of experiments, its value will most certainly be none the less.

Before proceeding to notice Mr. Lancaster's mode of ventilation allow me to make a parting allusion to the Atwood and Waterbury system. Your correspondent "K." admits that the air which passengers breathe in the eighth car of a train must first pass through the seven cars ahead, but qualifies the admission by saying, "that the air rushes through the cars in such an amount as to dilute beyond the keenest smell all odors that have yet arisen." "K." does not give the velocity of this rush of air through the train, but the inventor rates it at from 4 to 8 miles per hour. It is not denied that such a current may exist in the first or second cars, in their passage ways, but it is denied that a current of *one mile per hour* is induced in a line with the passengers seats. The passenger next the gang way may perceive a current, but the one next the window does not. Does "K." wish a proof of this, let him place a brazier of coals on a passenger seat, and scatter some resin on it so as to produce a smoke. The smoke as it rises will describe eddies, *slow* and graceful in their gyrations, with an almost imperceptible motion towards the rear of the car. As car after car is reached those eddies grow less and less, and the smoke assumes the cloud form. And just so do the breath and exhalations of passengers move through the train, and this is called ventilation!

Mr. Lancaster's mode of ventilation has the negative merit of being harmless. It is a system of injection. The air currents enter between the double roof with a velocity equal to that of the train's motion, but are at once retarded by the friction of their conduit and their deflection into the air channels or chambers on the cars' sides. The

pressing force of the air current will certainly be less in the car than it was at the entrance of the conduit, and the velocity of the currents passing and pressing on the cars' external surface being equal to the entering current, how can it be expected that these weakened currents will neutralize the strong external one when a window or a blind is opened. During the summer of '52 a car running between Worcester and Springfield was fitted with ten injectors on its roof, the sum of whose area was five square feet. It was supposed that the great amount of air thus thrown down into the interior of the car would create an interior pressure sufficient to expel any dust or cinders from the windows' openings. But on trial, under a speed of 50 miles per hour, a window could not be opened without the dust rushing in and when the window was closed the car was so hot as to oblige the passengers to leave it. Mr. Lancaster's plan or any other having for its basis the principle of interior pressure, will not accomplish the result, without involving requirements inconsistent with railroad usage.

P. M. H.

Reciprocal Treaty with the British Provinces.

One of the last acts of Congress at its recent session, was a confirmation of the Treaty for removal of duties on certain articles of commerce between the British North American Provinces and the United States. As the operation of the Treaty is confined to the products of the Provinces, which are chiefly of the *soil*, and of *fisheries*, it would appear to be much more favorable to their interests, than to those of this country, as we already produce a surplus of all, or nearly all, the articles exempted from duty, except lumber and coal. That the Provinces will realize a greater relative advantage from the arrangement just entered into, than the United States, we have no doubt; but it would hardly be possible for the former to yield more at the present time; for to admit our manufactures *duty* free, would be to give up the sources of the present revenue by which all the expenses of their government are defrayed. All things considered the Treaty secures to us all that the Provinces could well yield, or this country could reasonably ask. We shall derive a substantial advantage from it, and it is no good ground against it, that *other* parties will gain more than ourselves.

Commercially, the British Provinces are as much to be benefitted by free trade with the United States as are Louisiana or Texas. The natural and convenient markets for all, are the Northern and Eastern States, which are occupied by our manufacturing and commercial classes. A very considerable portion of the products of the Provinces will not bear exportation to the mother country. They have been excluded from the markets of this, by high duties. The result has been that the Provinces, the lower ones particularly, have shown an enfeebled and languid growth when contrasted with the progress of the States, though in possession of unequalled resources. The new Treaty which removes all obstructions to intercourse with their best markets, will form an era in their history.

The treaty is gratifying evidence of the progress of liberal ideas in national intercourse. We have no doubt its provisions will be extended so

as to embrace within a few years, all the articles of commerce between the two countries, so that *practically* the people of both will form one community, whatever may be the peculiarities of their local institutions.

Mississippi Central Railroad.

Below we give the statement of the Mississippi Central Railroad Company. It will be seen that they are progressing quietly, but energetically, in the construction of their road, with means supplied by the contributions of the people upon its line. This fact presents a striking and refreshing contrast to the usual course of railroad companies in seeking to borrow before they have hardly put a spade into the ground. The road will be constructed with despatch, without incurring a debt, or at least one of any considerable magnitude. The promptness with which the necessary funds are furnished is owing in part to the trust reposed in the managing parties in the road, who possess the entire confidence of the people of Mississippi, a confidence greatly strengthened by their judicious management of the company's affairs. There are no lack of means in that portion of Mississippi traversed by the above line, but it is necessary that the people should be made to believe that they will *secure* the construction of the proposed work to call them out.

The country through which the above road will run is one of the best in the South. There is none better settled, or which can show a larger amount of productions. The great staple is *cotton*, all of which is to be *exported*; and, of course, corresponding amount in bulk, or value, *imported*. The road is built mainly for the *incidental* advantages that are to follow, though we have no doubt it will yield in dividends a large return upon its cost. The connections it will form will add largely to its value and usefulness.

As far as Mississippi is concerned its success will constitute a marked event in the history of that State. It will inspire a degree of self-confidence and self-reliance on the part of her citizens which will render the execution of similar enterprises comparatively easy. It is a great thing to have a commendable example set in the outset. Such a one is the manner in which the affairs of the Mississippi Central R. R. have been conducted; and those who have been mainly instrumental in its success, are entitled not only to the gratitude of those immediately to be benefitted, but to the respect and imitation of the whole State.

REPORT OF THE DIRECTORS TO THE STOCKHOLDERS.

Soon after the adjournment of your last annual meeting a contract was concluded with Healy, Holeman, Sims & Sargent for the construction and equipment of your road from the town of Canton to the State line of Tennessee. The terms and conditions of the contract are in strict accordance with the basis of an agreement submitted for your consideration at the meeting above referred to, and approved of by an unanimous vote of stockholders then present. The contract is deemed highly favorable to your interest, securing the completion of the work at an early day, for a stipulated compensation, and on terms that should render it satisfactory to all the parties interested.—While it promises to you the speedy construction of an economical and permanent road, it offers assurances to the contractors of a reasonable remuneration for labor performed and risk incurred, should they prosecute the work with the skill and economy they have heretofore exhibited in the execution of works of the same or similar character.

It is stipulated in the contract that the road being one hundred and eighty-three miles in length, with necessary side tracks—shall be completed, as now located, by January 1857, for the sum of \$3,262,500. This amount includes the cost of the necessary locomotives, passenger and freight cars, with all the fixtures for operating the road when completed, and all engineering expenses with the exception of the salary of the Engineer in Chief.—In every particular the work is to equal a first class road of the materials of which it is to be constructed.

Ground was first broken on the line of road at Holly Springs, on the 16th of November last, in the presence of the Board of Directors and a large concourse of citizens, assembled to witness and participate in the ceremonies of the day.

It was a source of pride to all who joined in the festivities of that day, and may well be a source of congratulation to each and all of the stockholders of the Company, as well as to the citizens of the State generally, that for the favorable pecuniary condition of the Company, and the certainty of the successful prosecution of the work now in progress, they were indebted to no foreign capital, to the aid of no commercial city or town, but solely to the liberality and enterprise of our own citizens, and mainly to the planting interest of the counties through which the road is to pass.

Active operations in the construction of the road bed were commenced by the contractors in December last, about twelve miles north of Holly Springs. From the progress made in the work on that part of the line and from the number of hands now employed thereon, you may confidently rely upon the road being in readiness for the cars from Holly Springs to the intersection of the Memphis and Charleston Railroad, a distance of twenty-five miles, by the first of January next.

During the month of January nearly all the earthwork within the limits of Yalabusha county was sub-let by Messrs. Healy & Co., to the citizens of that county, who soon thereafter commenced operations on their several contracts and are now prosecuting the work with an energy that gives assurance of its early completion.

Most of the graduation between the Tallahatchie River and town of Oxford, a distance of fourteen miles, has recently been sub-let to the citizens of Lafayette county, and it is expected that the work of the construction will soon be commenced on part of the line.

Proposals are now solicited for clearing, grubbing and grading the roadway in Carroll and Holmes counties, and should the citizens of those counties exhibit the same willingness to undertake work on that part of the road, that has been exhibited in the other counties, the commencement of operations on that part of the line, during the present summer or fall will be placed beyond reasonable doubt.

From the well known character and ability of the sub-contractors to comply with their engagements, the directors feel confident that the work undertaken by them will be completed within the time, and in accordance with the stipulations of their several agreements.

It has ever been the desire of the Board of Directors that citizens of this State should undertake and execute the work necessary to prepare the road-bed for the iron rails, and thus enable the Company to return to our own people, as a compensation for labor performed, some portion of the funds obtained from them for the construction of the road.

The contractors, Messrs. Healy & Co., have at all times cheerfully co-operated with the directors in their efforts to accomplish this object, and it gives me pleasure to add, that nearly all the sub-contracts have been taken by men residing near the line of road, who, so far as the Directors are advised, are well satisfied with the compensation they are receiving for the work executed by them. By a continuation of this course, employment may be furnished to the surplus labor of this part of the State, our citizens benefitted by the profits of that labor, a greater number of hands at all times

engaged on that work, and the original contractors will thus obviate the necessity of introducing more laborers from other States than will be required to execute that part of the work that our own citizens are unwilling to undertake.

It was first determined, to commence the construction of the work on several divisions of the line to which iron could be most certainly and cheaply transported, at about the same period of time.

With this object in view, and with a desire that stockholders of the Company and citizens of the State should first have an opportunity of undertaking such portions of the work as they should wish to execute, in the month of December last, immediately after the commencing of the work on the northern division, an effort was made to sub-let the earthwork on that part of the southern division of the road within the limits of Madison and Yazoo counties. In consequence of the prices demanded for executing the work desired, the difficulty of obtaining the right of way without the prospect of paying heavy damages therefor; the unwillingness of the citizens of Madison county to aid in the construction of the road, by subscriptions to the capital stock of the Company, when they were to be greatly benefitted by its construction; the doubts then existing in regard to the completion of the Great Northern road to Canton, and the possibility of promoting your interest by extending your road to the city of Jackson; all combined to induce the directors to postpone for a time the commencement of the work on that part of the line, believing as they did, that a short delay would be advantageous to your interest by a removal of some or all of the then existing obstacles to an economical prosecution of that part of the work, and at the same time to give to the directors an opportunity to ascertain if a proper regard for your interest did not require that the road should be extended to the city of Jackson.

The result of the delay has not disappointed the expectations of the directors. Some of the difficulties referred to have been entirely removed, and it is confidently believed that others will soon be, or very much lessened in magnitude, so that the work may be commenced on that part of the line at an early day, and prosecuted with as much economy as on any other portions of the road.

The delay has not had a tendency to retard the progress of the work, or the ultimate completion of the entire road, nor in any manner been detrimental to your interest, but on the contrary advantageous to it.

The first consideration in determining the place of commencing the work of construction to select those points to which iron could be transported most certainly. Fortunately for the interest of the Company the divisions of the road offering the greatest facilities for the procurement of the iron rails were those places where labor could be most cheaply obtained, or where the least amount of earthwork was required for the construction of the road-bed. By prosecuting the work on these divisions the greatest amount of labor would be accomplished, or the greatest number of miles completed with the least outlay of capital.

The stockholders should not be unmindful of the fact, that the directors are restricted by public pledge, in their calls upon the subscribers to the capital stock of the Company, to one-third of the amount of their several subscriptions in any one twelve months, and should the amount of work executed or value of materials furnished, exceed their means of payment, the credit of the Company must be impaired thereby, and the completion of the road retarded if not entirely abandoned.

It is equally important that the work performed should be connected, so that as soon as completed it may be made useful to the public and profitable to the Company.

An amendment to your charter was granted by the Legislature of this State at its recent session, and it becomes necessary for you to accept its provisions before you can avail yourself of its benefits. It authorizes a connexion of your road with the

New Orleans, Jackson and Great Northern road at the city of Jackson, or at any point north of that city. It permits a consolidation of your Company with that of the Mississippi and Tennessee Central Railroad Company at any time it may be mutually agreed by both companies to do so, and thus form one continuous road under one organization, from your southern terminus northwardly through this State and Tennessee. These, with other granted privileges of perhaps minor importance are considered by the directors so advantageous to your interest; that they earnestly recommend its acceptance.

The Engineer of the Company has been directed to survey a line from a point at the present location in Yazoo county to the city of Jackson and to estimate the cost of such an extension. The citizens on the route of this new survey have been solicited to aid, by subscriptions to the capital stock of your Company, in raising the necessary funds to pay the additional cost of such extension in the event of its adoption. The estimates of the Engineer, and the amount of subscriptions thus obtained, are now in readiness to be submitted to the Board of Directors, and will enable them without further delay, to determine the point of connexion with the New Orleans, Jackson and Great Northern Railroad.

The Legislature by a recent law has authorized and required about one-third of the proceeds of the sale of the 500,000 acres of Internal Improvement Land donated by the General Government, in 1841, to this State for objects of internal improvement, to be invested in the capital stock of your Company. There is now in the State Treasury, a fund amounting to about \$360,000 derived from this source, about \$100,000 or nearly one-third of this sum is subject to the demand of the President of the Board of Directors.

Of the 500,000 acres of land, there was remaining unsold on the first of May last 347,395 acres, according to a statement of the Secretary of State. From the funds now in the State Treasury, and from future sales of land, you may reasonably anticipate that your capital stock will be increased some \$300,000 or \$350,000.

During the past fiscal year individual subscriptions to the capital stock of your Company have been largely augmented and now amount to \$1,741,250, including the amount taken by the contractors.

Since your last annual meeting, the country of Holmes in its corporate capacity has subscribed \$100,000, and hopes are entertained that the country of Carroll will follow her example.

The available means of the Company to comply with the obligations incurred by the contract with Messrs. Healy & Co., consist of individual subscriptions, as above stated... \$1,741,250

Subscription by the county of	
Marshall.....	\$100,000
Subscription by the county of	
Lafayette.....	100,000
Subscription by the county of	
Yalabusha.....	150,000
Subscription by the county of	
Holmes.....	100,000—450,000
Estimated amount to be realized from sales of Internal Improvement land, including the amount now in the State Treasury, say.....	300,000

Making a total of..... \$2,491,250

Leaving the sum of \$771,250 to be hereafter provided for by additional subscriptions or by loans.

The individual stockholders have generally paid the calls made upon their subscriptions, with great promptness, thus giving assurance that they may be relied upon for all further requisitions made upon them.

The High Court of Errors and Appeals having declared that part of your charter authorising counties to subscribe to the capital stock of your Company, a Constitutional law, the several counties that have availed themselves of that authority, during the past fiscal year collected by direct

taxation and paid to the Treasurer of your Company, nearly the amount necessary to liquidate the first annual instalment on their several subscriptions.

When it is remembered that these county subscriptions were to be paid in five or six annual instalments, by direct taxation on the taxable property of the county, and are based upon an assessed value of property in the subscribing counties, amounting to \$24,912,451 00, they may be considered of the most reliable character and their payment placed beyond contingency.

By reference to the report of the Treasurer, herewith submitted and marked "A," it will be seen there has been paid into the treasury since the organization of your Company, on account of capital stock, the sum of \$256,859 26, and there has been paid out during the same period, on account of construction, engineering, land damages, depot grounds, and other incidental expenses \$87,073 07, leaving in the hands of the Treasurer the sum of \$169,786 19, applicable to the prosecution of the work during the current year, and the liquidation of claims outstanding against the Company.

This is exclusive of the amount of the Internal Improvement Fund now in the State Treasury, subject to the demand of the Company; and you may confidently rely on the amount being considerably increased from payments that will be made from those who have heretofore neglected to pay the calls upon their subscriptions.

The Mississippi and Tennessee Central Railroad Company have concluded contracts for the construction of the road-bed from the northern boundary of this State to Jackson, Tenn., were it forms a junction with the Mobile and Ohio road, to be completed and in readiness for the iron rails by May, 1856.

That Company has abundant means at command to prosecute the work to a final completion, and from the well known character of those having the road in charge, you may confidently rely on its energetic and successful prosecution. The road here referred to, being a direct northern continuation of yours to an intersection with the Mobile and Ohio road, and possessing the privilege of extension through the State of Tennessee, its completion will materially increase the traffic and profits of the one in which you are shareholders.

From the progress making in the construction of the Mobile and Ohio road in the States of Tennessee and Kentucky, there is no reason to doubt its completion to the Ohio River at a period anterior to the anticipated completion of yours, thus opening a direct railroad communication over the Illinois Central road with the city of St. Louis and the northern lakes, on the shortest possible line that can be obtained east of the Mississippi; intersecting in its course the contemplated roads from Memphis to Louisville, and from Nashville to the Mississippi River. Near the State line of Tennessee your road intersects the Memphis and Charleston road passing eastwardly from the city of Memphis to the city of Charleston.

Seventy miles of the New Orleans, Jackson and Great Northern Railroad from the city of New Orleans north, is now in operation, and will be extended to the southern line of this State in all of next month. There is, at present, no cause to doubt its completion to the town of Canton before the expiration of the year 1856. Thus you have almost certain assurance that, by the expiration of the time when your road is to be completed, there will be a continuous line of railway of the same gauge, extending from extreme north to the city of New Orleans, traversing a country possessing the elements of almost unlimited agricultural wealth and offering facilities for the speedy interchange of the productions of 11° of latitude.

In addition to the connections with the important roads already referred to, should it be determined to extend your road to the city of Jackson, a junction will there be formed, not only with the New Orleans, Jackson and Great Northern road, but also with the southern road extending east

through Alabama; the Vicksburg and Jackson road, extending west through Louisiana over the Vicksburg and Shreveport road; and the contemplated road from Jackson to Ship Island. These are considerations worthy of serious reflection and should not be thoughtlessly rejected.

When these important railroad connections are duly considered, with the amount of freight and passenger traffic that may now flow from them; when you reflect upon the direct north and south line of your road; its remoteness from the competing influence of other railways, and of the Mississippi River; the character of the country traversed by it; the quantity and value of the productions of the district tributary to it; the population within the range of its influence; the yearly amount of travel passing from north to south; can it be doubted that this long line of railway will not almost equal in its advantages and importance the Mississippi River itself, or that the certainty and amount of the income of your road, when completed, will not equal, if it does not exceed, that of any other road now constructing, or in contemplation in any of the south-western States.

The local traffic of a railroad is of the first importance, and none should be undertaken where the local passenger and freight traffic does not promise an income equal to the expense of operating it when completed. The Central road possesses this assurance in an eminent degree.

In the district of country limited by its line of influence is contained more than one-fourth of the whole white and black population of the State, and there was grown more than one-fourth of the cotton and corn crop produced in 1849, in the whole State, according to the United States census of 1850. In addition to this, there is produced large quantities of agricultural commodities, now almost valueless to the producer, on account of expense of transportation to a market, that would become valuable articles of export upon the completion of the road. There are also extensive tracts of unimproved land, equal in quality of soil to any in the cotton growing region, that need but a cheap and certain means of transporting the productions of the country to market, to insure their cultivation and a very large addition to the quantity and value of our exports, thus securing to your road an amount of local traffic far exceeding any estimate that may have been made, based upon present population and production.

Notwithstanding the great benefits to be derived from the construction of your road, the profits that may reasonably be expected from its operation, and the means at the command of the directory for the prosecution of the work, its speedy completion must depend, in a great degree, not alone upon the directors, but upon the active and united co-operation of the stockholders of the Company. Upon them must the directory depend for the necessary means to comply with the engagements made with the contractors, and in turn the stockholders must look to the directors for an economical and judicious expenditure of the means entrusted to them. By mutual confidence and united action, all obstacles to an energetic prosecution of the whole work will be overcome, and its completion will be rendered as certain as its use will be beneficial.

Respectfully submitted by
W. GOODMAN, President.

Charleston and Savannah Railroad.

At an adjourned meeting of the subscribers to the Charleston and Savannah Railroad, held Wednesday the 12th ult., the following named gentlemen were elected President and Directors for the ensuing year:

President, Thos. F. Drayton; Directors, Hon. T. L. Hutchinson, Wm. Kirkwood, Edward Frost, Otis Mills, N. Heyward, W. F. Colcock, L. T. Potter, Daniel Hayward, W. B. Hodgson, J. Bradley, C. G. Meminger, J. B. Campbell.

Cleveland and Mahoning Railroad.

A meeting of the stockholders of this road took place in Warren, Ohio last week. The President Mr. Perkins, made a statement of the affairs of the Company, from which we glean the following. The stock account of the Company (including \$125,000 subscribed by Lawrence county, and applicable to the portion of the work in Pennsylvania) is over one million of dollars. Of this amount \$850,000 is applicable to the construction of the line from Cleveland to Youngstown, 67 miles. About \$520,000 has been expended in construction, right of way, etc., and about \$200,000 has been invested in the stock of the Ohio and Pennsylvania Canal. The amount of stock still believed to be collectable, and the real estate for sale, &c., applicable to the completion of the line from Cleveland to Youngstown, it is expected will realize \$230,000. The cash means required to complete to Youngstown exclusive of the iron, is about \$430,000, leaving still \$200,000 to be provided for. The Directors had prepared the Bonds of the Company, secured on a first mortgage, to the amount of \$850,000, but owing to the state of the money market, only \$37,600 have been sold.

After much consultation, the following resolution was passed by the stockholders:

Resolved, That to enable the Board to prosecute the work, efficient means should be taken to collect the sums due upon subscriptions of stock; and that it be recommended to the Board to issue in such sums as may be convenient, the convertible Bonds of the Company, to the amount of \$500,000, redeemable in ten years, bearing an interest of seven per cent. per annum, payable semi-annually in cash, and secured by second mortgage upon the road; and that one-half of this sum be offered for sale at not less than eighty cents on the dollar; but no Bond be issued until responsible parties shall have agreed, in such form as may be prescribed by the Board, to purchase a sufficient amount of such bonds to raise the sum of \$200,000.—*Pitts. Gaz.*

Resident Engineer's Headquarters.

{ STANFORD, SHEFFORD & CHAMBLEY R. R.
{ Granby, Canada East, Aug. 3d, 1854.

Gentlemen:—In the JOURNAL of July 29th, I notice some remarks by E. Nggent, C. E., on the equating of grades. I perceived some time since a misunderstanding among Engineers in regard to this subject, some equating for grades by adding one mile for every 20 feet of ascent, and some for every 80 feet: for comparison of different lines merely it matters little what is the number used, provided it is the same in both cases, but to find the equivalent horizontal line to any location, regard must be had to the nature of the expected traffic.

The elements of the problem are, the length and inclination of line, and the resistance of the train, which resistance depends on the weight and velocity of the load. Scott Russell's formula for the resistance to the motion of railroad trains gives the following results, the weight of the train being 50 tons:

Velocity per hour. Miles.	Resistance per ton. Pounds.
20	14.5
30	19.3
40	25.0
50	35.4
60	39.0
100	76.5

Let R = the resistance of a railroad train on a level, the resistance due gravity on an incline is expressed by $W \times \frac{1}{a}$; where W is the weight of the train in pounds, and $\frac{1}{a}$ the fractional inclina-

tion of the gradient. Now the vertical height in feet to overcome which we must expend an amount of power sufficient to move the load one mile on a level must be such that

$$W \times \frac{1}{a} = R;$$

$$\text{or } \frac{1}{a} = \frac{R}{W}.$$

To find then the number by which to equate proceed as follows. Supposing the train to weigh 50 tons or 112,000 lbs., and the velocity 20 miles per hour. The resistance from the above table is $14\frac{1}{2}$ lbs. per ton = 725 lbs. for the whole train, substituting which value in the formula $\frac{1}{a} = \frac{R}{W}$

it becomes:

$$\frac{1}{a} = \frac{725}{112,000} = \frac{1}{154} = 34 \text{ feet};$$

and the numbers for equating for the velocities in the table above are as follows:

20 miles per hour	..... 34 feet.
30 " " "	..... 46 "
40 " " "	..... 58 "
50 " " "	..... 83 "
60 " " "	..... 92 "
100 " " "	..... 181 "

Very respectfully

GEORGE L. VOSE.

Winchester and Alabama Railroad.

The Agent of this road, W. N. Bilbo, Esq., has at last succeeded in obtaining in Franklin county its proportion of the funds necessary for the completion of this road. Franklin county, for her population and resources, contributed more than any other county to the construction of the Nashville and Chattanooga railroad; and it has strained every nerve to raise its quota for the Winchester and Alabama railroad.

The Winchester and Alabama railroad commends its importance to our citizens from various considerations. It opens the interior of Alabama to Mobile, and by branches tapping the main trunk, the Western portions of Georgia, and the Eastern portion of Mississippi, to the stock and grain producers of our State. For its extension intersects the Memphis and Charleston railroad ten miles from Huntsville, and at Gunter's Landing meets with the Mobile, Selma, and Tennessee Railroad. It is of infinite importance to our grocery Merchants, who already partially supply this portion of the South with groceries. Nashville will soon become, as she now is in part, the exporter of the cotton of Jackson and Madison, and partially of other counties of North Alabama.—The completion of this road puts Nashville 120 miles nearer Huntsville by railroad than Memphis. Hence the great interest manifested by the citizens of Huntsville and North Alabama, for its immediate construction. They have already raised money enough to grade and timber that portion of the road to the intersection, and the entire Selma Mobile, and Tennessee Railroad is in a state of construction. Besides, all the funds necessary for the completion of the Memphis and Charleston railroad have been raised. Thus we see the importance of the immediate construction of the Winchester and Alabama railroad to the citizens of the Nashville and the farmers of Middle Tennessee. It is the most direct route to Mobile and New Orleans, and gives our farmers an advantage in market over those of East Tennessee and Kentucky, being some 150 miles nearer.

This road also commends itself to our citizens from the following facts: ninety-five miles from Nashville commence the coal fields of the Cumberland Mountains. They approach this road within from three to five miles, and extend parallel with it for a distance of twelve miles. The coal is fine and the strata are from three to five feet. Those of our knowledge belong to the Keiths, Whartons,

Stovals, Francis, and Lytles. The marble quarries are of the beautiful variegated, such as decorate our Capitol, and the black and gray. They approach within two miles of the road, near Salem—commencing at the cotton factory of Hunt & Man, and extending six miles along the road. There are forest of poplar, white oak, cedar, black walnut and cherry, indispensable to our furniture, engine, car, and steamboat manufacturers and builders. Vast deposits of iron are approached upon the lands owned by L. Mathews, within one quarrel of a mile of the road, and miners have discovered in several portions of Franklin county, the outcrops or blossoms of Copper. Our informant saw several specimens tested. The most valuable are those owned and analyzed by Newman & Shook. Nashville must be the great market for the consumption and exportation of these minerals and lumber.—*Nash. Union.*

Columbia and Hamburg Railroad, Ga.

James G. Gibbes, Engineer, has completed the preliminary surveys of this road, and has submitted his report to the authorities of Columbia, by whom he was appointed.

Two routes were surveyed, the one which he designates the "low or direct line," runs within two and a half miles of Aiken, (why not unite with the Charleston Road at Aiken, and thus save fourteen miles of road?) and is 68½ miles long—an air line being 63½. The other which he designates "the upper or Ridge line," passes from Hamburg near the Cherokee Pond, Edgefield, C. H., etc., and intersects the "lower route" about eight miles from Columbia, making the distance 74½ miles.

His estimates for the cost of construction of the two lines are as follows:

Direct line—68½ miles, \$1,105,625

Ridge line—74½ miles, \$1,040,925.

Being \$16,140 50 per mile for the direct, and \$13,972 14 for the Ridge line.

Rochester Scale Works.

Among the many items we call attention to, we would remember Messrs. Duryee & Forsyth, of Rochester, N. Y., Manufacturers of scales and safes. This enterprising firm has been before the public a number of years with their wares, and have gained a world-wide reputation.

Their scales are known by their correctness and durability. Their safes are of superior finish, and contain materials proof against fire—as has been proved in all instances when subjected to the test. Recently one of their *Fire Kings* was in a large fire at Brantford, C. W., with a large sum of money, books and papers in it, and all was preserved in good order—all of which speaks well for the manufacturers. Early this spring they erected a Railway Suspension Scale at Cleveland, for Messrs. Otis, Knight & Co., for weighing wheat by the car load. This scale was constructed upon a new plan invented by the senior partner of the firm (Mr. Duryee,) and is well worthy the attention of all railroad Companies, and others wanting such scales. This scale is of great utility, and must be far preferable to the old plan of constructing them.

Messrs. Duryee & Forsyth have done much to improve and bring into use weighing machinery, and to bring the price of a good article to a fair standard, and within the reach of all wanting them. Previous to their engaging in the business, a high and exorbitant price was charged for scales, by New England Manufacturers, and when Messrs. Duryee & Forsyth entered the field, for a share of patronage, a strong hostility was kept up against them by their opponents, and persevered in with untiring zeal to crush them—but thanks to none but their own efforts for success, by their untiring perseverance and efforts they have succeeded.

Railroad companies, merchants and others are under obligations to Messrs. Duryee & Forsyth.—Had it not been for them they would have to pay exorbitant prices for their scales—and we are glad to know that they are winning golden opinions all over the land—and that their trade is very rapidly increasing. They are gentlemen of

honorable dealings and worthy of public patronage.—*Dyer's (Cin.) Bank Note Mirror.*

Congress.

The session of the present Congress closed on the 8th inst. The present session has lasted eight months and among the most important measures consummated are the following:

The regular Appropriation bills.

The Kansas and Nebraska bill.

The bill providing for six first class war steamers.

The Ten Million bill of the Gadsden treaty.

The Homestead bill for Kansas and Nebraska.

The bill extending the warehousing system

The bill to give effect to the Canadian reciprocity treaty.

The bill repealing the Minnesota Railroad Land bill.

Amongst the treaties ratified by the Senate, the most important are:

The Gadsden treaty.

The British Colonial Reciprocity treaty.

The Commercial treaty with Japan.

The Neutrality treaty with Russia.

Sundry treaties extinguishing the Indian titles in Kansas, Nebraska and other Territories.

Among the bills which have failed are;

The various railway schemes.

The French spoliation bill of five millions.

The Pacific Railroad schemes.

The Senate bill of eight millions for the relief of Texas.

Senate amendments of several millions to the general appropriation bills, including half a million to the Washington water works.

Mr. Olds, administration bills for the increase of the rates of postage.

The bill for a line of steamers between San Francisco and China, &c. &c.

And the bill to break up Collins steamship line appropriations.

The River and Harbor bill met the Executive veto and failed to become a law.

Opening of the Chicago and Mississippi Railroad.

It will be seen by an advertisement in another column that the Chicago and Mississippi Railroad Company commence running through trains from this city to Alton and St. Louis to-day. Hitherto the railroad connection between Chicago and St. Louis has been made by three distinct lines of road. The link between Joliet and Bloomington has been completed, and now we have another great trunk line in operation to the Mississippi and the southwest. It is needless to speak of the great importance of this road to Chicago, bringing us, as it does, within twelve hours of St. Louis and the Lower Mississippi. That it will pay a large per cent. to the stockholders, and contribute largely to the business and wealth of our city, no discerning man entertains a doubt. The manner in which this road was built, speaks volumes for the energy and perseverance of the Company.—*Chicago Press.*

Chicago and Mississippi Railroad.

We understand that the resignation of Edward Keating, Esq., as Superintendent of the above road, took effect on yesterday. Mr. K., has discharged the arduous and incessant duties of his office with the most unremitting assiduity and industry; and the highly prosperous condition of the business of the road, amply testifies with what results his diligent and persevering efforts to advance the interest of the company have been rewarded. Having been in feeble health for a few weeks past, he started on last Wednesday for the East, where it is hoped his health will be entirely restored, by the change of air and scenery.—We but speak the sentiments of all connected with the road, when we say that the resignation is a source of deep regret to them, as well as to his numerous friends and public in general.

His successor, Richard P. Morgan, Jr., Esq., of Bloomington, assumes his duties of Superintendent.

to-day—a station which a long experience as construction engineer on the Joilet extension, has no doubt eminently qualified him to fill to the satisfaction of all parties.—*Alton Tel.*

Railway Traffic Returns.

Great Western of Canada 229 miles.

Earnings for week ending August 4th.

From Passengers	9,714
" Freight	2,358
" Sundries	1,074

\$13,148

Number of Passengers	5,876
Total since 1st Jan. 1854	\$590,976
" Passengers "	202,565

Grand Trunk Line of Canada 292 miles.

Earnings for week ending July 22d.

From 4,579 1st class passengers	5,333
" 323 2d "	236
" 2,418 tons mdze	5,866
" 557 M. feet lumber	2,027
" 943 cords firewood	1,319
" Mails &c.	779

Total

Total from July 1st 1854

Great Western of Canada 229 miles.

For the week ending July 28th 1854.

Received for passengers	9,137
" Freight	2,184
" Sundries	1,248

Total

No. of passengers carried	5,201
Do. since Jan. 1st 1854	196,689
Total Receipt since Jan. 1st	577,827

Grand Trunk of Canada 292 miles.

For week ending July 15, 1854.

Received for 5,261 passengers	\$6,094
" 3,175 tons freight	6,791
" 641 M. feet lumber	2,185
" 636 cords wood	932
" Mails &c.	779

\$16,781

Total receipts since July 1st

Railways in New Brunswick.

We learn from A. C. Morton, Esq., Chief Engineer of the European and North American Railway in New Brunswick, who is now in this city, that the contractors for building the E. & N. A. Railway in that Province, Messrs. Jackson, Brassey, Peto and Betts, are pushing on, with all practicable despatch, the construction of the entire line from St. John to the Gulf of St. Lawrence, and to the frontier of Nova Scotia. A large portion of the rails are already delivered, and the iron bridges are either all received, or already shipped from England. All the principal bridges are of iron, similar to those going up on the Quebec & Richmond Railway, and the road is to be of a superior character throughout.

Some difficulty exists, from the scarcity of laborers, but from the present posture of the work it is believed that during the coming year the line may be completed from St. John to the Nova Scotia line. The locating surveys are finished, and the work is sublt to American contractors.—*State of Maine.*

Penalty for Over-issues of Stock.

The Legislature of New Hampshire has passed the following law relative to over-issues of stocks:

"Any president, cashier, treasurer or secretary, or any other officer or stockholder of any bank, railroad, manufacturing or other corporation in this State, who shall knowingly, falsely and willfully sign, issue, or cause to be issued, any shares, in the capital stock of their respective corporations, other than those authorized in their charter, or by some amendment thereto, shall be deemed and adjudged guilty of felony; and when duly convicted thereof, shall be punished by a fine not ex-

ceeding \$1,000 and imprisoned in the State prison for not less than one nor more than seven years, at the discretion of the Court."

The Committee chosen to investigate the recent over-issue of 10,321 shares in the Vermont Central Railroad by Edward Crane, the President of the Company, have made a lengthy report. They exonerate all parties from the fraud except Crane; and after alluding to his previous over-issue of 2,000 shares, the Committee say: "To inflict a second injury in a corporation already prostrated by his misconduct, renders the act the more detestable, and when it is considered that everything was done to shield him from the consequences of his first transaction on the ground that he received no private benefit from it, he has added ingratitude to crime, and stands before the public an object of scorn and contempt."

Wabash Valley Railroad Company.

The annual meeting of the Stockholders of the Wabash Valley Railroad Company, was held at York, Ills., on the 3d inst.

The following gentlemen were unanimously elected Directors:

Hon. A. T. Ellis, of Vincennes; Governor A. C. French, John Houston Esq., Dr. D. S. Meserve, Crawford county, Judge U. M. Mayle, John B. Richardson, Gilead Shaw, Clark county; Jonathan Young, Hiram Sanford, S. Sutherland, Edgar county.

The Directory held a meeting the same day and unanimously elected—

Hon. A. T. Ellis, President; John B. Richardson, Secretary; Joseph G. Bowman, Treasurer; and Charles Summers, Chief Engineer.

Cincinnati, Logansport and Chicago Railroad.

The following named gentlemen now constitute the Board of Directors in this Road:

C. B. Smith, J. A. James, D. A. Powel, R. M. Corwine, J. Pullen, Cincinnati; C. K. Hamilton, New York; S. Meredith, Cambridge City; W. Butler, Dublin, M. L. Bundy, J. C. Huddleston, New Castle; W. Wright, Logansport.

On Monday last, C. B. Smith was elected President in the place of J. T. Elliott, resigned. A change in the Board of Directors and the President is in consideration of a subscription of \$800,000 to the Cincinnati, Logansport and Chicago Road, by the Cincinnati and Chicago Straight Line Company. This arrangement will, it is confidently believed, secure the completion of the road from New Castle to Logansport this fall.—*Rich. Pallad.*

To Contractors for Railroad Iron.

PROPOSALS will be received until the 20th September for nine thousand tons of railroad iron T pattern, sixty pounds to the yard, One-half to be delivered at Charleston, South Carolina, and one-half at Wilmington, North Carolina, delivery to commence in January and close in August, equal quantities to be delivered in each month at each place.

Payment will be made immediately on the delivery of each cargo, in North Carolina Funds. The contract will be given to the lowest responsible bidder provided the price be satisfactory. Bidders will endorse their bids—"Proposals for Railroad Iron"—and address them to Cyrus P. Mendenhall, Secretary, North Carolina Railroad Company, Greensboro, N. C.

WALTER GWYNN,
Chief Eng. N. O. R. R. Co

Raleigh, August 3d, 1854.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to EDW. BECH & KUNHARDT, 62 Beaver St., Or, A. TOWAR, Agent Pokeepsie Iron Works, Pokeepsie, N. Y.

Universal Scroll Chucks.

THOSE in want of a superior article and of various sizes will please call at or address the MERIDEN MACHINE CO. 15 Gold-st. corner of Platt, New York City. 81.2t

To Railroad and Canal Co.'s Contractors, &c.

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics &c., of any description, and also inform them that they forward and deliver such men at whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.

No. 86 Greenwich Street, New York.

26.4t

Lawrence Scientific School, HARVARD UNIVERSITY.

THE next term of this Institution will open on the thirty-first day of August, 1854, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical exercises, according to the nature of the Study, will be given in:

Astronomy	by Messrs. Bond.
Botany	Prof. Gray.
Chemistry, Analytical	
" and Practical	Horsford.
Comparative Anatomy	
and Physiology	Wyman.
Engineering	Eustis.
Mathematics	Pierce.
Mineralogy	Cooke.
Physics	Lovering.
Zoology and Geology	Agassiz.

For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

CAMBRIDGE, Mass., July, 1854.

[30 4t

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purpose, which will be sold at a reasonable price. For further information, apply to.

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York,

19 1t

Railroad Iron at Auction.

THURSDAY August 3d at twelve o'clock, at the sales room 54 William street.

1268 tons English Rails, New York and Erie pattern, about fifty six pounds linear yard, of approved quality, make and pattern.

These Rails are in the United States Bonded warehouse at Brooklyn, and convenient for shipments. Sample Bars can be seen at Auction Room. July 29. 1t

Lowmoor iron.

W. BAILEY LANG & CO., 54 CLIFF STREET, have in stock and offer for sale an assortment of Round, Flat and Square Bars LOWMOOR IRON, which they will sell by the ton or single bar. The attention of manufacturers, Railway Managers and Mechanics is particularly directed to the quality of this Iron, as its great strength, uniformity, and freedom from flaws, render it the best Iron in the market, where first quality is required.

W. BAILEY LANG & CO., being Sole Agents in the United States and Canada for the LOWMOOR CO., will execute orders at manufacturer's prices. 6t.3t

To Civil Engineers.

J. M., residing at 102, Third avenue, New York city—wishes to obtain the situation of assistant in a Civil Engineer's office, or the situation of Engineer or Superintendent of works, or for any department of work, or—having surveying instruments of his own—he would undertake surveys both for railroads and other works.

He has been employed principally in Scotland surveying railways, superintending railway works, making surveys of Burghs, surveying for water works, &c.

He most respectfully solicits the attention of Civil Engineers or parties who require his services, and will attend to business faithfully and efficiently. 1t 32.1

ZERAH COLBURN,

ENGINEER AND AGENT

FOR the Design, Construction, Valuation and Purchase of Locomotives and Railroad Machinery.

Offers his services to Railroad Companies in either of these departments, having long experience and the best facilities for all.

As CONSULTING ENGINEER he will advise as to the value or adaptation of any system of motive power, and furnish drawings, estimates and specifications for any arrangement of engine.

As ASSISTANT ENGINEER he will superintend the construction, survey, or reconstruction of any railroad machinery, and guarantee satisfactory results.

As CONTRACTING ENGINEER, having connection with the most reliable and successful manufacturers, he will negotiate for the purchase of Locomotives of the very best construction and proportions. Also Wheels, Tires and Repair Shop Machinery.

Having much experience in Patent Business he will undertake the preparation of Drawings, Specifications, Applications for Patent or Invention and other papers necessary for inventors. He is able to give material assistance in bringing inventions and improvements in Railroad Machinery into favorable notice.

CHILLED TIRES FOR LOCOMOTIVE DRIVING WHEELS.

Zerah Colburn retains the principal agency for the sale and right of use of this valuable improvement, and will furnish the most substantial guarantees of its Safety, Durability, Adhesion and great ECONOMY.

Office, 3d floor American Railroad Journal Building,
No. 9 Spruce street,
New York.

REFERENCES.

The New Jersey Locomotive and Machine Co.
James Jackson, Pres't, Paterson, N. J.
Chas. W. Elliott, Vice Pres't, 59 Beaver str., N. Y.
Henry V. Poor, Esq., Editor Railroad Journal, New York.
Geo. D. Phelps, Pres't, Del., Lack and West Railroad.
Geo. W. Wheeler, Vice Pres't New York & New Haven R.
William Raymond Lee, Esq., Boston.
Bush & Lobdell, Wilmington, Del.
Oliver M. Hyde, Esq., Mayor City of Detroit.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

New York and Erie R. R.

PASSENGER TRAINS

leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, over the N. Y. & E. R. R. and the B. & N. Y. C. R. R., without change of baggage or cars.

DUNKIRK EXPRESS, at 6 a. m. for Dunkirk.

MAIL, at 8 1/2 a. m. for Dunkirk and Buffalo, and intermediate stations. Passengers by this Train will remain over night at any Station between Binghamton and Corning, and proceed the next morning.

WAY EXPRESS, at 1 p. m. for Dunkirk.

ROCKLAND PASSENGER, at 4 p. m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

EMIGRANT, at 6 p. m., for Dunkirk and Buffalo and intermediate Stations.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Elmira with the Elmira and Niagara Falls Railroad for Niagara Falls; at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, &c.

D. C. McCALLUM, General Sup't.

Power Planers.

THOSE in want of a small Power Planer which will plane 3 feet in length, 14 in. wide, and 12 in. deep, and made in a superior manner, will please call at the office of the MERIDEN MACHINE CO. 15 Gold-st. corner of Platt, New York City.

Any communication by mail directed to the office or Factory (West Meriden, Ct.) will meet with prompt attention.

For Sale.

A STATIONARY Engine, having cylinders 18 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New York.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF ERIE CANAL—WESTERN DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Buffalo, until the 1st day of September next, at 10 o'clock, A. M. for the following described work between Tonawanda and Black Rock:—

Section 360, with penalty in bond of...	\$14,000.
" 361, " " " " " "	20,000.
" 362, " " " " " "	17,200.
" 363, " " " " " "	10,000.
" 364, " " " " " "	9,800.
" 365, " " " " " "	10,600.
" 366, " " " " " "	15,800.
" 367, " " " " " "	12,000.
Guard Lock and Section at Black Rock...	14,000.
Waste Weir on Section 360.....	500.
Culvert on Section 362.....	600.
Bridge Abutments on Section 360 to Lock	
Section inclusive.....	2,000.

The above work to be completed by the first of April, 1857.

Sealed proposals will be received at the Engineer's Office in the city of Rochester until the 4th day of September next, at 10 o'clock A. M., for the following described work between Rochester and Spencerport:—

Section 266, with a penalty in bond of.	\$7,500.
" 267, " " " " " "	8,500.
" 268, " " " " " "	6,700.
" 269, " " " " " "	6,100.
" 270, " " " " " "	6,500.
" 271, " " " " " "	5,200.
" 272, " " " " " "	5,600.
" 273, " " " " " "	7,200.
" 274, " " " " " "	4,200.
" 275, " " " " " "	10,200.

Culverts on Sections 266 and 275, both inclusive do. do..... 3,500.

Bridge Abutments on Sections 266 to Section 270 both inclusive..... 3,000.

Bridge Abutments on Sections 271 to Section 275 both inclusive..... 2,000.

The above work to be completed by April 1st, 1856.

MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse until the 7th day of September next at 10 o'clock in the forenoon for the following described work:—

Section 135, with penalty in bond of....	\$5,400.
" 136, " " " " " "	6,200.
" 137, " " " " " "	5,100.
" 138, " " " " " "	4,100.
" 139, " " " " " "	4,700.
" 140, " " " " " "	4,000.
" 141, " " " " " "	5,200.
" 142, " " " " " "	6,700.
" 143, " " " " " "	6,100.
" 144, " " " " " "	4,800.
" 145, " " " " " "	4,700.
" 198, " " " " " "	3,200.
" 199, " " " " " "	4,000.

Culverts on Sections 135, 136, 187, 138 and 139..... 4,600.

Culverts on Sections 141, 144, 145, 146, 147, 148, 149..... 4,600.

Bridge Abutments on Sections 135, 136, 137, 140, 148 and 145..... 3,600.

Waste Weir at Cowassalon Creek..... 800.

Dam and Guard Gate do. do..... 600.

The above work to be completed April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus

defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, August 1st, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT,
CORNELIUS GARDINIER, } Canal Comm'rs.

JAMES M. COOK, Comptroller.

JOHN T. CLARK, State Eng. and Surveyor.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 33]

SATURDAY, AUGUST 19, 1854.

[WHOLE No. 957, VOL. XXVII.]

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

The Railroad Mania.....	513
Western and Atlantic Railroad, Ga.....	514
English preferred stocks.....	514
Self Adjusting Railway Signal.....	515
St. Louis, Paducah and Nashville Railroad Connection.....	516
Car Ventilation.....	516
Journal of Railroad Law.....	517
Indianapolis and Cincinnati Railroad.....	517
The Gold Movements of the World.....	518
The Public Lands.....	519
Harlem Railroad.....	520
Stock and Money Market.....	520
Iron Foundries of Pittsburgh.....	521
Municipal Improvements.....	522
Improvement of the Locomotive.....	523
The Engineering Profession.....	524
Cleveland and Toledo Railroad.....	524
Greenville and Columbia Railroad.....	526
Why Earnings are Applied to Construction.....	526
Ohio and Indiana Railroad.....	526

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, August 19, 1854.

"The Railroad Mania."

There is a great deal said about the "Railway mania" which has been prevailing in this country, as if these works had been pushed to an extravagant extent, or that it is time that a stop should be put to their further construction.

That there has been an extravagant number of projects brought before the public, and lines laid down on paper, which if carried out, would be ruinous to their projectors, and highly detrimental to the public interests, we freely admit. Indeed, we look upon the discredit thrown upon railroad securities, and railroad projects, and the consequent check which they have suffered, as a most fortunate circumstance to the holders of railway property.

We cannot always move successfully in one direction. If railroads have absorbed paramount attention for several years, a pause should be allowed for other interests and other enterprises to assert their claims; otherwise our development

will be an unhealthy one. When the people of Ohio shall have completed the lines they have in progress, and which will give that State something over three thousand miles of railroads, the dictate of wisdom will be to stop the construction of new ones, for the present. Money will be better expended in other directions; the same may be said of other States. The present necessity will prevent the construction in Ohio of all roads that are not called for, and thus compel the people to act in harmony with their true interests. Such being the result, the present state of affairs is not to be regretted, though it may add largely to the cost of some of the unfinished works.

There is no one tendency in the progress of our railroads which is regarded with greater distrust than the disposition to construct competing lines; yet with a healthy sentiment on the part of capitalists there is little cause for such fears. Every body would like to have a railroad running by his own door; yet, however strong this desire may be, the number is few who would take stock in such a work which they did not believe would pay. But no rival road can be constructed where the company will not be compelled to come east for a considerable portion of its cost. If rival roads are built, therefore, they will be built by the capitalist, whose interests of all others are most to be prejudiced. It depends upon this class of our citizens to say, whether rival roads shall be built or not. And no matter how many rival roads have been proposed. Their projectors, and the public, will find that such roads cannot be built. Experience will show that we have less to fear from this source than was expected, and that just in proportion as the railroad system expands, does it become the more difficult for any project having a rival look, to succeed. A new railroad is started in Western New York, or in Ohio, or Indiana, for instance, the projectors of which in due time come to New York for money. The first inquiry of the parties to whom the scheme is unfolded, is, "how will it affect the projects in which I am interested, or those for which I have acted as agent, or which I have recommended to my friends." If the answer, or conviction be favorable, still the third party to whom the proposed loan may be offered for investment, may entertain a different opinion, and refuse to touch it. The tendency of

every one who has invested in securities is to conservatism, and he naturally feels a hostility to every thing new, whether there may be any grounds for this hostility or not.

We think this view of the case will tend to quiet apprehension as to the danger of rival works. We have no doubt it is confirmed by the experience of those who have attempted to raise money for such. Three or four years ago, a man could hardly come from Ohio to raise money for a railroad, without meeting encouragement from every quarter. Those who did not wish to buy his securities, wished him well, for the general good to be accomplished by his road. The interests of the railroad companies, and the commercial and monetary communities, were regarded as entirely harmonious. Now, there is hardly a person in any of the eastern cities that has not stocks and bonds in Western railroads. A new project is at once looked upon with suspicious eyes, as its accomplishment may render worthless older ones, and the new comer finds himself an unwelcome visitor to the temples of Mammon, and is politely bowed out, where his predecessor only a year or two previous, was most affectionately received.

Circumstances, and with them the opinions of people, have changed. The present stringency in money matters has helped to confirm this change, and this is the reason why we have welcomed it. The construction of railroads is stopped per force, and during the interregnum, time is allowed for reflection, and for the conservative sentiment of the country to assert itself.

We are not in present danger, therefore, of rival roads. While this is true, we do not think that for the last five years we have built in the aggregate, too many roads, for the public good. We may have built roads where their stocks may not be immediately remunerative, but which were proper to be built, notwithstanding. We make a wide distinction between the stocks and bonds of railroads, for the most obvious reasons. The stockholders in a road, living upon its line, may be repaid the first year, all their contributions to it, by the increased value of their property. The value of such stock, therefore, becomes really a matter of secondary consideration to such owners. The purchaser of securities, on the other hand, derives no such incidental advantage, and if his security

sinks in value, he loses in an equal degree. In looking at the question as to whether the construction of railroads in this country has been overdone, the answer may be found in the fact, whether companies can, or cannot, pay the interest in their *indebtedness*; for if this can be done in all cases, we think the question may fairly be answered in the negative.

We regard it as certain that not only are our railroad companies entirely able to meet their liabilities, but that our new works will in the aggregate, earn a fair rate of interest on their cost, and that in a great many cases, dividends will be earned and paid on *stock*, larger than the interest paid on their *liabilities*. As stated in a previous number of the Journal, the hypothesis upon which railroads have been built has not been invalidated. Our railroads are doing all that was claimed for them. But the rapid increase in their construction accounts, consequent upon an equally rapid increase of business, compels companies to use earnings in construction, which in an easy money market would be paid in dividends. But the existing state of things will soon change for the better, the relations between the abundance of capital and the demand for it, be restored, and the parties who have invested in railroads will get just what they supposed they were getting.

We think on the whole that the progress of railroads in this country has been a healthy one. There are exceptions undoubtedly, but the rule is as stated. Such being the fact it is plain to see that we have only *commenced* the construction of these works. If the railway be a good thing for Ohio, Indiana, and Illinois, it is equally good for Kentucky, Tennessee, and Mississippi;—yet where the former States have *thousands* of miles, the latter hardly have *hundreds*. The railway bears a certain relation to the wants of every section of the country. When these wants are *supplied*, their construction will cease, as it has in New England, in portions of New York, and other States. There is just as good reason why the States without railroads should enter vigorously upon their construction, provided the money can be obtained, as at any former period.

Neither the value nor the productiveness of these works have been over-stated. Commerce and manufacturing are no less legitimate pursuits because at particular times they appear to be overdone. The tendency of every department of industry and enterprise is to excess, a tendency which can only be corrected by the action of *other laws*. Such a check have railroads received, yet there is not a doubt that a greater number of miles will be constructed in the *next*, than have been within the *last five years*; neither is there a doubt that railroad securities will soon be in as active demand as they have been. The excesses, caprices, or the misconduct of a day, are not going to subvert a general law, nor render legitimate enterprise less productive, nor prevent the use of the most potent agency ever yet employed in advancing man's social, moral and material good.

So much for what railroads are in *themselves*. What is to be said of them when we come to the *results* they have accomplished? Every railroad built has added more than fivefold its cost to the value of the property of the country. What other investment has done the same? They have increased the internal commerce of the country in

an equal degree. The merchant owes his wealth and business to them; the manufacturer the demand that exists for his wares; the farmer the extraordinary price he is getting for everything he can raise; the foreign trade of the country, the extraordinary impulse it has received within the past five years. It is the railroad that has filled to overflowing the national treasury. It is the railroad that is attracting nearly half a million of emigrants annually to our shores, and who at once become co-laborers to our greatness. Who has a right to complain if these works have come in for a lion's share of our capital? Not the merchant, nor the manufacturers, nor the artisan, nor the farmer, to the advantage of all of whom railroads have contributed in an eminent degree. None will complain, as soon as a harmony between the different departments of industry of the country shall become restored.

In building their Railroads our people have done well. For the same reasons we have built them, we shall continue to do so hardly without perceptible pause, till we have an aggregate of 50,000 miles, which will be only about 1,500 miles to a State. Such being the facts the efforts of every one should be exerted to restrain the tendency to excess in periods of great apparent prosperity, and to sustain confidence in these works in times of despondency. Railroads are like every thing else. They are not the *sole* good when everything goes prosperously; nor the *sole evil* when the reverse is the case. They are just as valuable as they were two years ago. Investments in them may be made with much *greater* safety. The existing state of affairs will turn attention to their management, a result which could be effectually secured in no other manner, and will lead to the adoption of an economical and responsible system of management such as will render them productive. "Hard Times" have put all our Companies to a good *school*, which continued prosperity never would have done. There is therefore nothing to regret in the present state of popular opinion in reference to these works. It is not to be regretted that we have built the roads we have. It is the *timid* whose vision is bounded by the circle of the day, who loses confidence and courage. The principle upon which we have been acting is a correct one, and not withstanding occasional aberrations from it, it will in the end bring us to a safe conclusion.

Western and Atlantic Railroad, Ga.

James F. Cooper, Superintendent, has laid before the Governor a report of the Earnings and expenditures of the Western and Atlantic Railroad for the 1st and 2d Quarters of 1854, from January 1st to June 30th, 1854.

MONTHS.	EARNINGS.	EXPENDITURES.	
		Working and maintaining Road.	On all other accounts
January....	47,082 80	19,498 52	18,965 25
February...	51,690 82	21,268 34	13,097 27
March.....	71,681 42	22,530 52	32,679 43
April.....	63,762 11	32,927 01	47,644 54
May.....	44,622 59	15,124 78	26,865 40
June.....	39,664 42	18,732 04	20,683 16
Amount to Same period	318,402 16	130,081 08	159,935 04
in 1853. . .	238,116 58	156,460 41	219,495 35
Difference. .	80,285 58	26,379 33	59,500 33

To the Editor of the American Railroad Journal.

LONDON, July 13, 1854.

SIR: We have a very strong opinion, and have already to you mentioned verbally, that many of the American Railroads have fallen into an unfortunate line of policy, in loading their roads with such large amounts of absolute *debt*, and that bad and wasteful as the English railway has been, we have at least a great advantage in having generally adopted the plan of a comparatively small bonded debt, and of *preferential* stock for so much money as may be needed beyond the aggregate amount of bonded debt and common share capital.

English Railway Companies have very generally three classes of capital; 1st Common stock with no liability attached, which is simple partnership; 2nd. Preferential stock, which gives a continual claim on revenue, but none upon capital—the dividend has to be provided as agreed, but there is no periodical financing; no further trouble on this account—the money once raised is raised for ever; 3d. The bonded debt which is limited by Act of Parliament to one third of the aggregate share capital. This attaches as a liability on both capital and revenue account; the interest must be paid out of the revenue as it falls due. The bonds fall due from *time to time*, and the company must keep redeeming, but they are greatly facilitated in this by the system of taking up money just as they want it, and so making their bonds keep due at many various dates and not a great lump at one and the same date.

By this means the English Companies insure to their bonds generally a high character as a security, and thereby prevent any material fluctuation in their value, and they are always sought after at rates of 4 to 5 per cent. according to the state of the money market. They suffer no discounts, nor loss in their financing. The risk of fluctuation in the price of the preferential shares is no concern of the company, it is all borne by the individual proprietors.

But how unhappy the position of many of the American Companies. They issue first-class bonds; even they fluctuate seriously; but let that pass, only that it is a misfortune that they fall due in such masses on one day and go in such great lumps to great contractors, whose floundering, when they made a mistake, do untold mischief to the Companies concerned. But they issue also second class bonds just where English Companies issue preference stock. Well, they raise this money at serious cost, but the work is not done with; slowly but surely the bonds mature and come due; a lowering cloud depresses the Company's stock; perhaps the money market is tight; the stock suffers its own natural depreciation, but it suffers doubly because of the incubus of the debt coming due. The question comes, how will the Company raise the money? Second-class securities are at great discount, what will be done? Will the revenue bear the loss, and if so, where will the next dividend be, and so forth. The New York Stock market groans under the weight of this system of financing, and well it may, for in some Companies it renders any approximate valuation of the ordinary stock quite impossible.

Of preference stock, we have various sorts for varying tastes. Some with fixed perpetual dividends; some with fixed dividends with a right to the proprietor, either at any time, or until some

given period, to convert his preference shares into common stock; some with a fixed dividend as a minimum, and a right, without abandoning their minimum rate, to take a higher dividend if it arise on the ordinary stock. Some with a tempting fixed interest for a few years and a reduced rate afterwards; some with a right of redemption by the Company at a fixed price. These are all points of detail—the great point we insist on is the advantage and soundness of the principle of raising the money this way and for ever, instead of the plague of borrowing and re-borrowing upon second-class bonds.

Yours truly,

HESELTINE & POWELL.

We do not think there is so much difference between the English and American mode of raising money for railway purposes, as appears upon the surface; neither do we see any advantage gained by issuing *preferred* stock, except that it avoids the necessity of *eventual* payment of the money raised. An English company when in want of money issues *preferred* stock; an American, bonds secured by mortgage of the road, or not, as the company and purchaser may agree. Both the *preferred* stock and bonds take precedence of the *common* stock in English railways, and of the *entire* stock in American, and the charges of both are defrayed from *earnings*.

In one case there is an agreement to pay *perpetual* dividends; in the other, a certain rate of interest; and the principal at a future day. We think that in this market, *preferred* stock would be subject to greater fluctuations, than bonds, and would not be so readily taken by the public. We are satisfied that a seven per cent. *bond* issued by a railroad company would command ten per cent. more than a *preferred* stock carrying the same rate of interest, and equally well secured. The reason of this great difference in the *market* value of the two may be owing to the practice of our companies, in issuing *bonds* instead of *stock*.

There appears to be some advantage of having in every country, a *fund* paying perpetually a certain income, in which persons or institutions can *invest*, without having their incomes subject to diminution, or to the necessity of *re-investments*. But the creation of such funds is against the habits and ideas of our people. When the General Government borrows money, it is for a stipulated time, and at a stipulated rate of interest. The English Government has taken advantage of its high credit, and the great abundance of money to reduce the rate of interest on its national debt. The United States cannot force its creditors to receive their pay till the money, by agreement, falls due. Though it has, within a few years past, redeemed a large amount of its outstanding bonds, it had to pay an advance of 21 per cent. All the debts of the State Governments, are payable upon a day certain, and we know of not one which presumes to pay at all, that does not discharge its liabilities as they mature. The policy of paying off the *State* debts has been the settled policy of our people, so that at any amendments of the Constitution of the several States, which usually occur about once in 10 years, to accommodate their organic laws to their altered condition, or ideas, clauses are inserted almost without exception, providing for the payment of the *old* indebtedness, and forbidding the

creation of *new*. We refer to this fact merely to show the habits of our people, and in explanation of the reason why perpetual funds are not encouraged. They do not like to bind themselves, and their descendants to a perpetual obligation, but prefer to have the privilege of reclaiming their money for re-investment in something which, in their opinion, promises to pay better.

We have spoken of the *habits* of our own people, without expressing any preference for them. The *English* method may be a better one. We have, however, always urged a course, the tendency of which would be to put *all* investments in our railroad on the *same* footing; which is to make the indebtedness of all companies convertible into their *stock*. When the cost of a railroad is represented by stock, its affairs will be much better looked after than when the *stockholders*, who are the managers, represent a mere fraction of its *cost*. The reason is too obvious to require further remark. Where there are numerous interests, all of a different character, some one of them is pretty sure to suffer. At any rate, such is the experience in this country. Where there are different interests, distinct sets of accounts may have to be kept, the adjustment of which often gives rise to litigation, which of itself not unfrequently proves ruinous to the parties concerned.

The tendency of the public sentiment which in this country consequently, is toward simplification, and we may say, toward generalization, avoids as far as possible, all *preferences*. If success be the test of the wisdom of any particular policy, certainly the experience of our people is entitled to great weight. From a careful examination of the subject, we have no hesitation in saying that the entire investment in railroads in the United States, is paying at least six per cent. on its cost and will do so for the next five years, and we believe a much longer period. What other country can show so favorable a result?

For the want of an *uniform* interest, we foresee that much trouble will arise when the obligations of railroad companies *mature*. Take the case of the Erie Railroad. This company has made *three* mortgages upon its road to secure three distinct loans. The first mortgage bonds are selling at 110; the second 100; and the last at 84½. The two first loans have only a short time to run, while the third has 30 years. As the *second* is to be paid out of the proceeds of the *third*, and as there can be no question that from the small amount of the *first*, it will be paid at maturity, the *third* then becomes a *first* mortgage. Taking into consideration this fact, the length of time it has to run, the interest it pays, its perfect security, we consider *this* class of bonds as equally, if not more valuable than those secured by the *first* mortgage, which are to be superseded in a few years. Yet they are selling at a very low figure, mainly for the reason that the day of their eventual payment is so far distant.

How our railroad companies are going to pay their liabilities as they fall due is not entirely clear. The difficulties, however, will resolve themselves, as we approach the day of their payment. The cost of our railroads will have so much increased, that the *first* mortgages will be comparatively small sums, easily lifted by those coming after them. Capital will have become so much more abundant, that the holders of the *first* mortgage will much

prefer to change their places with others less favored, than to receive their money back again.

Self-Adjusting Railway Signal.

One of the principal causes of accidents on Railroads, by which numerous lives are lost, and property of enormous value destroyed, is found in the defective system of signals used at drawbridges, switches, railroad crossings and other places of danger. The unexpected approach of a train often times bewilders the mind of the signal man to such a degree, that, scarcely conscious of what he is doing, he shows the signal of safety when the emergency requires that the signal of danger, to be exhibited; and so the train, which should have been stopped, goes thundering on its way, and is precipitated into the water, or thrown from the track, or forced into collision with another train.

Occurrences of this nature have been so frequent and the impression produced by them, on the public mind, so indelible, as to render it unnecessary in this connection to refer to any particular instance.

Another prominent defect in the present system of signals, is the shortness of the distance at which they are visible from an advancing train. Particularly is this the case where they approach to a draw-bridge, or other place of danger is a round curve. Under such circumstances, the signal cannot be seen by the engine driver until the train is near the place of danger, and, as it sometimes happens, the speed of the train cannot be checked in season to prevent an accident.

The Self-Adjusting Railway Signal, recently invented by Mr. S. L. SPAFFORD, the able Superintendent of the Wilmington and Baltimore Railroad, entirely obviates the defects in the old system of signals. Mr. Spafford's signal can be attached to any moveable structure, at a slight expense, it is simple in its construction and consequently not liable to get out of order. It can be elevated to any height desired, and is so arranged as to show the proper signal, both by night and day. The chief merit in the invention, however, consist in the absolute impossibility to show a *wrong* signal by it; a desideratum long felt by railroad men. The machinery by which the signal is operated is connected with the structure to which it is applied, in such a manner as to render it impossible to exhibit the signal of safety for the passage of a train unless the structure, a draw for instance, be in its proper place and securely locked.

The circumstances which led to this invention, illustrates its importance and value. Soon after Mr. SPAFFORD assumed the office of Superintendent of the Railroad, with which he is at present connected, a freight train, running at night, was precipitated through an open draw into a river, causing the death of several persons and the destruction of a large amount of property. The draw, it seems, had been left open for the passage of a vessel and the Bridge Tender, being fatigued, fell asleep. The noise of the approaching train suddenly awakened him from his slumber, and being confused as was natural under the circumstances he unwittingly exhibited the signal of safety instead of the signal of danger and the train went rushing on to its destruction. This accident directed Mr. SPAFFORD's attention to the necessity of having a system of signals, which should

be entirely independent of any human being and, which, at the same time should be in all respects reliable. After much reflection on the subject he succeeded in producing the Self-Adjusting Railway signal, which was immediately introduced into use on the Philadelphia, Wilmington and Baltimore Railroad where it has been subjected to the severest test for the last eight months and proved itself admirably adapted for the purpose to which it is intended.

A due regard for the safety of passengers and a prudent management of the property entrusted to their care should induce the Directors of every railroad in the country to investigate the merits of this invention, and, if satisfied with its operation, to introduce it at once into use on their respective Roads. Such a course would go far towards restoring that confidence in the safety of travelling by Railroads, which the numerous accidents that have recently occurred at Draw-Bridges, Switches and Railroad crossings, have tended to impair. Hereafter the excuse, that the signal-men exhibited the wrong signal and thus caused a frightful accident will not exculpate the managers of any Railroad from the charge of gross carelessness and neglect in not guarding against the possibility of such an occurrence. A model of the invention illustrating the operation of the signal can be seen by persons interested in the subject, at the office of D. P. HALL, Esq., No. 1 Nassau street.

FRANKLIN E. FELTON.

We learn that the detailed statement of the above invention illustrated by suitable drawings is in course of preparation, and which, in due time, will be laid before the public.

(For the American Railroad Journal.)

Car Ventilation.

It is gratifying, I doubt not, to the readers of the Journal to see car ventilation regarded as properly one of the great questions of inquiry in relation to railway travel. Ventilation, which simply implies a substitution of pure air for the vitiated, as the latter is withdrawn, and which is easy of accomplishment in most other cases, is at once a difficult and an important problem in respect to passenger cars. To draw off air loaded with one kind of impurity and replace it with that which is charged with a grosser kind, though a species of ventilation both easy and common in cars, is in fact the very thing to be obviated by such a substitute as shall solve the problem of a pure air ventilation. In the way of definition therefore, "car ventilation," like all other saloon ventilation, may be understood to mean the continuous substitution of PURE AIR in place of vitiated air withdrawn. The ventilation is the more perfect as the air passes the more directly from each individual, towards the exhausting aperture without re-use. It is obvious that the air with which the cars are filled before starting, begins after, to pass off by the exhausting force on the apertures above, and they must in ordinary ventilation be refilled through the windows or their crevices with such air as is outside, unfit as it is for the purpose. It is to feed this indraft with pure air so as to answer the considerations of the most perfect ventilation that all efforts for the exclusion of dust, smoke and cinders, are to be primarily directed.

It has been under the influence of views like

these that many have attempted to procure a wholesome car ventilation—views that it is believed no one will controvert or deem trivial.—Among the systems set forth before the public, that delineated and described on the second page of the Journal cover is claimed to possess prominent merits. It claims to take up the supply of air as far forward as may be necessary to have it pure, the system not being limited to the front of the baggage car, though it is presumed purity may be secured at that point. A channel to suit the computed maximum demand located where it can be no incumbrance is provided for its safe conduct aft. From this main conduit over head, are leaders to each window, into which no other than this pure air can be drawn. Through these the air may be led by suction as well as at the same time pushed by the motion of the train, in any quantity which the exhaust apertures above may be adapted to drain off.

This system secures the following conditions. It furnishes to each individual seat a direct communication with the pure air supply and from each seat gives the air a direction towards the apertures, thus relieving the occupants of every other seat from a second-hand use of the same air. The number of acting exhaust apertures may be multiplied or diminished at pleasure, or with the demands of the weather and at different points of the same train or car, by means of the registers inserted.

If there is any motion in the external air the ventilation proceeds with briskness when the cars are at rest, and when they are filled it always proceeds as an effect of warmth tendency upwards.

Another condition fulfilled by this system is, a fitness for all seasons and temperatures which advantage is secured by the ventilation being governable for each seat at its own window to suit the occupants. In this respect the case is the same as heretofore and so indeed in all respects, except the admission of pure air instead of the impure.

A further condition fulfilled is; it is always right, always ready, requiring no attendance or regulation dependent on the promptness of employees of road. It is self-connecting and self-parting in the making up and unmaking of the train. All these conditions offer no slight advantages for the remedy of a real evil—advantages not easy to be overlooked or in other ways provided. There will not be wanting those whose interest or whose prejudice of the whole question, will lead them to decry the system with all its advantages. But let them show the fallacy of its principles, the unsoundness of its conclusions, the futility of its operation, or the puerility of the object in view and these will be listened to with becoming patience.

While this system is strictly a plan for pure, free and plentiful ventilation, other efforts in the same direction of the most prominence have sought to secure the benefits of ventilation, collaterally with provisions for getting up wind for hot days such as may not be only admissible, but pleasant during the three summer months. But this latter is an object aside from the legitimate sphere of ventilation and belongs rather to a class of devices for "fanning" passengers in their seats; an object good in itself—but not to be confounded with necessary ventilation.

These efforts are based upon the fact that open car windows afford a tempting breeze of which it is supposed the passengers are unwilling to be deprived. It is a question whether a very free ventilation of the usual kind will not be more satisfactory. Indeed it is certain to be more so than a current or draft that you cannot personally govern or avoid.

In conclusion I may be allowed to notice what seems to be a palpable fallacy in the conclusions drawn by one of your correspondents on this subject.

Can the man be found that has walked or can walk through a car directly beneath a series of large blowers delivering each a blast of 300 miles per hour? Or the man who sits at a car window subjected to a draft of 30 miles per hour and condemns the ventilation because it is too hot? But to quote "an ocular demonstration" of this fallacy. The "smoke in the centre of the car in two seconds of time will reach the window." Four and a half feet in two seconds of time is, how many miles an hour? Not 30 surely.

C. LANCASTER.

St. Louis, Paducah, and Nashville Railroad Connection.

A significant idea of the enterprising spirit of the people and of the stability of St. Louis, may be derived from the fact that their city, county, and private subscriptions to the railroads west of the Mississippi amount to \$5,500,000, that the number of men now working on the Mississippi Valley Railroad—embracing the North Missouri and Iron Mountain Railroad—amounts to nearly 1,000, and on the Pacific Railroad to more than 1,000, that the account of receipts and expenditures for the city alone during the year ending 8th April, 1854, amounts to \$1,041,697 42, that the surplus revenue of the last fiscal year amounted to \$37,434 20-100, that its revenue last year was \$725,966 84, and that the real estate held by the city in its own right, is estimated by good authority at over 3,000,000, while the whole debt of the city might be met by its own property independent of its revenue, and moreover when railroad bonds were falling, and the tax-payers of the city and county were called upon to give additional aid to the Pacific railroad, they voted on the 8th May, 1854 to tax themselves \$1,200,000, to carry on the work out of their own resources, by an overwhelming majority.

The amount of aid given by the people of St. Louis to railroads in Illinois, the amount of manufacturing and commercial business done here, though too extensive to be condensed or even shadowed forth in this article, would enlarge and exalt the idea of the enterprising spirit of the people, and deepen the conviction of their rapid and continuous prosperity, in wealth and population, the number of inhabitants being acknowledged at present to be about 120,000.

One of the lines of railroads starting from St. Louis points toward Paducah. The Belleville and Illinoistown railroad was the first indication that way. The original object of this road was to connect St. Louis and Belleville 14 miles. We are indebted to Mr. A. A. Van Wormer, for the following data of the present condition and stage of progress of this work.

"The graduation of the whole line is complete. Depot at Belleville (which is brick and is large and 1st class) is built. The cross ties are delivered. Two 1st class locomotives and 6 platform cars are ready and all on the track at the river.—The rails and chairs are ready. The track laying will commence in a few days, and it is confidently believed that the road will be done in thirty days thereafter. One mile and a half is already laid."

From this authority, it may be inferred that the cars will be running from the Mississippi to Belleville early in the fall.

By a clause in their charter, the Belleville and Illinoistown R. R. Co. extend their road to Alton on the one side and Murpheysborough on the other. The Alton line is 22 miles in length, of which the graduation of 18 miles is complete, and the remainder will soon be done.

An experimental survey has been made of the line from Belleville to the Illinois Central R. R. through Murpheysborough, distance 76 miles.—Cost of road in running order estimated on this survey, is within \$2,000,000.

These two links with one on the Illinois Central R. R. of about 44 miles, connects St. Louis and Cairo, which chain of roads, being only 134 miles, will draw an immense amount of business between the north and south, and during the winter season, when the river is frozen or blocked up with ice between St. Louis and the mouth of the Ohio, will do not only the passenger and post office business, but also the heavy freight business of the river, towards and from New Orleans and the whole southern portion of the Mississippi. Cairo must necessarily be a point of great importance, and the shortest road connecting it with St. Louis, must pay large dividends to its owners, at all seasons, and above all, in the winter, and dry seasons.

The extension of the Belleville and Murpheysborough road, in nearly a direct line, strikes Paducah; the distance from its junction with the Illinois Central R. R. and Paducah being 50 miles, making the distance from the St. Louis to Paducah 140 miles, which at reasonable railroad speed, is 6 hours. That the St. Louis and Paducah railroad connection may be fairly appreciated beyond even the local advantages which are certain to be derived from the peculiarly rich soil and coal region through which the route runs, it is proper here to present a view of the enterprising spirit of the people of Paducah, and to consider the forces that are working within and around it, conspiring in raising it to an importance greater than even its good position might naturally have gained.

Situated at the confluence of the Ohio and Tennessee rivers, Paducah might naturally have gained a large portion of the trade of those rich valleys; yet the artificial channels of trade—the railroad avenues of wealth around Paducah were originally directed elsewhere. The Mobile and Ohio R. R. and Illinois Central were both directed to Cairo; the Nashville, Louisville and Cincinnati railroads were also directed to other places. The trade of Paducah was in danger of being cut off on all sides, when, with watchful foresight, its people cast their eyes on the Mobile and Ohio railroad with a determination to turn this horn of plenty, that its fruits might fall at their own doors. They also cast their eyes across the Ohio, up the Wabash valley to Vincennes, with a determination to control a good share of the resources of those fertile fields. They laid their plans skillfully, and are now executing them with boldness, not only to defend but also to aggrandize their trade. Authentic reports show that they have built 15 miles of their road towards Mobile, and have a fair prospect of finishing it 25 miles to Mayfield this year, when 34 miles more will complete their connection with the main trunk in Tennessee. For more minute data on the subject of this enterprise we refer to the last report of the Mobile and Ohio Railroad Company published herewith.

We will now present a business sketch of Paducah itself, the materials being furnished at our request by the highest unofficial authority; and we are assured that the representation is within rather than beyond the reality. The sketch is just drawn, June, 1854. The business houses of Paducah number 67; 46 being dry goods and grocery stores, 8 clothing, 1 hardware and iron, 3 boot and shoe, 3 drug, 1 book and music, 1 China glass and Queensware, 1 horticultural and seed, 2 boat and ship chandlery, 2 watch and jewelry, 2 fancy and millinery, 1 variety, and 2 merchant Tailor stores.

The manufactories are as follows: 1 large stone flouring mill capable of turning out 800 bbls. per

day, 8 large saw mills running three or more saws each, 2 tanneries, one extensive and run by steam, 1 steam chair factory, 1 large barrel factory, 1 pork-house, 4 furniture manufactories, 2 saddle and harness, 1 small foundry, 4 blacksmith, 2 tinners and sheet iron, 2 upholsteries, 1 carriage factory, 2 gunsmith shops, 1 tobacco warehouse, sales tri-weekly, 1 tobacco stemmery, 1 tobacco factory, 1 boat yard, 1 set marine railway for docking boats capable of hauling out any steamer afloat.

Of other buildings there are 7 hotels, the St. Francis built this last fall equal to any in the West, 2 livery stables, 7 churches, Old Presbyterian, Methodist, Baptist, Episcopal, Cumberland Presbyterian, Christian and Catholic; 2 colleges, one male and one female, 3 primary schools, 2 banks, one the Commercial Bank of Ky. with two branches, Mother Bank at this place, also a branch of the Bank of Louisville. 6 newspapers, one daily, one semi-weekly, four weekly, and one monthly, are published in Paducah. Population of Paducah, which in 1850 by census report was only 2,428, is now estimated at 4,000.

From this business sketch, from these indications of the enterprising spirit manifested in and around this place, from the wellknown agricultural, mineral and commercial advantages it enjoys, Paducah must be considered a point of rising and great, if not commanding importance; and one with which St. Louis should be connected intimately by packet boats, and as speedily as possible by a direct railroad.

The argument in behalf of this railroad connection is strengthened by the consideration of its rapid extension to New Orleans, to Mobile, to Savannah and to Charleston. By the New Orleans, Jackson and Great Northern Railroad, and by the Mobile & Ohio Railroad, the connections with New Orleans and with Mobile will be established. From Savannah and from Charleston to Nashville, continuous lines were opened and put in operation this year, therefore it is necessary to obtain only a connection with Nashville, in order to realize a complete one with the south-eastern Atlantic coast of the Union.

We have treated of this route from St. Louis via Paducah to Mayfield, Ky. We will now sketch the remainder of the same to Nashville.

From Mayfield, Ky. to Paris, Tenn., the distance is 36 miles. Here a connection may possibly be established with the Nashville and Northwestern Railroad, and if not at Paris, more surely at Reynoldsburgh, on the bank of the Tennessee river, 24 miles further. From Reynoldsburgh, to Nashville the distance is 60 miles. This last link in the chain of railroad connection between St. Louis and Nashville is insured for its completion, as will be seen by reference to the facts on this point published in the Western Journal and Civilian, vol. 9, page 238, and vol. 10, page 365. By allowing 15 miles for deviations along the route from Mayfield to Nashville, 120 miles, and adding the distance from Paducah to Mayfield, 25 miles and we find the distance from Paducah to Nashville along this route 160 miles, and the distance from Paducah to St. Louis being 140 miles. St. Louis and Nashville are thus brought to within 300 miles, and at the speed of 30 miles an hour, to within 10 hours of each other.—*Western Journal*.

Indianapolis and Cincinnati Railroad.

The following figures show the receipts from passengers and freight in their respective departments for eight weeks in the months of June and July.

Week ending.	Pass'rs.	Freight.	Total.
June 3.....	\$2,583 08	\$1,608 81	\$4,186 84
" 10.....	2,480 20	1,591 62	4,071 82
" 17.....	2,575 47	1,573 25	4,148 72
" 24.....	2,693 72	1,745 25	4,438 97
July 1.....	2,095 20	1,605 12	3,600 32
" 8.....	2,317 77	1,698 77	4,016 54
" 15.....	1,825 57	2,412 24	4,237 81
" 22.....	1,616 08	2,188 06	3,804 14
" 29.....	1,659 80	1,922 84	3,582 64

Journal of Railroad Law. RAILROADS NOT NUISANCES.

Bell vs. The Ohio and Pennsylvania R. R. Co. Pennsylvania. This was a bill filed for an injunction against the Ohio and Pennsylvania Railroad Company to prevent their erecting a depot and running their cars on the South Common in Allegheny city. A number of points were raised in the pleadings and disposed of by the learned Judge before whom the case was argued, but the only one of any very general interest was the question whether the running of cars in the city, and the using of land therein for railroad buildings, depots, &c., was a public nuisance such as to justify the interference of a Court of Chancery. Upon this point we quote a portion of the decision of the court, which was rendered by HAMPTON, F. J. He said:

"What degree of annoyance will constitute a nuisance must always depend on the special circumstances of the case. Certain sounds would be considered nuisances by some, and music by others. As, for instance, the chiming of church bells, the blowing of horns or trumpets, the lowing of cattle, the sound of the forge hammer, the whistle of the steam engine and the sound of the fife and the drum. And this depends more or less upon the proximity or distance of the different sounds. It is not every annoyance that is actionable, and more especially is this the case in towns and cities, in these modern times of progress and improvement. It does not appear here that the company create any more noise or confusion than is usual under similar circumstances, or than is unavoidable in carrying on the business of their road. To deny to them, therefore, the use of their road, would, in effect, be to exclude all railroads from our towns and cities, after these corporations have chiefly contributed to their construction,—to debar the right to steamboats to land at our wharves, to discharge and receive freight and passengers, to stop the passage through our streets of the hundreds of hacks, omnibuses, drays and carts, necessary to convey freight between the outer depots, and drive them round the city limits, to stop all machinery, of every description, propelled by steam, to stop all public markets which produce noise and disturb the citizens residing adjacent thereto, and restrain the use of coal as a fuel because of the intolerable annoyance occasioned by its smoke.

It should be borne in mind that we live in an age and a country of progress and improvement in all the business branches of life. New branches of business are constantly springing up on every hand. The inexhaustible resources and capabilities of the country are being rapidly developed by the ingenuity, energy and enterprise of our citizens. The unparalleled increase and improvement in agriculture, commerce and manufactures, demand increased facilities in travel and transportation. These, and many other considerations, require the modification of former rules, and a judicious application of the expansive principles of the common law to the altered condition of the country and the necessities of the public.

These remarks are made for the purpose of showing that what at one time have been held to be nuisances, might not, and, probably, would not be so considered now. Private interest and comfort must often yield to public necessity or convenience. This we apprehend must be the

case here. If the company had authority to construct their road where it is, they are entitled to the ordinary and necessary uses and advantages of their position, and would not be responsible for any unavoidable annoyance or disturbance such uses might cause. To permit and encourage them to build their road at a heavy expense, and then deny them the privilege of using it for the ordinary and necessary purposes of such a work, would be inconsistent with every principle of justice and common sense."

The injunction was refused.

RAILWAY TICKETS. RIGHTS OF PASSENGERS.

It has been recently decided in Scotland that railway tickets can be used only to the stations marked on them, and that passengers have no right to leave at any intermediate station. The question arose on the following fact. It appears that the *whole* fare from Campbleton to Glasgow, by steamer to Ayr and thence by railway to Glasgow, is considerably less than to several of the stations between Glasgow and Ayr, and that persons have been in the practice of taking out Glasgow tickets at Campbleton, and then leaving the train at the intermediate stations, thus paying less than if they had taken tickets to the station where they actually intended to stop. To put an end to this practice, the railway company brought small debt actions against two passengers for the difference of fare between what they actually paid and what they would have paid if they had taken tickets to the station where they actually stopped. Sheriff Anderson before whom the cases were tried, expressed the opinion that, although the Company might, if they thought proper, allow passengers to leave the train at intermediate stations no person could demand it as a right, and he so held upon the trial.

LIABILITIES OF RAILROAD COMPANIES. PASSENGER'S NEGLIGENCE.

Penn. R. R. Co. vs. Aspell. Pennsylvania. This was an action brought by Aspell to recover damages for injuries alleged to have been caused by the negligence of the Railroad Company. It seems that Aspell was going to Morgan's corner, at which station the train should have stopped, but that owing to some defect in the bell rope the conductor was not able to make the proper signal to the engineer, who, therefore, went past, though at a speed somewhat slackened, on account of the switches which were there to be crossed. Aspell, seeing that he was about to be carried on, jumped from the platform of the car, and was seriously hurt in the foot. He brought this action, and the jury, with the approbation of the Court, gave him fifteen hundred dollars damages. Upon appeal this judgment was reversed. The Court *per* BLACK, C. J. said:

The persons to whom the management of a railroad is entrusted are responsible for every injury caused by defects in the road, the cars or the engines, or by any species of negligence, however slight, which they or their agents may be guilty of; but they are only responsible for the direct and immediate consequences of errors committed by themselves. They are not insurers against the perils to which a passenger may expose himself by his own rashness and folly. If a passenger is negligently carried beyond the station where he intended to stop, and where he had a right to be let

off, he can recover compensation for the inconvenience, the loss of time and the labor of traveling back, because these are the direct consequences of the wrong done to him. But if he is foolishly enough to jump off, without waiting for the train to stop, he does it at his own risk, because this is gross imprudence for which he can blame nobody but himself. If there be any man who does not know that such leaps are extremely dangerous, especially when taken in the dark, his friends should see that he does not travel by railroad. It is true that a person is not chargeable with neglect of his own safety when he exposes himself to one danger by trying to avoid another. In such a case, the author of the original peril is answerable for all that follows. If, therefore, a person should leap from the car, under the influence of a well founded fear of that a fatal collision is about to take place, his claim against the company for the injury he may suffer will be as good as if the same mischief had been done by the apprehended collision itself. When the negligence of the agents puts a passenger in such a situation that the danger of remaining on the cars is apparently as great as would be encountered by jumping off, the right to compensation is not lost by doing the latter, and this rule holds good, even where the event has shown that he might have remained inside with more safety. (See *Stokes vs. Saltonstall* 13. Peter's 181.) Did the plaintiff in the present case suffer the injury he complains of by attempting to avoid another with which he was threatened? Certainly not. He was in no possible danger of anything worse than being carried on to a place where he did not choose to go. That might have been inconvenient; but to save himself from a mere inconvenience by an act which puts his life in jeopardy, was inexcusable rashness.

Nor is the plaintiff's position altered by the fact that the conductor announced the approach of the train to Morgans Corner. It is not negligence in a conductor to notify passengers of their approach to the station at which they mean to get off so that they may prepare to leave with as little delay as possible when the train stops. And we cannot see why such notice should put any man of common discretion in peril. It is scarcely possible that the plaintiff could have understood the mere announcement of Morgans Corner, as an order that he should leap without waiting for a halt. If he did make that absurd mistake it was amply corrected by the earnest warning which he afterwards received both from the conductor and the brakeman.

The Court should have instructed the jury that the evidence, even excluding that for the defense, left the plaintiff without the shadow of a case.

RIGHTS OF OWNERS OF LAND LYING ADJACENT TO RAILROADS.

Allon and Sangamon R. R. vs. Baugh. Illinois. This case arose from a disagreement between the railroad company and Baugh as to the amount of damages due for the company's right of way over Baugh's land. Upon the trial, the Judge instructed the jury that after the assessment and payment of damages, the railroad companies would not be bound to make fences for Baugh on either side of the road, nor would Baugh have a right, without consent of the company, to make cattle

guards across the road. Under this instruction the jury found for the plaintiff, assessing his damages at \$480. Upon an appeal taken on an exception to this instruction the judgment was affirmed. The court *per* TRUMBULL, J. said.

"We know of no principle of the common law, and there is certainly no statute, which compels one person or corporation to fence the land of another. It was never supposed, when a public highway was laid out, that the owners of lands over which it passed would have any right to require the authority by which it was constructed to inclose it by fences. There is no distinction in principle between the obligation to fence a public highway and a railroad; and the obligation to construct cattle guards, which are a species of fence, is of the same character.

Has then the owner any right, without the company's consent, to make himself cattle guards across or under the road? Upon this point it is clear, that after the condemnation of the land and the payment of damages, the proprietor of the land over which the road passes would be prohibited from placing any obstruction upon it. Now the construction of a cattle guard across or under the road would be an interference, temporarily at least, with the track itself, as it would be necessary to excavate beneath the rails, and while the work was being alone, and the necessary supports being placed underneath, the road could not be used. To allow this to be done without the consent of the company would be to deprive them, for the time being, of the use and control of their own road, and of the right of way for which they had paid.

The Gold Movements of the World.

The discovery of gold took place in California in 1847, and since that year there has been shipped, up to the close of 1853, and deposited in the United States mints, \$280,000,000 worth of gold dust, or in sterling value, £44,000,000.—The whole produce of the California mines in the period is estimated at \$260,000,000; \$40,000,000 being rather a low estimate for the amount of gold dust taken to foreign countries, used in ornaments and plate, and still uncoined, &c. Official documents give the imports and exports of specie in the United States, approximately as follows, from 1847, which, be it remembered, was the "famine year," and drew over a large quantity of specie for breadstuffs:

	Imports.	Exports.
1847.....	\$24,121,289	\$1,997,739
1848.....	6,360,224	45,841,620
1849.....	6,651,240	5,404,648
1850.....	4,628,792	9,983,898
1851.....	5,453,592	43,764,210
1852.....	5,503,544	25,096,255
1853 to December	5,500,000	26,753,356
	\$58,218,681	\$158,841,726

The "imports" of 1853 are assumed, as we have not the complete figures before us. Gold dust, amounting in value to forty-four million pounds sterling was, therefore, received in the United States up to the close of that year, and specie to the extent of nearly twelve millions more; against this, shipments of specie, amounting to \$31,770,000 were made to Europe. Last year California exported gold to the value of sixty millions of dollars, or upwards of £12,000,000 sterling; and the yield, judging from the monthly shipments this year, continues to be steady, with only such slight fluctuations, as weather, want of water or excess of it, may occasion. In a gold producing country, the export of gold dust and bullion is a part of its legitimate trade, and the fact of such continuous export is no proof that the balance of trade is

against the country, whilst the average production of the staple is maintained. The specie in the United States banks in January this year, was sixty million of dollars, and there was also twenty-five millions in gold and silver in the treasury offices, and certainly more gold and silver in general circulation among the people than at any previous period. The exports of specie to foreign countries, from New York, were, as we have seen, in round numbers, £2,000,000 sterling, in 1850; £8,850,000 in 1851; £5,000,000 in 1852; and £5,400,000 in 1853. The shipments from other United States ports are very inconsiderable; a little is exported occasionally from Boston and Philadelphia.

Judging from the stock of gold in England as coin and ingots—stated at about £70,000,000—it appears probable that £250,000,000 sterling would nearly represent the gold existing in Europe at the period of the discoveries in California and Australia; which, together with Russia (since 1838,) now constitute the main general sources of supply. Some authorities, however, rate the coin and bullion in the world in 1850, as high as £600,000,000 gold, and of silver at £1,200,000,000. M. Leon Faucher considers France possesses silver to the value of £134,000,000 sterling, of which 150 millions consist of coin; and the gold coinage belonging to France is probably not less than thirty millions sterling. It is supposed that the gold and silver in the United Kingdom is from fifty to sixty millions sterling. In the seventy years ending 1847 (deducting the re-coinage from light gold) our average yearly gold coinage was rather more than two and three quarter millions sterling. The following return shows the amount coined in the principal States in the last six years.

Country.	Three years ending 1850.	Three years ending 1853.
Great Britain	£6,121,790	£25,095,072
France	7,302,000	23,911,536
Austria	1,566,422	2,982,885
United States	8,953,001	34,269,911
Indian Presidencies....	151,736	186,270
Prussia	707,703	36,798
Spain	683,131	121,707
	25,485,783	86,605,177
		25,475,783

Total..... £112,090,960

Of this about £18,150,000 were re-coinage.

In 1853 there was coined in the three principal mints of the world—London, Paris and the United States—£35,548,803 worth of gold, and more than £3,000,000 worth of silver. With all this enormous amount of coinage, the increase of foreign trade and the great activity of productive industry, cause a steady demand for further metallic currency; and coinage is absorbed and distributed in a manner unparalleled in any former period of the world. The following statement from the *Bankers' Circular* shows the quantities of gold received and delivered by the Bank of England, in the bullion department, in the last four years. It does not represent the actual purchases and sales of specie by the bank, but only the amount deposited and withdrawn on merchants account:

	Gold Received.	Gold Delivered.
1850.....	£5,936,956	£3,635,203
1851.....	13,379,874	3,486,500
1852.....	18,720,866	4,722,173
1853.....	15,332,098	14,057,352
Total.....	£53,372,594	£26,001,228

The highest amount of bullion and coin held by the bank in both departments last year, was on the 1st of January—being £20,527,662, against £21,845,390, the highest stock in the previous year, viz; on the 10th July. The lowest amount last year was £14,960,206 on the 22d October against £12,608,895, which was the lowest amount held in 1851.—Silver being only a legal tender for small amounts in this country, beyond exigencies of our small coinage, there is no inducement to accumulate it here, in consequence of gold being

the standard of value. Hence we find that about 20½ million pounds sterling of silver which found its way to the bank vaults in the four years ending 1853, the whole flowed out again to India, and China and France, where it constitutes the monetary standard.

According to a statement of the exports of bullion from London last year, compiled by Messrs. Haggard & Pixley, the quantity shipped amounted to about 21¼ million pounds sterling, of which 5¾ millions were in silver, and the remainder gold. The whole of the silver—except £530,000 sent to the continent—went to India, China, and Mauritius. The shipments of gold were in round numbers £1,000,000 to Australia and New Zealand £9,500,000 to the continent; £1,000,000 to the Mediterranean; £375,000 to the West Indies; £286,000 to the Brazils, and £105,000 to Africa. In the first six months of the present year, specie of the value of £2,373,014 has been shipped to the Mediterranean ports and the East, of which £1,858,347 was in silver.

In 1853, 2,545,260 ounces of gold were shipped from Victoria (nearly all of it to this country,) of the aggregate value of £10,181,040, and there still remained in the local banks deposits and balances of the value of £9,316,810, and specie and bullion amounting to £4,336,030. The specie imported into Melbourne and Geelong, in 1853, is stated at £2,400,000; a much larger quantity of coin we have, however, seen was sent to Australia ports, but portions of it would not arrive till 1854. Last year, 624,947 ounces of gold, worth about £2,409,783, were exported from Sydney, and 50,000 ounces remained in private hands. The city banks also held deposits and balances to the extent of £5,115,699. The discovery of the auriferous character of the soil of Australia took place in July, 1851, and from that period to the close of 1853, there has been shipped more than £27,000,000 worth of gold. Well informed Colonial authorities estimate the produce of the Australian gold mines up to the close of 1853, at £29,600,000. The whole quantity exported from Australia may be thus clearly stated:

	Ounces.
From New South Wales.....	1,625,256
From Victoria	4,617,818
Total	6,243,084

worth, at say £4 the oz., £24,972,336. This is only what is officially recorded as shipped; a great quantity has also been brought home privately by passengers and we should not be far wrong in estimating this amount at £8,000,000 more: besides which there remains to be taken into consideration the quantity remaining in hand in the various Australian settlements, and Van Diemen's Land and New Zealand.

We find then despite the large production of gold, no one country has been able to retain permanently any considerable hoard of the precious metals. Out of the £30,000,000 raised in our Australian colonies, and shipped to England within the last two or three years, we have a stock in the bank of England scarcely as large as we had previous to the gold discoveries, and our monetary requirements are more stringent than ever. The United States, although parting with only £32,000,000 out of the £56,000,000 received, find the balance of coin shipping out of their hands in a continuous stream. The European States and the Eastern countries seems to be profiting most by the absorption of bullion. The void in the metallic currency of the most of the continental nations is filling up, and depreciated paper currency has been to a great extent withdrawn. Still, like quicksilver, you can scarcely follow the movements of specie, for it travels almost as rapidly from place to place, as the electric fluid.

The requirements of the great European Powers for the war now carrying on, make heavy inroads on the supplies of coin and bullion, and serve to alter materially the usual flow of the metallic tide. But these unusual circumstances must re-act hereafter, and throw back the metallic currency into the chief centres of manufacturing pro-

duction. The Bank of France had in 1844, £10,885,000 of bullion in its coffers, which increased to £25,890,042 in June, 1852, and has decreased from that date to £13,430,255 at the last return, issued early in May this year. The Bank of England has at present little more than £14,000,000 of specie in its vaults, whilst the demand on it for discounts was never so continuously heavy. The United States Banks have little more than £12,000,000 sterling in specie, besides £600,000 locked up in the Government Treasury. Every commercial country seems, therefore, as bare of coin and bullion as before the gold discoveries; and instead of repletion, there are general complaints of scarcity.

Such are the more salient features of the vast picture presented by the oscillations of this important metallic current, which ramifies and extends its fructifying stream over the civilized world; here moving in headlong force until the magnified torrent rolls its waters over the chief food-producing and manufacturing centres of the globe; and there gushing forth in tiny rills and gentle rippling streams, scarcely appreciable, so that it becomes difficult to follow it in cycle of its never-ending rotation.—*London Gazette.*

Railway Traffic Returns.

Great Western of Canada 229 miles.

Earnings for week ending August 11th.

From Passengers.....	9,978
" Freight.....	2,835
" Sundries	1,032

	\$13,845
Number of Passengers.....	6,089
Total since 1st Jan. 1854.....	\$604,819
" Passengers	208,654

Grand Trunk Line of Canada 292 miles.

Earnings for week ending July 29d.

From 4,707 1st class passengers.....	5,171
" 442 2d ".....	324
" 1,657 tons mdze.....	5,841
" 553 M. feet lumber.....	1,905
" 1,630 cords firewood.....	2,230
" Mails &c.....	779

Total.....	\$15,750
Total from July 1st 1854.....	\$69,065

The Public Lands.

Up to the 30th June, 1853, there had been donated to thirteen new States and four Territories.

	Acres.
For certain public purposes.....	123,062,451
Total amount of sales up to same date.....	103,197,856

Excess of grants over sales.....	19,865,095
Grants for military services	24,841,980

Total excess of grants over sales..... 44,707,075

These statistics apply exclusively to the New States, the old States having received nothing. The grants of lands to the Illinois Central, and Mobile and Ohio Railroad were:

	Acres.
In Illinois.....	2,595,058
In Mississippi.....	737,150
In Alabama.....	419,528

Total.....	3,751,711
Reserved to be offered at double price, \$2 60 per acre:	

In Illinois.....	1,223,921
In Mississippi.....	288,495
In Alabama.....	167,046

Total..... 1,651,874
The land granted, amounts at Government price to \$4,689,639; from July 1st, 1852, to December 30th, 1853, one year and three months, there were:

sold of the reserved lands 284,000 acres, yie \$610,000 not one-seventh part of the minimum value of the lands granted for the road.

American Railroad Journal.

Saturday, August 19, 1854.

Harlem Railroad.

A convention of the stockholders of this road was held in this city on the 15th inst., for the purpose of hearing the report of the investigating committee, and of taking action in reference to the recent over-issues of stock by the transfer agent. The meeting was a very full one, the feeling very strongly in favor of assuming the fraudulent issues, and resolutions passed to that effect. We have not room for the report this week, but will give it, or the substance of it, in our next issue.

Stock and Money Market.

The past has been a very inactive week in Wall street. At all times, the present is the dullest season in the year. Prices fluctuate considerably without any material improvement. The market will probably remain pretty much as it is till the commencement of the fall operations.

We publish below the earnings of several companies for the month of July. They show a large increase over the past year, notwithstanding the wide spread sickness, and general stagnation of business. Under all the circumstances the receipts are entirely satisfactory, and prove the earnings of our roads to be in a great measure independent of the ordinary fluctuations of business.

The Bank returns for the week ending July 12th, show the following result:

	Loans.	Specie.
Aug. 5th, 1854.....	\$93,723,141	\$14,468,981
Aug. 12th, 1854.....	93,485,057	13,522,023
Decrease.....	\$288,084	\$946,958
	Circulation.	Deposits.
Aug. 5th, 1854.....	\$9,124,648	\$76,378,487
Aug. 12th, 1854.....	8,917,179	74,626,389
Decrease.....	\$207,469	\$1,752,098

EARNINGS OF RAILROAD FOR JULY.

Ohio and Pennsylvania Railroad.	
Receipts in July, 1854.....	\$75,626 07
Receipts in July, 1853.....	56,728 01

Increase, 33 per cent.....\$18,898 06

This road has been completed and in operation some eighteen months.

Baltimore and Ohio Railroad.

	Main Stem.	Wash. Br.	Totals.
For passengers.....	\$270,214 05	\$24,140 65	\$65,544 50
For freight.....	228,810 05	6,088 90	234,898 95

Total...\$270,214 10 \$30,229 55 \$300,443 65

As compared with the corresponding month of last year, the result is as follows:

	Main Stem.	Wash. Branch.	Totals.
July, 1854.....	\$270,214 10	\$30,229 55	
July, 1853.....	164,140 42	27,170 85	

Increase....\$106,073 68 \$3,058 70

Michigan Central Railroad.

	Passen's.	Freight.	Mis.	Totals.
1854....	\$82,531	\$37,319	\$3,531	\$123,382
1853....	65,896	31,626	6,018	103,542
Increase....	\$16,634	\$5,693		\$19,840
Decrease.....				\$2,487

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for de.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	251,743	113,520	none	86
Androscoggin and Kennebec..	55	824,863	1,043,540	2,036,140	177,003	80,053	none	32
Kennebec and Portland.....	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	42
Port., Saco and Portsmouth..	51	1,355,500	123,884	1,459,384	208,669	.....	6	95
York and Cumberland.....	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	105
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	.....	.....	328,782	163,075	5	49
Manchester and Lawrence....	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	54
Vermont and Canada.....	47	1,500,000	.....	1,500,000	.....	.....	Leased to the Vt. C.	82
Western Vermont.....	51	392,000	700,000	.....	.....	.....	Recently opened.	.....
Vermont Valley	24	.....	.....	.....	.....	.....	.....	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	81
Boston and Maine.....	83	4,076,974	150,000	4,111,315	803,024	418,358	8	100
Boston and Providence.....	55	3,160,000	402,326	3,579,041	509,326	226,639	64	77
Boston and Worcester.....	69	4,500,000	590,541	4,850,754	887,219	413,289	7	964
Cape Cod branch.....	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River.....	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern.....	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	65
Fall River.....	42	1,050,000	6,208	1,050,000	294,183	126,589	8	90
Fitchburg.....	37	3,540,000	191,500	3,716,870	626,659	214,633	6	854
New Bedford and Taunton... Conn.	60	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony	45	1,964,070	295,038	2,293,534	374,897	122,866	none	924
Taunton Branch.....	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts..	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	114
Worcester and Nashua.....	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	934
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	67
Providence and Worcester... Conn.	40	1,457,500	300,000	1,791,999	291,417	120,892	6	97
Canal.....	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	639,529	294,269	10	116
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill..	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven....	61	3,000,000	1,641,000	4,978,487	806,713	428,178	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven..	55	750,500	650,000	1,380,610	.....	.....	Recently opened.	40
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	50
Buffalo and New York City... N. Y.	91	900,000	1,550,000	2,550,000	.....	.....	Recently opened.	.....
Buffalo, Corning and N. York.	132	.....	.....	In progres	.....	.....	.....	.....
Buffalo and State Line.....	69	879,636	872,000	1,921,270	.....	.....	Recently opened.	130
Canandaigua and Niagara F..	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira.....	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.....	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)...	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	454
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	52
Harlem	180	4,725,250	977,463	6,102,935	681,445	324,494	4	.....
Long Island.....	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central.....	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	914
Ogdensburgh (Northern).....	118	1,679,969	2,969,760	5,133,834	480,137	195,847	.....	10
Oswego and Syracuse.....	35	350,000	206,000	633,598	92,353	46,072	.....	.....
Plattsburg and Montreal....	23	174,042	181,000	349,775	.....	.....	Recently opened.	.....
Rensselaer and Saratoga.....	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington....	60	850,000	400,000	1,250,000	.....	.....	Recently opened.	.....
Saratoga and Washington....	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	.....	.....	Recently opened.	33
Troy and Boston.....	39	430,936	700,000	1,043,357	.....	.....	Recently opened.	.....
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,335	478,413	10	148
Morris and Essex.....	45	1,022,420	128,000	1,220,825	149,941	79,252	7	.....
New Jersey.....	31	2,197,840	476,000	3,245,720	603,942	316,259	10	181
New Jersey Central.....	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	20	600,000	.....	750,000	.....	.....	Recently opened.	125
Harrisburgh and Lancaster..	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading....	95	6,656,882	10,427,800	17,141,987	2,480,626	1,251,957	7	62
Philad., Wilmington and Balt.	98	5,000,000	2,399,166	8,067,266	868,038	541,769	5	684

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	97
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	50
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina..... S. C.	110	.....	.....	In prog.	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,834	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	160,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River..... Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..... "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..... Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,632	267,278	10	59
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	77½
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	100
Columbus, Piqua and Indiana..... "	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton..... "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	102½
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	111
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	107
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	77½
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine..... "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati..... "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	76
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru..... "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	32
Terre Haute and Indianapolis..... "	72	632,387	663,100	1,353,019	105,944	71,446	4	108
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	123
Michigan Southern and Ind. N. Mich.	315	.....	8,741,564	7,276,616	1,200,922	586,929	17	94
Michigan Central..... "	282	.....	8,977,563	8,618,505	1,146,598	582,816	8	87
Ypsilanti..... Mo.	38	.....	non	In progress	Recently opened.	.....	.....	.....

Michigan Southern.

Passengers and Mails.....	\$78,813 10
Freight and Miscellaneous.....	41,608 35

Total.....	\$120,421 45
Earnings July, 1853.....	107,568 45

Increase..... \$12,853 00

Cleveland and Pittsburg Railroad.

Passengers.....	\$18,440 48
Freight.....	16,712 33
Mail and Express.....	1,491 00

Total..... \$36,643 81

The receipts for July, 1853, were..... 34,373 03

Increase..... \$2,270 73

Pennsylvania Railroad.

For the month ending July 31, 1854.....	\$209,299 37
Same month last year.....	157,244 90

Increase..... \$52,054 97

Receipts from Jan. 1, 1854, to July 31, 1854..... \$2,125,348 57

Same period last year..... 1,608,376 58

Increase..... \$516,971 99

Milwaukee and Mississippi.

	1853.	1854.
Passengers.....	\$8,376 79	\$16,099 95
Freight.....	7,800 21	19,474 79

Total..... \$16,177 00

Increase this year, \$19,397 74

Indiana.

We learn from the Evansville, and Indianapolis papers, that the graduation on the Straight Line Railroad, designed to connect the important cities of the State, through the extensive South, White River Valley is progressing well, with a heavy force, the company having concentrated their hands on the division of 54 miles of the road between Evansville and the Ohio, and Mississippi Railroad, which when constructed will connect the Ohio river at Evansville by the shortest possible route with New Albany, Jeffersonville, Louisville, Madison, Lawrenceburgh, and Cincinnati, and when the whole line is finished it will be only about 150 miles from Evansville to Indianapolis, while by river it is over 200 miles from Evansville to New Albany, the terminus of the first railroad, above Evansville. The company, the papers state, have met their estimates promptly in the midst of the money pressure, and appear to be moving forward with the proper care, and energy, to justify the most favorable results.

The Iron Foundries of Pittsburg.

It is said that there are now in Pittsburg thirty-eight iron foundries, of which nine are almost exclusively employed in the manufacture of steam engines, and twenty-nine in the manufacture of various kinds of hollow ware, machinery, &c. The foundries which are employed in the manufacture of steam engines consume yearly 3,200 tons of wrought iron, 9,200 tons of pig, employ 640 men, and produce 120 steam engines every year. Their net capital is \$549,000. The heaviest establishment among the other foundries is the Fort Pitt Works. At this establishment there were built some years since two iron steamers of four hundred tons each, and a revenue cutter which latter craft is still in existence upon Lake Ontario. In 1853, the Fort Pitt Works consumed 2,225 tons of pig iron, and 1,000 tons of wrought iron, and employed 260 hands. They are now engaged on a government order for 21 guns, called Columbiads, having a ten inch bore, and throwing a 124 pound shot. It is estimated that the total amount of pig iron, blooms and scraps, annually consumed in Pittsburg, is at least equal to 127,375 tons.

Ogdensburg, Clayton and Rome, and Black River and Utica Railroads.

One of the most essential members of the railroad system of the State of New York is a direct connection between New York City and the St. Lawrence River, and commanding the Ottawa country of Canada, beyond. One of the most available and convenient routes for such a connection lies in the Black River Valley. The agricultural capabilities of Lewis, Jefferson and St. Lawrence counties have turned attention to the merits of this route, and have enlisted an ample share of enterprise for its immediate occupation by a first class railroad. The fact that two projects for such a purpose are already pressing their claims, in opposition to each other, is sufficient proof of the appreciation in which this connection is held, and relieves us from urging the necessity or utility of its construction.

In January, 1853, a company was organized to construct a railroad from Utica to Clayton, passing Boonville, and thence intersecting the principal towns in the Black River Valley. A connection with Ogdensburg was also determined upon. In April of the same year, an independent interest, identified with the village of Rome, organized for the construction of a road from that place, having the same general direction and objects as the first, but entering the Black River Valley at Boonville, 23 miles from Rome, and $34\frac{3}{4}$ miles from Utica. Both roads have completed surveys, and let out their entire lines to contract. Both roads have issued reports, describing almost identical routes, announcing nearly the same progress of construction, and claiming, each for itself, precisely the same results when finished.

In the present attitude of these companies, with respect to that portion of their lines lying north of Boonville, we can discover no grounds for a contest of superiority, for, both roads having identical routes and objects, have equal claims, but necessarily subject to perpetual collision, involving eventually the existence of one or the other.

The only room for independent action by these companies is upon those portions of their roads lying south of Boonville. It is only upon these portions where the two schemes are entitled to comparison. From Utica to Boonville, by the Black River and Utica Railroad, is $34\frac{3}{4}$ miles, having maximum grades going north of 66 feet. From Rome to Boonville by the Ogdensburg, Clayton and Rome Railroad is 23 miles, with maximum grades going north of 49 feet, and a whole rise and fall some 200 feet less than on the other route. As independent geographical points Rome appears to be superior to Utica as the terminus of the Black River Valley road. Rome and Utica are $14\frac{1}{2}$ miles apart, and when considered in their relative position to other points, we find Boonville to be but $2\frac{3}{4}$ miles nearer Albany by the Utica than by the Rome road, while Buffalo would be $26\frac{1}{2}$ miles further distant, a result which gives a decided superiority to Rome over Utica.

Beyond Boonville, the description furnished by the Black River and Utica Company will apply to the general route occupied. The line of road passes Turin, Lowville, Carthage, Philadelphia (from whence a branch runs to Ogdensburg), Theresa, and terminates at Clayton opposite the "Thousand Islands" of the St. Lawrence. Ogdensburg would be 93 miles from Boonville, and 128 from Utica. Clayton would be $73\frac{3}{4}$ miles

from Boonville, and $108\frac{1}{2}$ from Utica. For all the distance, the grades are not more unfavorable than those of the Northern Railroad of New York, except south of Boonville, and in the descent of the heaviest tonnage. The route is generally very favorable.

While one road is necessary for the accommodation of that part of the country, we feel certain that the two companies, now claiming, each for itself, the entire route, will have to appear jointly to receive any pecuniary assistance for which they may, like other roads, be compelled to apply. After the strength of local means have become exhausted, each road will be in the worst shape to apply for help. Indeed, we can hardly believe but that a compromise is contemplated by both companies, although their reports contain no allusion to it, and in fact ignore each other's existence.

Whether the reputed fact of being in process of construction is stated by each road, to intimidate the other, or whether each company has full faith in its own scheme, even if immediately exposed to competition, we do not know; but we fully believe that one-half of the aggregate cost of two coincident roads will be a sacrifice beyond remedy. We hope soon to hear of the discontinuance of one of the two projects, except where independent in location, as we are well aware that the community on the line is unable to build and support two rival works, and the result will only bring loss and discredit where harmonious action would insure ample profit, and preserve the integrity and honor of the railroad interest generally in the northern part of New York.

Municipal Improvements.

It is not, comparatively, a long time since New York has realized the influence of railroads in their immediate effects upon her business. It is not above two years since the Erie and Hudson River roads have attained a position to accomplish results, such as could be felt and appreciated in our city. Yet in this time they have affected the relative social position of the inhabitants of the two sides of the town. They have established a preference for the west over the east side, for purposes of residence, business, instruction and amusement. And in a more general view, they have brought us in closer connection with the entire country, thereby identifying our own growth with that of the whole nation.

The position of our great trunk lines of railroad, and their relation to our municipal progress, imposes upon our city the duty of initiating a system of improvements in the arrangement and connections of some of our principal streets. Essential and valuable as our railroads are, they are comparatively out-of-the-way affairs, so far as local access is concerned. Our street-system was not planned at the first, nor has it been subsequently modified, with any reference to the intrusion of railroads. No great central business depot was ever anticipated, as every foot of our waterfront is available for the receipt or delivery of merchandise. But under the new dispensation of the railroad system, wherein our business, proprietary and social interests are every day more involved, we need a corresponding street system.

We have once or twice called attention to a system of improvements for the lower part of the

town, but have never attempted to demonstrate their ultimate influence upon our internal movements. One point we have urged is the necessity of more streets in the direction of the length of the business part of the town—more longitudinal thoroughfares. The need of such is obvious. Our city, by its position, is traversed by *bells*, or *zones*, devoted to different social occupations. Shipping, banking, wholesale and retail trade, boarding and lodging houses, residences and manufacturing, although nowhere entirely distinct and separate from each other, occupy specific and definable limits, and may be regarded as *superposed strata* or "courses," in the longitudinal arrangement of the city. It is not *within* any one, but between *different* sections of this system that the greatest share of internal movement must exist. And yet, with any reasonable number of cross streets, Broadway is the only continuous longitudinal thoroughfare of the whole city. The pressure of travel in this street, and the absurd mutilations proposed for its relief, ought to awaken our entire population to the necessity of extensions and connections between the parallel streets. We do not and cannot consider an *elevated* railroad as more appropriate to Broadway than an elevated aqueduct, navigated by steamboats. A railroad, *level* with the street, and the exclusion of omnibuses, would relieve much of the pressure, but no plan except extending and connecting the parallel streets will afford general and complete accommodation.

It seems reproachful to our public spirit that Crosby street, having a length equal to all of Broadway below the Park, and a width equal to Chesnut street in Philadelphia, or Washington street in Boston; having an even grade, and being but a short block from Broadway, should commence and end so abruptly in Howard and Bleeker streets. As it is, what travel seeks it, except destined within it? Open it into Canal street at the lower end, and into Lafayette place, and extend this connection to the Bowery, at the other, and we have a fine street, offering attractions for a large share of the travel now crowded upon Broadway. By its proximity to the latter street it ought at least to answer as an *omnibus* route.

Open such a street, and its extension would be required through the rum-stricken regions lying between Leonard, Anthony and Pearl streets, and thence to the Park. A narrow court already extends two blocks out of Canal street, at the corner of the New Haven Railroad Station.

Such a scheme of improvement would direct attention to the insufficient width of Nassau street, and if property owners and the city could agree upon the most necessary improvement to be effected by widening that street, we should have a capacious and noble highway from the lower end of the Island, through Broad, Nassau and Crosby streets to Union Place. The "Park," with its meagre attractions, and antiquated public buildings would be the only break. But if our citizens could forget the *habitus* by which they have associated this uninviting enclosure with the idea of the central institution of the town, they would permit a passage for the proposed street, and consider the proposition for a noble Municipal hall on Madison square.

Such a plan of improvement would be worthy of our city, and would be more than paid for in the immediate improvement of real estate in the

three streets thus linked together. We would christen it "Union Avenue."

We have long held the opinion that the foot of Canal street is the proper point for the great Metropolitan railroad depot of the city. It is a point which, with a little improvement, may be said to command the whole town. We regard the ultimate extension of Canal street to the East River as certain, while we also look upon the extension of the Sixth Avenue to the foot of Canal, as a most essential improvement, and likely to be carried out. The lines of city railroads already established are well calculated to meet this point. A passenger arriving at Canal Street could proceed directly by the city lines of horse cars to any point on West street, Broadway, the Sixth, Eighth or Ninth avenues, Bowery, Hudson street, "Union Avenue," and indeed to any principal street in the city. From the foot of canal, the Sixth avenue, Spring and Canal streets, would radiate towards the center of the town, including all the metropolitan attractions and facilities within a short range. On the water, the Collins steamships long since established their station at the foot of Canal street, while the concentration of railroad travel upon that point would attract the California and New Orleans steamers and probably the French and German steamships to adjoining docks. A ferry is already established to Hoboken, and another regular ferry would be required immediately to Jersey City. The Erie railroad company would probably find it for their interest to run their boats to Canal as well as Duane streets.

It is also worthy of remark that the terminus of the proposed "West side" railroad to Albany, and the ultimate terminus of the Syracuse and Newburgh road, if built, would be at Hoboken, directly opposite.

Within Canal street, and but a short distance from the end lying upon the North River, would be the tracks and stations of the Harlem and New Haven Railroads. So it is seen, that an inconsiderable extension of one or two streets, would centralize the Hudson River, New York Central, New York and Erie, New Jersey, New Haven, Harlem and West side Railroads, the Liverpool, Havre, Bremen, California and New Orleans steamers, and the ferries to Jersey City and Hoboken;—landing all of their travel near Broadway, and close by all of the large hotels and the temples of taste and fancy with which that noble thoroughfare is lined.

We declare that such an arrangement is needed, and that New Yorkers should anticipate the noble destiny of their great city by urging it to consummation. It is not the object merely to centralize all the travel entering the city, but to afford it proper accommodation, such as is now denied to it by the contracted and crowded facilities at the lower end of the town. Room for the accommodation of all the travel entering our city can be provided at the foot of Canal street, and the same travel could be better distributed from that point than elsewhere.

The Erie railroad pier at the foot of Duane street is always crowded with freight, and must yet absorb all the dock and pier accommodations for a long distance above and below. Nothing would attract travel for the Erie road, more than making its passenger terminus, with other roads, at the point we have indicated, and nothing would

tend so much to the establishment of the commutation ticket system on a liberal scale, as the certainty of a supply of travel from the central depot of the city, opposite the Jersey terminus of their road.

The present terminus of the Erie road in a necessary and convenient one for freight entering or leaving the city. It is the vast extent of this business which requires that it shall be separated from the passenger movement. The value of the position of this depot would be greatly enhanced, as well as the internal convenience of the city promoted, by the extension of Mercer street, across Canal, Lispenard, Walker, White and Franklin streets, and into Erie place, adjoining the Erie Railroad depot. At the upper end of Mercer street a short extension would complete a connection with Union Place, thus creating a valuable and capacious central thoroughfare.

There is hardly any person who can estimate how immensely our municipal facilities would be augmented by the consummation of this system of improvements. Although it would change the occupation of much property in the lower part of the town it would do so with advantage instead of injury to the proprietors, except perhaps to publicans and saloon keepers. It would set free to commerce a large part of the best ground in the city, and it would supply the materials of commerce with better facilities of external and internal transportation than can exist in the present condition of the city. Is not the scheme worthy of an effort?

Improvement of the Locomotive.

BY ZERAH COLBURN.

The Boiler.

To increase the strength and evaporative power of the Locomotive Boiler would secure an important improvement. The principle upon which this Boiler is built is already the best, known to experience; and to increase its power without change of structure, would require an increase of its dimensions. But with the ordinary arrangement of locomotives, there are practical limits to the size of the boiler, and not until these are removed, and until some practical difficulties, attendant upon the use of large boilers, be overcome, can we obtain the dimensions due to the most powerful engines we may be likely to require.

The necessary arrangement of passenger engines, adapted at least to American if not to all roads, imposes fixed limits to the size of boiler, and such limits as, in some cases, have been nearly reached. These limits are the height of driving axles, and the width between driving wheels, when measured across the track. In freight engines, these limits are less inconvenient, as the wheels are, or should be, of comparatively small diameter, and may also be grouped closely together. The diameter only of the boiler is chiefly governed by these limits, the length of boiler and depth of furnace being generally limited by other considerations.

For 4 feet 8½ inch gauge, a diameter of boiler, of 52 inches outside of all, is the largest attainable with high driving wheels; and is as large as is properly consistent with safety. A diameter of 52 inches, as compared with 44 inches, is larger by 40 per cent.; and is sufficiently large, it having corresponding length, to preclude the necessity of the oval form of boiler.

I shall hereafter show the relative room afforded by the outside and inside connected arrangements of engine, and the extent to which they govern the position of the boiler. But independent of the obstacles interposed by the inside connected engine, the *spring suspension* of all engines has been usually placed in the way of lowering the boiler to the limit imposed by the driving axles. To use a boiler, therefore of 52 inches diameter, upon a narrow-gauge engine, would require the springs to be placed *above* the horizontal diameter of the boiler; the only place consistent with steadiness of motion. This would be necessary only with driving wheels of over 5 feet diameter. The difficulty would then exist of having no room between the sides of the boiler and the inner faces of the driving wheels to permit the spring pintals or straps to pass down to the axle boxes. To do this an indentation would require to be made in each side of the boiler, easily done by heating and hammering the boiler plate before it is riveted up. This indentation need not interfere with the tubes as the greatest width occupied by the tubes cannot exceed 46 inches, for a narrow gauge and with high driving wheels. If then the link motion and eccentrics be placed beyond interference, we can use a boiler of 52 inches diameter with 6 feet wheels, upon the narrow gauge, and with a distance of but 5 feet 7 inches from the rail to the centre of the boiler. Thus we gain a *point*, and a very important and useful one.

I will show, hereafter, the opportunities for increasing the size of the boilers of low-wheeled freight engines.

We must next look to the furnace. The size and proportions of this part of the boiler have the greatest influence upon its evaporative power and economy. To discuss the *proportion* of furnace to boiler room would involve a consideration of the draught, character of fuel, and other circumstances without evolving any permanent proportion different from that usually applied. I shall therefore only consider the opportunities for increasing the size of the furnace, and especially of its width.

Our 52-inch boiler would admit of a furnace 5 feet 2 inches deep, the center of waist of boiler being 5 feet 7 inches from the rails. This depth is from six to twelve inches more than is usually obtained, except with boilers set very high.

The length of furnace may be 5 feet if desired, and will ultimately be made as much in usual cases of large engines. A long furnace involves spreading the wheels; giving a longer and steadier base; separating, by a greater distance, the weights acting to deflect the rails, and obtaining also more adhesion, by relieving the trucks. The limit to such spreading of the drivers is in the concentration of weight. Capt. John Childe, Civil Engineer, who was among the first to urge such a disposition of the wheels, fixes the limit at eight feet between centers. A furnace 5 feet long would require 7 feet 2 inch centers for an outside-connected engine.

But as the *length* of a locomotive furnace is increased so is the distance through which the air is drawn through the burning fuel. The ready and free admission of air in a furnace governs, to an extent, the strength of draft required, and, with a locomotive, governs the size of the blast-pipe

openings. The impediments to a free entrance and passage of air in a furnace, increase almost in a geometrical ratio the distances traversed. Indeed I have seen long furnaces with a fierce fire next to the tubes, while the back of the fire was comparatively dead. In regarding the increased thickness of the bed of fuel, the interposed current of air nearest the tubes, the natural surface of the burning mass of fuel (being inclined towards the tube sheet) and other circumstances, I believe that the efficacy of grate surface is nearly inversely as its longitudinal removal from the tube sheet.

To a moderate increase of width no such objections exist, while any increase in that direction, is an increase of actual surface on which the fuel is burnt. Narrow-gauge locomotives, seldom have grates of over 38 inches width, in consequence of the room, occupied between the driving wheels and firebox, by the flat frame and the springs. But a frame of one inch thickness and eight inches depth, placed on edge would be stiffer, and afford a better fastening for the machinery of the engine. Indeed, the *cheapest* frame possible would be that formed by two plain bars joined at their ends, and having the pedestals bolted on. Such a frame would cost no more than the cost of bar-iron and labor of welding up to the required length. Such a frame, further more, would allow of a grate of 46 inches width, a gain of from four to ten inches over furnaces in use. The springs would be well secured above the horizontal diameter of boilers, as already described, and would not interfere with any detail of this arrangement.

The combined dispositions thus decided, giving a furnace 5 feet long, 3 feet 2 inches wide, would afford over 107 feet of fire-box heating surface, a larger extent than is any where used in this country for large passenger, wood-burning engines.—The area of grate would be 19 1-6 feet, far exceeding any ordinary attainment for similar boilers.

In my next I shall consider the opportunities for increasing the extent and efficiency of the tube surface.

The Engineering Profession.

Among the ill effects which the late financial difficulties have had upon railway projects, there is one which will be severely felt by a large class of citizens; the loss of employment to the host of engineers who were employed upon our roads last year. A great difficulty was found two years ago in obtaining men qualified to run, locate, and construct the lines then projected; and very many, too many young men entered the profession, encouraged by the then high wages, and fair prospect for long employment.

This year most of these roads have been stopped, and their engineers thrown out of work with no prospect of obtaining more. Gentlemen thoroughly qualified by education and long experience, are forced to be idle, or turn their attention to other new kinds of business. Half-fledged Assistants are racing around the country looking for situations, and those who are lucky enough still to hold on, are trembling lest they have to go too.

Wages have gone down to scarcely living prices and the chances for more work, or better pay grow more dubious.

Now a great proportion of this evil is due to the fact, that there are too many in the ranks, and

among all too many who are not engineers,—a proportion easily enough corrected; and which I hope, will be, if confidence in railway enterprise is again restored, and the work goes on next year. Railway Directors are most to blame, for the overstock of the profession. They have been too little apt to look at the actual wants of their works, and having young friends to please have secured their appointments without knowing whether they were wanted or not. Chief engineers of western roads especially, have scarcely inquired into the qualifications of applicants, and have frequently made appointments of green hands, to the exclusion of experienced ones. Cousins, and brothers, and brothers-in-law, of engineers have been in very many instances put in charge of Divisions, merely for relation sake, when they have had so little experience as scarcely to know how to "read the rod." Ax-men and rod-men are promoted too soon (for their own good sometimes,) and after once being an Assistant become unwilling to accept again any situation less than that.

These are real evils, of manifest injury to the profession, and steps should be taken to remedy them. If railway construction goes on next year, Chief Engineers and Directors can obviate them, in a great measure, by making fewer appointments of new hands. Men who have been in the business, and who can furnish testimonials, as to their qualifications should be the first ones chosen; and after these are all employed then there will be time for new ones. Again, do not let us have so much of undeserved promotion. The berth of "Assistant engineer" is one of no little responsibility; in many cases of more importance than the "Residency." Every rodman who can use the level or transit, is not qualified to be an Assistant. There is (or ought to be) something more required of him, than the mere ability to set slope stakes, or measure borrowing pits. There is a large amount of knowledge, easily enough acquired by a studious person, it is true, which it is necessary an Assistant should have before he should be allowed to take charge of a Division. The Resident cannot always be on hand, and an ignorant Assistant, may, through his want of knowledge cause a very serious and permanent injury to his work; or pass unnoticed some fault which a practised eye would have at once detected. I know of one Assistant, having charge of a Division on which is a heavy bridge of 4 long span, whose whole experience comes within 9 months. Such a work ought not to be entrusted to such a person. Ax-men and Rodmen should be expected to serve longer in those positions than they usually do; and be made to pass a rigid examination before being recommended for promotion. Young men, (old ones too) should not be appointed to stations, which, upon a thorough questioning, they are not found qualified to fill. And I do not see why, like in other pursuits, engineers should not be strictly required to pass through all the grades. Among the Chiefs in England and this country, we find the best are those who commenced at the ax and chain. As appointments have been made, and as engineers have been treated socially, an ax-man's berth is no more plebeian than a 3d assistant's is in our Naval engineer service.

The Profession of Civil Engineering is not merely the art of building a railway. It embraces a large share of all the sciences, and thoroughly qualified

engineers, as the Stephensons, and Mr. Brunel, of England; E. F. Johnson, Charles Ellet, Jr., and others of our own country, must be ranked among the most learned men of their nations. There are many young men, who have entered the business, to study hard and learn it all, but who will be utterly discouraged if they find that the unqualified are to be promoted over them out of mere friendship; or that the profession is to be overcrowded because the appointing powers *dislike* to refuse applicants. A. F. H.

Cleveland and Toledo Railroad.

FIRST ANNUAL REPORT.

As the present Corporation was organized by the union into one, of two distinct and independent companies, it is deemed proper to present a condensed introductory history of the companies thus united, prior to their consolidation, without which the character and constitution of the present Corporation may not be fully understood.

One of the companies thus united, was incorporated and known by the name of Junction Railroad Company, and the other by the name of the Toledo, Norwalk and Cleveland Railroad Company. The former was incorporated by an act of the Legislature of Ohio, passed on the second day of March, 1846, and the latter, by an act of the seventh of March, 1850. The Junction Railroad Company by its original Charter, and two several amendments passed on the 22d of January, and the 21st of March, 1851, was authorized to construct a railroad from the City of Cleveland to the west line of the State by such route as the Directors might determine, with power to construct branches to any points within the counties through which the main line might pass. The Charter of the Toledo, Norwalk and Cleveland Railroad Company, authorized the construction of a railroad from Toledo, by the way of Norwalk, in the County of Huron, to a connection with the Cleveland, Columbus and Cincinnati Railroad, at some point in the County of Huron or Lorain. The authorized Capital Stock of the Junction Company, was \$3,000,000, and that of the other Company, \$2,000,000, making the united capital of the two roads \$5,000,000, which is consequently the capital of the consolidated Corporation.

The consolidation was effected, and the present Company organized on the first of September, A. D. 1853, under the specific provisions of the twelfth section of the amendment to the Toledo, Norwalk and Cleveland Railroad charter, passed on the first day of March, 1850. Under its charter the Toledo, Norwalk and Cleveland Co. constructed a road from the East Bank of the Maumee River, opposite the City of Toledo, to Grafton, where it connects with the Cleveland, Columbus and Cincinnati Railroad, 25 miles southwest from the City of Cleveland, being a distance of 87½ miles, all of which was finished and put into operation in the month of January, A. D. 1853.

It is well known, that the completion of this road finished the last remaining link in the long and important line of railway from New York and Boston to Chicago, which has since been extended to the Mississippi River, where it find a temporary resting place only in its progress to the far distant West. This road passes through several flourishing towns, and is now denominated, the Southern division of the Cleveland and Toledo Railroad Company.

At the time it was opened, its immediate affluents were the Cleveland and Columbus, the Sandusky and Mansfield, the Mad River and Lake Erie, and the Michigan Southern, Railroads. Other roads of importance, and which will add most essentially to its business, are now under construction, and will, at no distant time, be completed.

The Junction Road, or Northern Division as it is now called, commence at the City of Cleveland, and, except a necessary deflection to find a convenient locality for crossing the deep bed of Rocky River, follows the Lake shore closely, passing through several growing towns, among which is the City of Sandusky, to its junction with the Southern Division, about 8 miles east of Toledo, and 99 miles from Cleveland. From this point, a

branch track is now being laid down to Toledo on the road bed of the Southern Division. The main track here crosses the Southern Division, and extends forward through Perrysburgh, and Maumee City, in nearly a right line to its junction with the Northern Indiana, near Swanton, 14 miles west of Maumee City, and one hundred and twenty-five miles and eighty-six hundredths from Cleveland. Counting the branch to Toledo as a part of this division, its whole length is within a fraction of one hundred and thirty-four miles. If to this be added the Southern Division, eighty-seven and one-half miles, the aggregate line of road of the consolidated corporation will exceed two hundred and twenty-one miles, exclusive of the side tracks and turn-outs.

The portion of the Northern Division between Cleveland and Sandusky City, a distance of sixty miles, was finished and opened for travel last fall, and is now in successful operation. The part of this division between Sandusky and its intersection with the Southern Division, a distance of 39 miles, and the branch track from this point to Toledo, 8 miles, making an aggregate of 47 miles, will be completed by the middle of the present month of July, unless some unforeseen accident, not now anticipated, should happen to prevent it. The track laying on this part of the road is now so far advanced, that its completion by that time may be confidently counted upon.

That part of the Northern Division which lies between the intersection of the two divisions, and the point where it crosses the Toledo and Illinois Railroad at Maumee City, a distance of something less than 13 miles, will be completed and brought into use during the present season—probably by the middle of October or first of November—so that before the close of navigation, about 112 miles of the main line of the Northern Division, and the branch track of eight miles to Toledo, will have been completed and brought into use.

This will leave unfinished at the close of this season, only the short space of 14 or 15 miles, between Maumee City and the junction of this division with the Northern Indiana Air Line Railroad, now under construction. The report of the Engineer, shows that most of it is already graded, and that when necessary, that part of the road can be finished in a few weeks time. It is not deemed important to finish this last link in the road, before the whole line of the Northern Indiana Road is completed and ready for business.

The Southern Michigan, the Northern Indiana, the Toledo and Illinois, and the Northern Division of the Cleveland and Toledo Railroads are of the gauge of four feet eight and a half inches; and the roads running west from Chicago to the Mississippi River, are of the same gauge.

The Southern Division of the Cleveland and Toledo Road, is of the gauge of four feet ten inches, and corresponds to the gauge of the roads which it intersects, and those with which it is connected at its eastern terminus.

On the last named division, there is a break of gauge at its connection with the Michigan Southern, at the City of Toledo.

By opening the Northern Division to Toledo, and also to its intersection with the Toledo and Illinois road at Maumee, this great inconvenience will be avoided at both of these points.

It is understood, and we may say reduced to a certainty, that the Toledo and Illinois Road will be opened during the coming Autumn, from Maumee City to Fort Wayne, a distance of ninety miles, and probably some thirty miles beyond the last named place.

That Road is destined to go forward into the Wabash Valley, to its connection at Paris with the Terre Haute and Alton Road, and to St. Louis by the way of Alton. It passes through a country of unsurpassed fertility, and it cannot fail to bring to the Cleveland and Toledo Road, a most important accession to its business. The amount of trade and travel that will flow in upon us from that great line of road, will be second in magnitude to no other affluent, except the Michigan Southern and Northern Indiana.

The Northern Division was commenced and successfully carried forward, under the charge of Hon. E. LANE, to the time of the Consolidation; when that was effected, the Directors did not deem it necessary to press the work to its earliest completion, since the Southern Division—which was then in operation—furnished a temporary accommodation for the business that might be expected to be done by both, while they were yet new and undeveloped lines of trade and travel.

The report of the able and experienced engineer who has had charge of the construction of that division of the work from its commencement, will show its solid and substantial character, and that the ruinous and expensive expedient of slighting any part of the work with a view to lessen the first cost of construction has been wisely avoided. From its solid construction, slight curve, and low grades, we feel confident assurance that there is no road in the western country over which better time can be made, or with more safety; and that it will perform its whole duty as one of the links in the great chain of Railroads from New York to the Mississippi river. At present the travel of this great Line mainly passes over the Southern division; when both roads are opened to the free choice of the travelling public, the business will probably be divided between the two. The construction of depot accommodations for freight and passengers, has thus far been confined chiefly to the immediate wants of the Company. Ampler provision will be indispensable, especially at Toledo, Sandusky and Cleveland. The cost of these cannot now be stated, as it will depend mainly upon the plan that may be adopted, which is not yet definitely decided upon. It may not be inappropriate to bestow a few remarks upon what may be denominated the natural power of the geographical position which is occupied by the Company's roads. The slightest inspection of the map of the country must convince any one, that viewed with reference to Railway communication, the line between Cleveland and Toledo is and ever must be, of commanding importance. Between these two cities the waters of Lake Erie project down into the very heart of the United States and form the most Southern point in the Northern boundary of the whole extensive line from the Atlantic to the Pacific oceans.

Here the Southern shore of Lake Erie comes down to about 41½° north latitude. Assuming Cleveland as a station of departure Eastward, the boundary line of the United States runs from it uniformly nearly North-East, until at its North East terminus in the State of Maine, it reaches a point above latitude 47°. A line drawn East from that city, with a very slight Southern deflection, will strike the city of Philadelphia. Indeed, for all practical purposes, that city may be regarded as on the same parallel of latitude with Cleveland. This last named line passes through the heart of Pennsylvania and New Jersey, while New York and the New-England States lie to the north of it. Passing to the west end of our road, and taking Toledo as a station, the boundary of the United States turns suddenly around the head of Lake Erie, running almost North, until it intersects Lake Superior, and thence through that lake to North latitude 49° and thence west on that parallel to the Pacific. It also so happens that Lake Michigan projects down into the country to a point at its Southern extreme, nearly on a parallel of latitude with the South Shore of Lake Erie, between Toledo and Cleveland.

Lake Michigan, from its geographical position, may be regarded as an insuperable natural barrier to Railroad communication, and must always force around its southern extremity and concentrate at that point, the Railroad travel from the immense extent of country lying North, North-west and West of it, stretching away West to the very foot of the Rocky Mountains, and North and North-west to the shores of Lake Superior, and into regions far beyond the confines of that lake. Destined as that boundless and fertile expanse of country undoubtedly is, to be peopled with unprecedented rapidity, the travel from it to the Nor-

thern Atlantic cities, will, in a few years, exceed in amount what might now be regarded by many as the vision of a disordered imagination. At Chicago, a partial distribution to the North-east and South-east will take place. But it is unmistakably evident from an inspection of the map, as well as from the known natural features of the country, that when the railway travel going Eastward from this boundless region is brought down, as it ever must be, to the Southern extremity of Lake Michigan, the great mass of travel when once there, will keep forward on a nearly due east line to Cleveland. From the turn the Lake here takes to the North-east, Cleveland will always be the first great point of distribution of the travel to the Northern Atlantic cities, thus forced around the south shore of Lake Michigan. A part will seek its way to Pennsylvania and the Atlantic cities, over the Cleveland and Pittsburgh Railroad. A part will take the same direction over the Cleveland and Mahoning road, which, with its connections when completed, form a line of uniform gauge from Rock Island on the Mississippi river, both to Philadelphia and New York. The remaining and perhaps the greatest part, will follow the lake shore to Dunkirk, when another distribution will take place between the New York and Erie, and the more Northern roads. Nor does this movement, vast as it ever must be, constitute by any means the entire mass of travel from the West, that will find its natural outlet to the East, and North-east, along this part of the Southern shore of Lake Erie.

The Michigan Southern and the Northern Indiana roads will bring to Toledo the trade and travel of the country, along their respective lines, situated between Lakes Erie and Michigan; while the Toledo and Illinois line of road will bring to the same point from the South-west, and the trade and travel of the Maumee and Wabash valleys, extending even to St. Louis by the way of the Terre Haute and Alton Railroad.

This latter line of road penetrates into and passes through hundreds of miles of country of unsurpassed fertility, and viewed in connection with the long and important lines of Railroads which unite with it from the West at Fort Wayne, Logansport, and Lafayette, and that it intersects both branches of the Illinois Central nearly midway their course, its immense value as an affluent to the Cleveland and Toledo Railroad is self-evident and can scarcely admit of an over estimate.

With the trade and travel going West from the Northern Atlantic cities, the converse process of concentration and distribution will take place.—The first great point of concentration from Philadelphia and the country North of it, will be at Cleveland; thence passing over the Cleveland and Toledo road to the city of Toledo, the first distribution of this concentrated travel will there take place between that going forward North-west and West, towards Lake Michigan, and that seeking its way South-west through the valleys of the Maumee and Wabash rivers into Indiana and Illinois to the St. Louis, and the country beyond and above that city, on both sides of the Mississippi.

The second point of distribution will be at Chicago. A part passing up the west shore of Lake Michigan, past Green Bay into the upper peninsula of Michigan, to the copper and iron bearing region. A part finding its way North-west, towards the western end of Lake Superior, and the head waters of the Mississippi, and at no distant day far beyond the sources of that river, into the extensive regions drained by the great Red river of the north, and stretching off West to the slopes of the Rocky Mountains, which according to the report of Capt. Pope, of the United States Topographical Corps, of his exploration of the upper waters of the Mississippi, and of the country within the limits of the United States, drained by the above mentioned Red River, made by order of the War Department, is a country of great agricultural fertility, and of sufficient extent for at least two respectable States. All that region when peopled, must ever on its way, come down around the southern bend of Lake Michigan. The remaining part

will go forward West and South-west from Chicago to the very verge of civilization on this side of the Rocky Mountain.

When we contemplate the certainty and magnitude of this no distant future, there can be no mistaking the fact, that the net-work of vast railroads branching out from Chicago over all the country above described, will concentrate at the Southern extremity of Lake Michigan, a volume of travel and trade, which in the movement of human commerce and intercourse, will bear the same relation to the secondary and ordinary lines of trade and travel, and that the aggregated current of a mighty river sustains to the head springs of the valley. The main body of this great movement, when thus concentrated at the southern extremity of Lake Michigan, will naturally go forward in a direct line to the head of Lake Erie at Toledo, and thence to Cleveland, where, as already explained, its first important distribution will take place. This statement of the commanding natural position of this great trunk line along the southernmost shore of Lake Erie, between Toledo and Cleveland, renders it wholly unnecessary to enter into any specification of what now are, and what must be hereafter, its almost innumerable affluents direct and remote, both East and West of it, or to go into a detail of their individual importance.

Enough has already been said on this topic to demonstrate that the Cleveland and Toledo Railroad may safely rely for its present and future prosperity upon the broad and deep fountains of business provided for it by the hand of nature, which can neither be dried up nor diverted from their natural channels; and these considerations make manifest the propriety of combining the two parallel lines above described in one corporation, which add largely to the local accommodations, and avoid the possibility of rival and interfering interests, while the business to be developed will be constantly on the increase, and tax to the utmost the capacity of both.

In corroboration of this view, notwithstanding the long continued stringency in the money market, and the diminished activity of business this year compared to the last, yet during the only four months of this year and the last, in which it is in the power of the Company to make a comparison, the receipts of these four months have exceeded those of last year on the Southern division seventy-three per cent. The report of the Superintendent exhibits the gratifying fact, that the gross earnings of the Company for nine months, commencing with the 1st of September last, when the consolidation took place (and the present Company was organized) to the 31st of May, amounted to \$497,570 80, and the cost of operating the road to \$203,703 02, leaving a net income of \$293,876 85. Thus it will be seen that the cost of running the road is a fraction less than forty per cent of its earnings. The details of the cost of operating the road will be found in the superintendent's report. After what has been said above we deem it almost superfluous to express the opinion that the business of the company will be largely increased during the coming year, and that the Cleveland and Toledo Railroad will always be able to maintain its place on the list of first class investments.

During the nine months embraced in the Superintendent's Report, commencing with the 1st of September last, the Company have transported over their roads upwards of three hundred thousand passengers without an accident causing a loss of life, or personal injury to any one of them, with the single exception of the fracture of a passenger's arm, which was incautiously projected from the window of a car, while passing a bridge. The Directors make this announcement with the most unfeigned satisfaction. No other fact could so conclusively prove that the Road is so managed as to entitle it to the confidence of the travelling public, and that its safety has been vigilantly guarded by the Superintendent, Conductors, Engineers, and all others employed in the transportation department. In concluding our report, we

take great pleasure in bearing testimony to the ability, fidelity and zeal with which all the Officers and Agents of the Company have discharged their respective Duties.

S. F. VINTON
President.

Greenville and Columbia Railroad.

The recent annual report of this company states the total disbursements on amount of construction up to July 10th, to have been \$1,999,080 41. The total cost of road as represented by its stock and debt is as follows:

Stock paid in.....	\$1,293,464 25
Bonds sold.....	530,500 00
Floating Debt.....	438,306 27

Total.....\$2,262,270 52

From this sum are to be deducted \$140,777 77, being the amount of the available means of the Company.

To pay the floating debt the Company have still on hand \$269,500 of mortgage bonds, being the balance of an issue of \$800,000. Estimating the bonds at *par*, there will be a balance of \$28,028 00 of indebtedness to be provided for.

The receipts of the road for the year have been \$214,865 13. The estimated receipts for the current year are \$800,000, which will be sufficient, allowing one-half for working expenses, to pay the interest on the funded debt, and 7 per cent. on the stock.

The total length of main track to Greenville is 143 miles. Length of the Anderson Branch 10: Abbeville Branch 12 miles: total length of road 165 miles. The road has been operated the past year with great success. Of 45,000 passengers carried, not one has suffered injury. The equipment has been almost equally free from accident.

The above road supplies railway accommodations to an extensive and wealthy portion of South Carolina. It has been built at low cost and bids fair to be remunerative to stockholders, as well as to add largely to the value of property on its route. Its management from the commencement has been characterized by prudence, economy and perseverance, which qualities have secured to the public a valuable work, and to the stockholders what is destined to a profitable one.

Why Earnings are Applied to Construction.

We presume that the increase of construction accounts of most of our railroads exceeds annually the amount of their net earnings. This increase is the unavoidable result of a proportionate increase of traffic. There is no good reason why this increase should be borne by earnings, nor why dividends should not be paid from year to year, upon capital actually invested. But it may happen, as such has been the case the present year, that from the difficulty of borrowing money, or of obtaining new additions to the capital account, earnings are expended in construction, to meet exigencies that cannot be provided for in the manner above stated. There is no doubt that the New York Central, the Cleveland and Columbus, and the Little Miami Companies, are earning *net*, a large dividend upon their cost. Yet they have recently omitted to pay one, in consequence of having applied the earnings in improvements upon their lines, and which could not be postponed without great loss, or inconvenience. The course pursued has rendered the roads all the more valuable, though the effect has been to de-

press their market value. Roads may be compelled to expend their earnings upon construction, but there is no good reason why they should do so, provided money can be had from other sources. The increase of the capital account of the Boston and Worcester Railroad from 1836 to 1849 was \$3,400,000, while the whole amount of net earnings was only \$3,000,000; yet during this period of 14 years the Company earned and paid, over seven per cent. upon the cost of the road, annually. This is one of the soundest and most productive and successful roads in the United States; but had the increased expenditures been paid from earnings, the stockholders would not have received a penny up to the present time.

It may be inconvenient for holders of railroad stock to forego their usual dividends, but they really suffer no loss. They only invest their own means, instead of creating new debts; and also it may be entirely proper for companies to divide earnings upon the capital they have already invested, while their construction accounts may be open. Certainly, it is much wiser for them to reinvest their own means, than to borrow of others at exorbitant rates.

Ohio and Indiana Railroad.

The entire track of the Ohio and Indiana Railroad, extending from Crestline on the Cleveland, Columbus and Cincinnati road, to Fort Wayne, in Indiana, is laid, with the exception of some thirty miles, which is now being put down and the whole road will be completed and in operation by the 5th September next. This company have constructed their work with great care. They will have one of the best works in Ohio, and much of success and thoroughness may be justly attributed to their able President Samuel Hanna, of Fort Wayne Indiana.

The Alexandria and Gordonsville Railroad.

We learn from the Charlottesville Advocate that "the subscription of Amherst and the private subscriptions already obtained have placed at least the commencement of this work beyond all doubt. Whether it will be completed, or not must turn upon the additional assistance that it is hoped will be rendered by those who will soon learn to appreciate its great advantages. The letting of the whole distance to Lynchburg—58 miles—will take place as soon as the notice of the fact can be properly advertised."

Milwaukee and Mississippi Railroad.

The earnings of the Milwaukee and Mississippi Railroad for July were:

	1853.	1854.
Passengers.....	\$8,384 64	\$16,099 65
Freight.....	7,770 21	19,474 79

Total.....\$16,154 85 \$35,574 74

The road is now running to Madison 100 miles, while it was running to Janesville, 70 miles, in the month of July, 1853. Taking the average per mile of last year's business, the increase of length of road would require receipts of about \$23,100, leaving a margin of over \$12,000 for actual increase of business during the duldest month of the whole year. In the year 1852, the total receipts of July (the road open to Eagle 36 miles,) were \$4,419 86. The average sum per mile, per month, of road for the three years is:

1852.....	\$122 50	1854.....	\$355 74
1853.....	231 00		

North Carolina Railroad Convention.

A Convention will be held in Centre, Stanly County, on Saturday the 9th day of September next, to take into consideration the subject of connecting the Atlantic Seaports of North Carolina by railway communication, with the chain of roads bordering to the valley of the Mississippi.

South-West Branch Pacific Railroad.

We understand that the first division of this road, from Franklin to Gasconade, is now ready for construction, all the preliminary engineering work being complete. The engineer force has been organized with a view to immediate prosecution of the work, but as the means for this is entirely dependent on the citizens of the South-west, and the question as to the tax for the necessary \$500,000 postponed until the August election, it has been thought advisable to discontinue this force, until it is certain that the South west would be true to its own interest, and subscribe the amount needed, and orders have been issued to that effect. The engineers will be placed again on the line within thirty days, provided favorable action is had in regard to the subscription, but not until the whole sum, \$500,000, is taken.—*St. Louis Republican.*

Boston and New York Central Railroad.

The Directors propose to issue \$250,000 of their first mortgage bonds "to stockholders and friends of the enterprise," at 80 cents on a dollar. The avails are supposed to be sufficient to enable trains to run over the entire road into Boston, within 60 days. The authorized capital of the Boston and New York Central is \$2,925,000 in shares of \$100. Of this, 22,088 shares (\$2,208,800) have been issued to stockholders and 1612 shares have been pledged as collateral. The concern owes a balance of \$936,379 71, beside \$297,750 of Norfolk County bonds outstanding. Its assets are \$1,200,000 of mortgage bonds, and the unissued stock, say 7000 shares. Of the bonds, \$694,000 have been pledged as collateral, for \$512,931. Of this last amount, \$450,000 is not due for one year, or thereabouts. Practically, the road has \$500,000 of bonds on hand, with which to carry the floating debt and put itself in running order.

Ogdensburg (Northern N. Y.) Railway.

At a meeting of the board of Directors of the Ogdensburg Railroad, held at Malone, August 2, Wm. Raymond Lee was chosen President; Geo. V. Hoyle, Vice-President and Superintendent; J. Francis Tuckerman, Treasurer, and I. G. Hopkins, Secretary.

Cleveland Painesville and Ashtabula Railroad

At a meeting of the stockholders of the Cleveland, Painesville and Ashtabula Railroad, held at Cleveland on Tuesday last, the following gentlemen were unanimously elected to serve as directors for the ensuing year: Alfred Kelley, Columbus, Ohio; Wm. Case, Chas. Hickox, Amasa Stone, Jr., W. D. Beattie, Stillman Witt, T. M. Kelley, George B. Ely of Cleveland, O.; D. R. Page, Madison, O.; Erastus Case, Auburn, N. Y. At a subsequent meeting of the directors, W. Case of Cleveland, was reelected President; George B. Ely, Secretary, and P. Handy, Treasurer. An exhibit of the financial condition of the company was presented, which was very satisfactory. The business of the road for the six months ending June 30, shows an increase of twenty-five per cent. over the same period of last year.

Cincinnati, Harrison & Indianapolis Railroad

At the regular annual meeting of the stockholders of Cincinnati, Harrison and Indianapolis Straight Line Railroad Company, held on the 10th of August the following gentlemen were elected Directors for the ensuing year:

E. M. Gregory, Chas. Reemelin, T. W. Faber, R. H. Pinny, Robert Boal, J. H. Gerard, John M. Makin.

The Board of Directors organized by electing E. M. Gregory, President; Chas. Reemelin, General Agent; T. W. Faber, Secretary; John M. Makin, Treasurer.

To Engineers and Surveyors.

A YOUNG man, 18 years old, wants a situation (to learn the business) as chain carrier, in a railroad survey. No objections to go to any part of the country, or world. Good reference can be given if required. Address A. S., Office of this Journal. [32 1m]

RAILROAD STOCKS, BONDS & STATE SECURITIES.

The subscriber offers for sale—
Ohio and Mississippi Railroad Company, 7 per cent. second mortgage, convertible Bonds. Interest payable semi-annually in New York.

Scioto and Hocking Valley Railroad Company, 7 per cent. first mortgage, convertible Bonds. Interest payable semi-annually in New York.

Cincinnati, Western Railroad Company, 8 per cent. Real Estate Bonds. Interest payable semi-annually in New York.

Hamilton County, Ohio, 6 per cent. Bonds. Interest payable semi-annually in New York.

Louisville and Portland R. R. Co. Bonds.

Mayville and Lexington R. R. Co., 6 per cent. second mortgage, convertible Bonds.

Louisville City Bonds.

Cincinnati, Logansport and Chicago R. R. Co., 10 per cent. Income Bonds.

RAILROAD STOCKS.

Covington and Lexington R. R. Stock.

Cincinnati, Hamilton and Dayton R. R. Stock.

Little Miami R. R. Stock.

Ohio and Mississippi R. R. Stock.

Southern Bank of Kentucky Stock.

Columbus and Xenia R. R. Stock.

Cincinnati and Chicago R. R. Stock.

Central Indiana R. R. Stock.

Cincinnati and Indianapolis R. R. Stock.

Indianapolis and Bellefontaine R. R. Stock.

Cincinnati, Wilmington and Zanesville R. R. Stock.

WANTED—\$100,000, for which the best securities will be given.

WANTED—\$40,000, on commercial paper.

ISAAC OSBORN DAVIS,

Stock Exchange and Financial Agency Office,

No. 38 Third street,

Cincinnati, Ohio. [32 1m]

Machinists' Tools.

SHRIVER & BROTHERS,
Cumberland, Maryland,

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools. These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others requiring first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders, and communications receive prompt attention. Address

SHRIVER & BROTHERS Fulton Works,

Cumberland, Maryland. [32 6m]

August 19th, 1854.

OFFICE CINCINNATI, HAMILTON & DAYTON R. R. Co.
Cincinnati, August 8th, 1854.

THE Board of Directors of this Company have this day declared a Dividend of Five per cent. out of the net earnings of the Company for the six months ending 31 July, payable in Scrip bearing Seven per cent. interest redeemable in three years. The Scrip will be delivered on and after Sept. 1st, to the Stockholders registered in Cincinnati on application at the office of the Company, and to those registered in New York at the office of the Ohio Life Insurance & Trust Company in that city. The Transfer Books will be closed for ten days from this date. [32 1m]

FRANK S. BOND, Secretary.

Rensselaer Polytechnic Institute.

DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS,—including Railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the Annual Register, giving full information respecting the Institute, apply to

R. FRANKLIN GREENE, Director, R. P. I.
Troy, New York. [32 3m]

Lowmoor Iron.

W. BAILEY LANG & CO., 54 CLIFF STREET, have in stock and offer for sale an assortment of Round, Flat and Square Bars LOWMOOR IRON, which they will sell by the ton or single bar. The attention of manufacturers, Railway Managers and Mechanics is particularly directed to the quality of this Iron, as its great strength, uniformity, and freedom from flaws, render it the best Iron in the market, where first quality is required.

W. BAILEY LANG & CO., being Sole Agents in the United States and Canada for the LOWMOOR CO., will execute orders at manufacturer's prices. [61.81]

Universal Scroll Chucks.

THOSE in want of a superior article and of various sizes will please call at or address the MERIDEN MACHINE CO. 15 Gold-st. corner of Platt, New York City. [31.2t]

To Railroad and Canal Co.'s Contractors, &c.

THE undersigned would direct the attention of Chief Engineers and Contractors to the facilities they possess for supplying them with laborers, mechanics &c., of any description, and also inform them that they forward and deliver such men at whatever destination they may be required.

Companies or Contractors desirous of receiving steady and industrious men, will be promptly supplied at the shortest possible notice.

JOHN J. HELLING & CO.

No. 86 Greenwich Street, New York.

26.4t

Lawrence Scientific School, HARVARD UNIVERSITY.

THE next term of this Institution will open on the thirty-first day of August, 1854, and continue twenty weeks.

Instruction by Recitations, Lectures and Practical exercises, according to the nature of the Study, will be given in:

Astronomy	by Messrs. Bond.
Botany	Prof. Gray.
Chemistry, Analytical and Practical	Horsford.
Comparative Anatomy and Physiology	Wyman.
Engineering	Eustis.
Mathematics	Pierce.
Mineralogy	Cooke.
Physics	Lovering.
Zoology and Geology	Agassiz.

For further information concerning the School application may be made to Prof. E. N. Horsford, Dean of the Faculty.

CAMBRIDGE, MASS., July, 1854.

[30 4t]

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crabs cars, adapted to Railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

Or BRIDGES & BRO.

64 Courtland st., New York.

19 tf

To Contractors for Railroad Iron.

PROPOSALS will be received until the 20th September for nine thousand tons of railroad iron T pattern, sixty pounds to the yard, One-half to be delivered at Charleston, South Carolina, and one-half at Wilmington, North Carolina, delivery to commence in January and close in August, equal quantities to be delivered in each month at each place.

Payment will be made immediately on the delivery of each cargo, in North Carolina Funds. The contract will be given to the lowest responsible bidder provided the price be satisfactory. Bidders will endorse their bids—"Proposals for Railroad Iron"—and address them to Cyrus P. Meadwell, Secretary, North Carolina Railroad Company, Greensboro, N. C.

WALTER GWYN,

Chief Eng. N. C. R. R. Co.

Raleigh, August 3d, 1854.

[31.1d.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to

EDW. BECH & KUNHARDT, 62 Beaver St.,

Or, A. TOWAR, Agent Pokeepsie Iron Works,

23tf Pokeepsie, N. Y.

To Civil Engineers.

J. M—, residing at 102, Third avenue, New York city—wishes to obtain the situation of assistant in a Civil Engineer's office, or the situation of Engineer or Superintendent of works, or for any department of work, or—having surveying instruments of his own—he would under take surveys both for railroads and other works.

He has been employed principally in Scotland surveying railways, superintending railway works making surveys of Burghs, surveying for water works, &c.

He most respectfully solicits the attention of Civil Engineers or parties who require his services, and will attend to business faithfully and efficiently. [1t 32.1

500 TONS No. 1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.

99 and 101 John st.

N. B.—The above Iron constantly imported. [32 tf]

ZERAH COLBURN,

ENGINEER AND AGENT

FOR the Design, Construction, Valuation and Purchase of Locomotives and Railroad Machinery.

Offers his services to Railroad Companies in either of these departments, having long experience and the best facilities for all.

As CONSULTING ENGINEER he will advise as to the value or adaptation of any system of motive power, and furnish drawings, estimates and specifications for any arrangement of engine.

As ACTING ENGINEER he will superintend the construction, survey, or reconstruction of any railroad machinery, and guarantee satisfactory results.

As CONTRACTING ENGINEER, having connection with the most reliable and successful manufacturers, he will negotiate for the purchase of Locomotives of the very best construction and proportions. Also Wheels, Tires and Repair Shop Machinery.

Having much experience in Patent Business he will undertake the preparation of Drawings, Specifications, Applications for Patent or Caveat and other papers necessary for inventors. He is able to give material assistance in bringing inventions and improvements in Railroad Machinery into favorable notice.

CHILLED TIRES FOR LOCOMOTIVE DRIVING WHEELS.

Zerah Colburn retains the principal agency for the sale and right of use of this valuable improvement, and will furnish the most substantial guarantees of its Safety, Durability, Adhesion and great Economy.

Office, 3d floor American Railroad Journal Building,
No. 9 Spruce street,
New York.

REFERENCES.

The New Jersey Locomotive and Machine Co.
James Jackson, Pres't. Paterson, N. J.
Chas. W. Elliott, Vice Pres't. 59 Beaver str., N. Y.
Henry V. Poor, Esq., Editor Railroad Journal, New York.
Geo. D. Phelps, Pres't. Del., Lack and Western Railroad.
Geo. W. Whistler, Vice Pres't New York & New Haven R.R.
William Raymond Lee, Esq., Boston.
Bush & Lobdell, Wilmington, Del.
Oliver M. Hyde, Esq., Mayor City of Detroit.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

New York and Erie R. R.

PASSENGER TRAINS

leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, over the N. Y. & E. R. R. and the B. & N. Y. O. R. R., without change of baggage or cars.

DUNKIRK EXPRESS, at 6 a. m. for Dunkirk.

MAIL, at 8 1/4 a. m. for Dunkirk and Buffalo, and intermediate stations. Passengers by this Train will remain over night at any Station between Binghamton and Corning, and proceed the next morning.

WAY EXPRESS, at 1 p. m. for Dunkirk.

ROCKLAND PASSENGER, at 4 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

EMIGRANT, at 6 p. m., for Dunkirk and Buffalo and intermediate Stations.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Elmira with the Elmira and Niagara Falls Railroad for Niagara Falls; at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Supt.

Power Planers.

THOSE in want of a small Power Planer which will plane 3 feet in length, 14 in. wide, and 12 in. deep, and made in a superior manner, will please call at the office of the MERIDEN MACHINE CO. 15 Gold-st. corner of Platt, New York City.

Any communication by mail directed to the office or Factory (West Meriden, Ct.,) will meet with prompt attention.

For Sale.

A STATIONARY Engine, having cylinders 13 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,

Paterson, New Jersey,

or 74 Broadway, New York.

Jul. 14 29 tr.]

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF ERIE CANAL—WESTERN DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Buffalo, until the 1st day of September next, at 10 o'clock, A. M. for the following described work between Tonawanda and Black Rock:—

Section 360, with penalty in bond of...	\$14,000.
" 361, " " " " " "	20,000.
" 362, " " " " " "	17,200.
" 363, " " " " " "	10,000.
" 364, " " " " " "	9,800.
" 365, " " " " " "	10,600.
" 366, " " " " " "	15,800.
" 367, " " " " " "	12,000.
Guard Lock and Section at Black Rock...	14,000.
Waste Weir on Section 360.....	500.
Culvert on Section 362.....	600.
Bridge Abutments on Section 360 to Lock	
Section inclusive.....	2,000.

The above work to be completed by the first of April, 1857.

Sealed proposals will be received at the Engineer's Office in the city of Rochester until the 4th day of September next, at 10 o'clock A. M., for the following described work between Rochester and Spencerport:—

Section 266, with a penalty in bond of...	\$7,500.
" 267, " " " " " "	8,500.
" 268, " " " " " "	6,700.
" 269, " " " " " "	6,100.
" 270, " " " " " "	6,500.
" 271, " " " " " "	5,200.
" 272, " " " " " "	5,600.
" 273, " " " " " "	7,200.
" 274, " " " " " "	4,200.
" 275, " " " " " "	10,200.

Culverts on Sections 266 and 275, both inclusive do. do.....	3,500.
Bridge Abutments on Sections 266 to Section 270 both inclusive.....	3,000.
Bridge Abutments on Sections 271 to Section 275 both inclusive.....	2,000.

The above work to be completed by April 1st, 1856.

MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse until the 7th day of September next at 10 o'clock in the forenoon for the following described work:—

Section 135, with penalty in bond of....	\$5,400.
" 136, " " " " " "	6,200.
" 137, " " " " " "	5,100.
" 138, " " " " " "	4,100.
" 139, " " " " " "	4,700.
" 140, " " " " " "	4,000.
" 141, " " " " " "	5,200.
" 142, " " " " " "	6,700.
" 143, " " " " " "	6,100.
" 144, " " " " " "	4,800.
" 145, " " " " " "	4,700.
" 198, " " " " " "	3,200.
" 199, " " " " " "	4,000.

Culverts on Sections 135, 136, 137, 138 and 139.....	4,600.
--	--------

Culverts on Sections 141, 144, 145, 146, 147, 148, 149.....	4,600.
---	--------

Bridge Abutments on Sections 135, 136, 137, 140, 143 and 145.....	3,600.
---	--------

Waste Weir at Cowassalon Creek.....	800.
Dam and Guard Gate do. do.....	600.

The above work to be completed April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus

defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner, until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, August 1st, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT, } Canal Comm'rs.
CORNELIUS GARDINIER,

JAMES M. COOK, Comptroller.

JOHN T. CLARK, State Eng. and Surveyor.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 34]

SATURDAY, AUGUST 26, 1854.

[WHOLE No. 958, VOL. XXVII.

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

Harlem Railroad.....	532, 529
New York and Boston Railroad.....	530
Milwaukee and Her Railroads.....	531
Utica and Binghamton Railroad.....	531
Pennsylvania Railroad.....	532
South Western Railroad.....	533
Prices of Wheat for 60 Years.....	533
Equation of Grades.....	533
Cincinnati, Hamilton and Dayton Railroad.....	534
Columbia and Marietta Railroad.....	534
Car Ventilation.....	530
Stock and Money Market.....	537
New York and Erie Railroad.....	538
Improvements of the Locomotive.....	538
Convention of Railroad Companies.....	538
Terre Haute and Alton Railroad.....	539
Boston Concord and Montreal Railroad.....	540
Vermont Central Railroad.....	541
Pacific Railroad in Texas.....	541
Cincinnati Railroad.....	541
Pennsylvania Coal Company.....	542
Connecticut and Passumpsic Railroad.....	542

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, August 26, 1854.

Harlem Railroad.

We give in another place the action of the convention in reference to the recent over-issues of stock in this company, by which it will be seen that the over-issues have been assumed. The decision reflects great credit upon the stockholders, and will contribute much toward restoring a confidence so seriously impaired by the frauds that have been committed.

The committee of the stockholders seem to have a pretty clear idea of the manner in which the company have suffered under the management of Mr. Schuyler, and do not in our opinion over-estimate the value of the road. We fully believe the road could be made to pay on its present cost. The right of way that the Company have into the City of New York, is exceedingly valuable, and is becoming more so every year. The first 20 miles of the road out of this city is really worth more than one-half the cost of the whole line.

But the more important matters suggested by the convention are the results to which it will lead. The loss that called it together is a mere bagatelle compared with the losses which have been yearly suffered with the most stoical indifference on the part of the company. Have the stockholders been aroused to a proper conception of the manner in which their affairs have been conducted, and of the reforms necessary to resuscitate the company from its present deplorable condition?

We fear not. We are "impressed" to say that the report of the committee is more like what we should have expected from an equal number of superannuated school-masters, whose formal and decorous bearing, united with total ignorance of common affairs, causes them to cut a ridiculous figure when they come in contact with the world. So long as the spoliation on the Harlem road went on in a regular, *business-like* way, it was perfectly proper, if not laudable. The moment the "manner and form" was changed, what was a virtue before, became a crime. A man with half an eye might for years have seen that Mr. Schuyler has been plundering the company by new *improvements* effected at enormous cost, by contracts in which he was interested. The limit to his expenditures was the extent of his ability to raise money. Yet during all this time not a murmur was heard. Mr. Schuyler was regarded, apparently with equal reverence as are the sacred *bulls* of India, who may displace the master of a house from his own bed with impunity; the bedless one neither murmuring nor complaining, but grateful rather at being so honored above his fellows. So roamed this self-constituted divinity among fat pastures, cropping the first and sweetest fruits of the season, entering the enclosures of his victims, who were not only willing, but anxious to be sacrificed, while no sufferer, or unbeliever, dared to *wag* their sacrilegious tongues. The deity dethroned, the enormity of his offences becomes instantly palpable. But when men have given such examples of their credulity will they not fall victims to the next impostor, whom they will humbly follow till awakened from their delusions in a smaller manner?

We fear such will be the case. In a month, an affair that has caused such a commotion will be forgotten. The directors, oppressed with their own avocations, will cease to feel any responsibility,

or take any interest in the affairs of the company, and the road will fall under the management of a clique or a party, who will serve themselves first, and the public afterwards. Such has been the history of this road. What reason have we to expect that the future will be different? Will the stockholders take any more interest in their property than formerly? Have we any ground to hope that a more vigilant set of directors will be chosen? Time only can answer these questions, and we fear it will answer them all in the negative.

New York and Boston Railroad,

T. Willis Pratt, Esq., Engineer of this work, has made a report on its location and probable income from which we gather the following particulars.

The length of the surveyed line between New Haven and Boston is 135 miles, making the distance between New York and Boston, *via*, the New Haven road, 211 miles. One governing object in seeking a location has been the accommodation of the largest local population, consistent with the necessary directness and the physical features of the route. Upon this view, Middletown and Willimantic, in Connecticut, and Woonsocket in Rhode Island, have been made fixed points in the location. Middletown maintains by its own trade and by the business of Portland, on the opposite bank of the Connecticut, a population of 12,000 people; and will be brought 10½ miles nearer New York and 32 miles nearer Boston by the New York and Boston road than by any present Railroad route in operation. Willimantic in the town of Windham, Ct., is already the point of intersection of the Hartford and Providence, and the New London and Palmer railroads, and contains a population, including the whole town in which it is situated, of 5,000 inhabitants. By the New York and Boston road, this village will be brought 14 miles nearer New York and 16 miles nearer Boston than by any other route, thereby forming a trunk line from that village to each of the great cities and one to which the intersecting roads will be tributary.

From Willimantic, by a tolerably direct route, the road will run to Woonsocket, crossing on the way, the Norwich and Worcester road above Dayville. Woonsocket contains about 6,000 inhabitants, and is in the centre of five towns containing 25,000 inhabitants, all looking to Woonsocket vil-

lage as their central point of business. From hence a choice of routes is offered by the Norfolk county and the Midland roads to Boston.

As to the physical features of the line, there is no curve of less than 2500 feet radius, except one of 2292 feet at Woonsocket, upon the whole line to be constructed. Upon parts of the line now in operation, viz on the Norfolk county and Charles River Branch railroads, there are curves of smaller radii. The maximum grade is 60 feet per mile. The gradients are generally favorable, while of the alignment the engineer observes it is believed to be superior to that of any other New England Railroad of equal length.

A careful estimate of revenue fixes it at \$1,424,732 87 per annum, more than equal to an eight per cent. return upon the entire cost of the New York and Boston road, and after deducting one half for operating expenses.

The report of the engineer is able in its treatment of the merits of the proposed line, and appears to be moderate and fair in its conclusions. It settles to our satisfaction the point that trains can be run between the two great cities in *six hours*, in which event the New York and Boston road would secure *all* of the through land travel, and offer attractions for much of the present steamboat travel.

Regarded only with reference to its means of local support, it is found that all the towns upon and within five miles of its line, and excluding New Haven and Boston, contained in 1850 a population of 127,834; giving an average of 947 per mile, which is 42 per cent. more than exists on the Western road of Massachusetts. The Western road is supported almost entirely by its local business, only one tenth of its receipts being for a movement over its entire length. Again, too, the Western road is intersected by several roads which divert trade and travel from it, whereas the line of the New York and Boston road intersects several lines of railroad in such a manner as to make them at once tributary for business seeking either of the great cities. The roads intersecting at Wilimantic are of such description, and so are also the Norwich and Worcester and the Providence and Worcester roads. The intersection with the Norwich road would open a new and direct route to New York, from Worcester and the State of New Hampshire. The intersection with the Providence and Worcester road would also intercept a considerable amount of trade and travel seeking New York and Boston, and would advance the growth of Woonsocket.

On the whole, we know of no proposed road of equal length affecting the interests of so large a population, nor one so likely to change the directions of travel in a district already well traversed with lateral roads, requiring only to be engrafted upon a common trunk. To the business interests of New York and Boston, especially, the construction of this road is of the greatest importance, drawing as it will trade and traders from new districts, besides greatly promoting the convenience and despatch of the inter-metropolitan travel.

Western Railroad of Massachusetts.

The business of this company is reported as being more profitable for the present than for any previous year. The receipts for the past eight months exceed, by \$130,000, the earnings for the corresponding months of last year. A gross revenue of \$1,700,000 is anticipated for the present year, that for last year being \$1,525,224.

Milwaukee and Her Railroads.

Next to Chicago, the city of Milwaukee presents the most striking instance of the rapid growth of American cities. It is beautifully and advantageously situated on the western shore of Lake Michigan, 90 miles north of Chicago, and 110 miles from the southern extremity of the Lake. Its inner harbor is formed by the confluence of the Milwaukee and Menomence Rivers, which are easily entered by the largest lake craft, and afford abundant facilities for commercial purposes. The town encircles a spacious bay, affording excellent anchorage. A flat of considerable extent, affords ample space for the business portion of the town. This is surrounded by elevated table lands, furnishing the best possible sites for residences. The situation of the town contrasts very favorably with that of *Chicago*, which lies upon a naked, and apparently boundless prairie, elevated only a few feet above the level of the Lake. On going north, the country gradually rises, and when we get as far north as Milwaukee, the shores of the Lake have obtained a very respectable elevation, sufficiently so for health and drainage. They are also covered with a heavy growth of timber.

In 1834, just 20 years ago, Milwaukee had but one white inhabitant, an Indian trader by the name of *Juneau*. The "*Black Hawk war*," the theatre of which was in Wisconsin, gave an opportunity for the volunteer soldiery to observe the attractions of that State for settlement, and it was no sooner over, than a strong tide of emigration at once set in that direction. The city of Milwaukee was first laid off in 1835. A newspaper was first published in 1836. In 1848 it had a population of 1,700. The increase up to the present time has been as follows:

Year.	Number.
1840 (estimated).....	1,700
1842 ".....	2,700
1844 ".....	6,200
1846 (June 1st).....	9,508
1848 (January 1st).....	14,061
1850 (June 1st).....	20,045
1854 " estimated.....	32,500

The numbers for 1840, '42 and '44 are conjectural; those for the next three periods obtained from the census.

The first daily paper was published in 1844. There are now seven daily papers there, 4 in the English, and 3 in the German language.

The city has a large commerce. It is the great *entrepot* for the trade of the State of Wisconsin, which numbers probably over 450,000 inhabitants. There is no new State which has filled up so rapidly, as there is none in which the labor of the pioneer could be turned to so good account. Timber and prairie are distributed in the manner most convenient to the settler, who is not compelled to remove the former to plant his crops, while he has an abundance for all useful purposes. This fact is one of the reasons of the rapid progress of the State in wealth and population. It has to be sure other paramount attractions in the excellence of its climate and soil and in its unsurpassed commercial advantages.

The State for its "*age*" is believed second to none in the West in its efforts to supply itself with railroad accommodation. As the commercial centre, the railroad system of the State has been shaped by the city of Milwaukee which has furnished the principal part of the means for the con-

struction of many of the more important lines of road. That our readers may see what progress is being made in the construction of those works, we copy from the Milwaukee Sentinel the following account of the lines in which the city of Milwaukee is more immediately interested than all other important lines in the State, which will be noticed at another time.

MILWAUKEE AND MISSISSIPPI RAILROAD.

The Milwaukee and Mississippi Railroad, now completed and in full operation to Madison, (96 miles,) the Capital of the State, with a branch to Janesville, county seat of Rock county, and the seat of a large business,—as being the first Wisconsin Railroad to make a shewing of earnings, first claims our attention. Its general direction is westerly from Milwaukee, and the proposed terminus on the Mississippi at Prairie du Chien—at the mouth of the Wisconsin River—is less than 200 miles due west from this city, while Madison, to which place the road is now completed, is on the line just half way between the termini. The road, however, is not straight between Milwaukee and Madison, but diverges north of a direct line to the point where the Watertown Railroad connects, and again south to within 8 miles of Janesville. Thence bearing northwest, it reaches Madison; and beyond that point the route is very favorable and down the valley of the Wisconsin River to Prairie du Chien. The line which will probably be selected has one tangent line of 30 miles in length, and several stretches of 4 to 6 miles each, while upon 90 miles of the distance between Madison and the Mississippi, the grade does not exceed 10 feet to the mile, and in no part of the route does it exceed twenty-two feet to the mile. Such a road must be well calculated for a high average of speed.

The M. & M. Railroad was opened to Waukesha, 20 miles, Feb. 25th, 1851. The gross earnings from that time to the 31st of December, 1851, amounted to.....\$22,111 60
Expenses of operating..... 7,596 82

Net earnings.....\$14,574 78

Meantime the work of extension was being carried forward, and the road was opened to Eagle, 36 miles from Milwaukee, Jan'y 22d, 1852; to Palmyra, 42 miles, August 3d, 1852; to Whitewater, 50 miles, September 24th, 1852; to Milton, 62 miles, December 1st, 1852. The Southern Wisconsin Railroad had been chartered, to run from Milton through Janesville to the Mississippi, and the first 8 miles was built by the M. & M. R. R. Co. being opened to Janesville, 8 miles, or 70 miles from Milwaukee, Jan'y 6th, 1853.

The Annual Report of the Company shows that the gross earnings for the year ending December 31st, 1852, amounted to.....\$75,340 90
Expenses of operating..... 26,658 63

Net earnings.....\$48,682 27

The total cost of completing and equipping the road from Milwaukee to Janesville, 70 miles, was \$1,364,570, or an average of \$19,494 per mile.

During the year 1853, work was done upon the extension of the road from Milton to and beyond Madison, but no section was opened during that year, the opening to Stoughton, 18 miles, taking place on the 2d of January, 1854, so that the statement of earnings for 1853 is for an entire line of 70 miles for the year, except six days.

The Annual Report for Jan'y, 1854, shows that the total receipts for 1853 were.....\$226,918 48
Expenses of operating..... 87,115 48

Net earnings.....\$139,803 00

LA CROSSE AND MILWAUKEE RAILROAD.

The La Crosse and Milwaukee Railroad Co., is chartered to build a road from Milwaukee about 196 miles in a direction west-north-west to La Crosse, on the Mississippi river. From La Crosse to St. Paul, the course of that river is north-west making the course very direct between St. Paul

and Milwaukee. The route starting from the depot grounds near the waterpower in the 2d Ward in this city, follows up the valley of the Milwaukee river, enters Washington Co., passes through Dodge county from South-east to North-west, bends towards and passes through Portage city, Columbia Co., crosses the Wisconsin river at or near the famous "Dells," and thence by way of Adams, Sauk, and Clarke counties, reaches the Mississippi by the valley of the La Crosse river, at the thriving village of the same name.

At the junction about 20 miles from this city, the Milwaukee Fond du Lac and Green Bay Railroad, coming from the northward, will unite with this road. At Iron Ridge and Hartford it comes into the Iron region, where extensive works are being erected for the purpose of using the ore which is very abundant there. A good part of the rails used upon the track will be made at this point.

At Horicon, the Milwaukee and Horicon R. R. intersects this road, bringing to it a large amount of trade and travel. Thence to Portage City, it passes through a rich and thickly settled region, and at the latter point reaches the junction of the Fox and Wisconsin Rivers. The country which intervenes between the Wisconsin river and the Mississippi at La Crosse is fast filling up with an industrious and enterprising population, and, once at La Crosse, the road looks out upon a vast trade opening in Minnesota, with a contemplated railroad reaching to the bend of the St. Peters River.

From Waushara or Fox Lake, a Railroad is chartered leading north-westwardly, to Willow River in St. Croix County,

The route is in two divisions; 1st, from Milwaukee to Portage city, a little over 100 miles, estimated to cost, completely equipped, \$22,000 per mile or \$2,090,000; and 2d, from Portage city to La Crosse, at \$18,000 per mile, of \$1,808,000, making the whole estimated cost of the road \$3,898,000. The first division was put under contract a year ago, and the work has been in steady progress since that time. Work is now going on rapidly on all the sections between this city and Horicon, 50 miles. On the 1st of May last, one half of the grading was completed, the bridging mostly done, three-fourths of the ties delivered along the line of the road, and the remainder of the earth-work would amount to only about \$100,000. The Company has purchased a large quantity of iron, and has it on hand ready to be laid down. The Directors have abundant means at hand to enable them to complete the 1st division, without putting in market any mortgage bonds on the road, and expect to open to Horicon on the 1st of October, or very soon after that time. They have already expended considerably over \$500,000, and have gained all the right of way, and have still, of available means, \$189,000 of Milwaukee city bonds and \$548,000 in real estate mortgages, to say nothing of the stock subscriptions to the amount of \$300,000, on which instalments to the sum of \$60,000 will be due by the 1st of September.

The officers of this road are as follows:

STODDARD JUDD, *President.*
LEVI BURNELL, *Secretary.*
WILLIAM DAWES, *Treasurer.*
WILLIAM R. SILL, *Chief Engineer.*
BYRON KILBOURN, *Superintendent.*

MILWAUKEE, FOND DU LAC & GREEN BAY R. R. CO.

This company was recently consolidated with the La Crosse and Milwaukee Railroad. This company was chartered a year ago last winter to build a road in a direction west of north, from Milwaukee, through the western part of Washington Co., to Fond du Lac, and thence by way of Oshkosh northerly to Green Bay. Considerable work had been done upon the road, a large quantity of iron purchased, the aid of this city granted to the amount of \$200,000, when the consolidation was effected with the La Crosse Co., by the terms of which the new Company takes the line of the former for about 20 miles from this city, and is to complete the Fond du Lac branch immediately after its own line reaches Portage City, and as much sooner as

means can be provided, the city loan unexpended (some \$100,000) and the subscriptions north of the junction remaining to be used for the branch to Fond du Lac. Meantime another Company termed the Air Line R. R. Co., was chartered last winter to build a road from Milwaukee through Fond du Lac north, but has not yet done anything. By the completion of the Milwaukee and Horicon R. R., to Waupun, however, which is confidently expected to be done during the coming fall, we shall have a railroad communication with Fond du Lac by means of the northern section of the Valley Railroad, which may be put in order for use by that time.

MILWAUKEE AND HORICON RAILROAD.

At Horicon, Dodge County, 50 miles from Milwaukee, the Milwaukee and Horicon Railroad diverges from the line of the La Crosse and Milwaukee R. R. in a northwesterly direction, stretching through a rich, farming country, studded with thriving villages. Passing through Waupun, on the dividing line between Dodge and Fond du Lac counties, its second division (the line of the La Crosse R. R. from Milwaukee to Horicon being considered its first division) reaches the Neenah or Fox river at Berlin, a village of considerable importance and rapid growth, accessible by steamers and destined to be the depot of a large lumbering trade from the Wolf River. This division is 42 miles in length. Still going northwestwardly, this road reaches Stevens' Point, on the Wisconsin River, in the heart of the pinery, at a distance of 50 miles from Berlin, the inward and outward trade of the country adjoining which is already sufficient to warrant the construction of a railroad thither, counting nothing for any trade or travel from beyond. The main route of the road bends more westerly after leaving Stevens' Point, and reaches the Mississippi at the mouth of the river St. Croix, only a short distance from St. Paul, Minnesota, and 295 miles from Milwaukee.

From Berlin northward, a railroad is chartered, and the Company organized May 18th, 1854, to reach Ontonagon, on Lake Superior, 210 miles distant. The line is a very direct one, and the road must be built within a few years, since the growing importance of the Lake Superior mining Region will demand it.

The Milwaukee and Horicon Railroad Company was organized Nov. 20th, 1853. The first division of this line, is a portion of the La Crosse road, and is expected to open to Horicon 50 miles, by Oct. 1st, 1854. Thence on its own line, to Waupun, 15 miles, will be completed January 1st, 1855, and to Berlin, 27 miles further, by Oct. 1st, 1855. The third division, from Berlin to Stevens' Point, 50 miles, is to be finished by October 1st, 1856.

The resources of this young company, by the untiring efforts (responded to by the people) of its President, Directors and Agents, already amounts to \$1,400,000, in stock, town and county bonds, and 1st mortgage bonds, all applicable to the construction and equipment of the road beyond Horicon.

The officers of the Company are as follows:

JOHN B. SMITH—*President.*
J. N. MASON—*Acting Sec'y.*
WM. J. BELL—*Treasurer.*
JESPER VLIET—*Chief Engineer.*

MILWAUKEE AND WATERTOWN RAILROAD.

This Company is chartered to build a road from this city to Portage City and thence to La Crosse on the Mississippi. From Milwaukee to Portage City is about 100 miles, and with a slight deflection to Watertown, the route is almost an air line.

By an arrangement with the Milwaukee and Mississippi R. R. Co. this Company has the use of the first 17 miles of the track of the former, or to Powers' Mill. From this point to Watertown the grading is very nearly done, the bridging all completed, the iron purchased and in course of delivery, and a locomotive and construction train at work in conveying iron out, while the work of laying down the track is going forward. Thirty freight cars have already arrived, and the necessary rolling stock with which to commence opera-

tions is all contracted for, and will be in readiness for the opening of the road to Watertown which is expected to take place by the 1st of September.

Besides the connection with Portage City and beyond, this road connects at Watertown with one chartered to run from Watertown to Madison, a very direct route, and a road which must bring a very large business to the M. & W. Co.

The entire estimated cost to Watertown including construction, right of way, Depot buildings, water stations, equipments, Engineering and fencing.....\$740,000 or \$23,879 per mile.

The Company have issued of first mortgage bonds.....\$310,000
Bonds from the city of Watertown..... 80,000
" " " Milwaukee..... 75,000
The amount of stock issued is.....\$346,100

JOHN S. ROCKWELL, *President.*

EDWARD H. BRODHEAD, *Chief Engineer.*

JOHN L. HATHAWAY, *Secretary.*

JOSHUA HATHAWAY, *Treasurer and Financial Agent.*

GREEN BAY, MILWAUKEE AND CHICAGO RAILROAD.

(better known as the "Lake Shore Railroad.")

This company was incorporated in 1851, and organized in 1852, with a capital stock of \$3,000,000. THOMAS P. WILLIAMS is President of the Company, CHAS. H. WHEELER, Treasurer, and C. R. ALTON, Chief Engineer, all of this city.

The charter of the G. B. M., and C. R. R. Co., authorizes the construction of a road leading from the line between Wisconsin and Illinois to Milwaukee, through the busy lake cities of Kenosha and Racine; and thence northward to Green Bay, through Port Washington, Sheboygan, Manitowoc, with the right to extend from Green Bay to Lake Superior.

The section from the State line to Milwaukee is under contract to, and being rapidly constructed by Messrs. Bishop & Co., of Bridgeport, Conn.—They have a large force at work along the whole line, and two-thirds of the whole distance (40 miles) is already graded, and prepared for the iron, which has commenced to arrive. Heavy contracts have been made with eastern establishments for the necessary rolling stock, and everything is in favorable train for the speedy completion of this portion of the road.

At the state line, this road connects on the same gauge with the Chicago and Milwaukee Railroad, leading from Chicago northward. This last road is under contract to Messrs. Stone & Witt, of Cleveland, O., who are pushing on with all possible despatch, and the whole 85 miles from Chicago to Milwaukee will be completed and ready for operations certainly by the 1st of January, 1855 and probably by December 1st of the current year.—The Company intend to continue their road northwardly from Milwaukee as rapidly as their means will allow, since they believe that the business of the country demands the road, and that it will return ample dividends to the Company for their outlay. In view of the growing importance of the mineral region of Lake Superior, we cannot overlook the great revenue which will accrue to this Company from the ultimate extension of its road northward to the Great lake.

Utica and Binghamton Railroad.

At a meeting of the Directors of the Utica and Binghamton Railroad, held at Hamilton, on the 15th inst., A. J. Williams of Utica, was chosen President; Dr. D. White of Sherburne; Vice President, and J. Watson Williams of Utica, Secretary and Treasurer. It has been resolved to put the portion of the road between Utica and Sherburne immediately under contract.

Paying Up.

The Boston Courier says that arrangements are reported to have been made by Mr. Crane, the late President of the Vermont Central Railroad, to return the 8,000 shares of the over-issued Stock, sold for his benefit, provided the Trustees will refund the \$11,000 borrowed on 2,000 shares, for the use of the Corporation.

Chicago and Aurora Railroad.

The revenues of this road for the last six months have been as follows:

January	\$13,345 42
February	15,887 29
March	16,183 95
April	14,592 96
May	23,683 34
June (estimated)	28,455 70

Total.....\$111,587 65

Pennsylvania Railroad.

The following is a comparative statement of the receipts of the Pennsylvania Railroad for the month of July and for the year thus far, compared with the corresponding periods last year.

For the month ending July 31, 1854.....\$209,299 87
Same month last year.....157,244 90

Increase.....\$52,054 97
Receipts from Jan. 1, 1854, to July 31, 1854.....\$2,125,348 57

Same period last year.....1,608,376 58

Increase.....\$516,971 99

Harlem Railroad.

Below we give the report, (to which we referred last week) is the committee appointed to examine the affairs of the Harlem Railroad and the extent of the losses suffered by the Kyle and Schuyler frauds.

REPORT OF THE COMMITTEE.

The undersigned, a committee appointed at a recent meeting of the stockholders of "The New York and Harlem Railroad Company," to examine into the affairs of that Company, respectfully report—That on entering on the duty so assigned them, and after an interchange of thought and opinion, it was considered that the investigation demanded could be more thoroughly, systematically, and effectually made by a single competent individual, than if attempted by the joint efforts of your committee. Under this impression, they secured the services of Nicholas Dean, Esq., a well known citizen, whose familiarity with accounts, and general character and standing, as well as the numerous marks of public confidence which he has heretofore received, would go far to satisfy the stockholders and the public of the truth and reliability of any statements he might make. A resolution was passed by the committee, (a copy of which is annexed,) directing the specific character of these inquiries, and under which Mr. Dean has compiled the various tables or schedules herewith presented, and marked Nos. one to eight, inclusive.

As all the schedules referred to will be read, your Committee do not think it necessary in this place to go into a detailed recital of their several contents, and will only here remark that all the bonds and extension certificates are accounted for; that against the apparent indebtedness of Mr. Robert Schuyler appearing in schedule No. 3, and growing out of bonds with which he had been entrusted, amounting in the aggregate to \$127,700, there will be an offset or various disbursements made for this Company by him and his firm, which, it is expected, will reduce the actual balance due from him to a sum little, if any, greater than \$20,000. A knowledge of the precise amount of this balance must wait the rendering of an account current by the assignees of the Messrs. Schuyler, which is promised at an early day. There is another and further amount of extension certificates (\$92,000,) which went in the hands of Mr. Schuyler under circumstances which, it is believed, will give to this Company a valid defence against their payment, and notice to that effect has been given to the holders of them, through the public press.

The floating debt of the Company is \$925,505 90, for the extinguishment of which it has available assets to the extent of \$650,000, leaving to be provided for \$285,505 90.

Schedule No. 7 shows the cost, estimated present value, and existing encumbrances of, and upon the Company's real estate in this city, giving a clear surplus of three-fourths of a million of dollars. To sell this real estate, or any considerable portion of it just at this time, would not, in the opinion of your Committee, be an economical mode of raising money for present exigencies: much of it (probably all) will continue to increase in value, and evidently give to the Treasury large profits. The rents now received for such parts of it as are not required for the Company's business amount to \$21,860 per annum, leaving a yearly surplus of more than \$10,000, after paying interest on the outstanding mortgages.

The Engineer's estimate of all further expenditures necessary to complete the road, build station houses, wood sheds, turn tables, &c., and perfect all required additions and improvements for its effectual and profitable working, and the final closing of "construction account," as will be seen in schedule No. 7, amounts to \$195,204 91. This sum, together with the deficiency of assets to meet the floating debt, \$285,505 90, making an aggregate of \$480,710 81, constitutes the total, (excluding the recent losses,) which for the Company should provide at as early a day as a proper reference to economy will permit.

To meet the losses referred to and retrieve the spurious stock your committee estimate, from all the discoveries yet made, that a sum less than \$300,000 will suffice.

The New York and Harlem Railroad, in common with many others, has suffered under and struggled through years of financial embarrassment. Its available means have seldom been equal to its pressing wants. Large sums have been paid, and are yet being paid, for commissions, interest and discounts, and its bonds are, from necessity, sold in the market at rates greatly below par. These items go to swell the cost of construction, and render it more and more difficult to earn dividends upon its capital. To relieve the treasury from these continual and exhausting drafts has become a paramount duty, and we earnestly commend it to the early attention of the Board of Directors.

Of the late losses, and the causes which have led to them, your committee desire to speak cautiously and in all charity; but truth compels them to say that there has been a lack of vigilance and care in the detail of the company's business. Too much power, as well as too much confidence, have been placed in a single individual, especially as that individual was, while at the head of your corporation, also the president of several other railroad companies, was involved in numerous extensive contracts, and embarrassed with enterprises of enormous magnitude. However great his business acquirements, (and your committee concede to him marked ability) it was evident to every intelligent observer that he had taken upon himself duties beyond the powers of any single individual to discharge properly. At most he could give to your affairs but a small part of his time, while his connection with other roads induced him, as your committee think, to make "entangling alliances," and enter into compacts by which the true interests of your company were not promoted, if, indeed, they were not sacrificed. Not able, by reason of his accumulated labors, to give his personal attendance at your general office at the corner of Centre street and Tryon row, the whole of the transfers of stock, and other most important business transactions, were made at his office in Hanover st., beyond the reach of that daily observation, scrutiny, and direct supervision which the directors and other officers of the company should always have the ready power of exercising. This unfortunate arrangement gave to your late Secretary every facility in concocting and carrying forward for a long period his stupendous frauds.—Had the stock ledger been within the daily reach of your directors, your treasurer, or even your principal book keeper, the issue of spurious stock certificates would have been long since detected and most of the loss prevented. An examination

and footing up of Kyle's individual account in that ledger—the work of five minutes—would, to a practiced eye have been sufficient to awaken suspicion and provoke careful examination.

Your committee would further remark that the stockholders themselves are also chargeable with remissness of duty; they take too little interest in the annual choice of directors. Instead of personal attendance and personal inquiry, voting is chiefly done by proxies, furnished upon application, with few interrogatories as to the object—thus surrendering a controlling power to a few individuals, and in effect making it a close corporation. The influence of such apathy and indifference is most prejudicial—it becomes contagious, and is too likely to pervade every department of the company's business.

The investigations of your committee have satisfied its members that very large retrenchments may be made in the annual expenditures; too many trains have been daily run upon the Road; these may be reduced, and all necessary service performed without any sensible diminution of its present or prospective earnings, or the abridgement of any of the privileges of its local traffic and travel. It is assumed that by this and other economical arrangements more than \$100,000 per annum may be saved.

Finally, in the face of all these adverse circumstances and unexpected losses, your committee have unshaken confidence in the ultimate success of "The New York and Harlem Railroad"—it controls, and must always control, an exceedingly valuable and constantly increasing business; it possesses an inherent and self-sustaining vitality, which, if nurtured and developed by careful, judicious and honest management, will soon make it an interest paying road, and place all its stock among the safest and best of railroad investments; and they fully believe that the recent frauds, instead of retarding, will hasten this consummation.

Edward Haight,	L. Underhill,
D. G. Wheeler,	Horace Brooks,
G. C. Verplanck,	S. Vanduzer,
Thomas Taber,	Albert Smith,
Wm. V. Brady,	Ed. Crosby,
James Davis.	

The substance of the report of Mr. Dean will be found in the schedules furnished by him. Such as are of general interest we annex.

SCHEDULE NO. 1.**Over-Issue of Stock.**

	Shares.
Old stock	4,181
Preferred do.....	1,389

SCHEDULE NO. 2.**Statement of Mortgage Bonds Harlem R. R. Co.**

Whole issue of bonds.....	3,000
Purchased at auction.....	11

Total	3,011	\$3,011,000
Bonds paid for railroad iron.....	\$230,000	
" " " branch road.....	118,000	
" " " exchange'd for old bonds.....	470,000	
" " " sold for cash.....	618,000	
" " " remaining unsold.....	1,542,600	
" " " in hands of R. Schuyler.....	38,000	
Bonds unsold as above.....	3,011,000	
" " " appropriated for the exchange of old bonds.....	830,000	
" " " applicable to floating debt, (see schedule No. 3,).....	712,000	
Of the bonds sold for cash, 500 were to Cornelius Vanderbilt, say 500, at \$930.....	465,000	
Of which received on account through Robert Schuyler.....	375,800	
Unaccounted for by Mr. Schuyler.....	89,700	

The two items above make a gross sum in the hands of Mr. Schuyler of \$127,700; but it is proper to say that he has made various disbursements for the Company, which it is expected will greatly reduce it. The precise amount of such reduction must await the rendering of his account by the

assignees of his firm, which is expected at an early day.

Of the Bonds unsold \$1,011,000 are hypothecated to secure the floating debt.

SCHEDULE NO. 3.

Floating Debt, and Assets applicable to its payment.
Floating Debt Harlem Railroad Co...\$935,505 90
Assets.

Bonds unsold	\$712,000
Deduct, say 15 per cent....	106,800
	\$605,200
Bills receivable	16,800
Cash on hand	28,000
	650,000 00

Deficiency of assets.....\$235,505 90

SCHEDULE NO. 7.

Aggregate of expenditures required to complete the road, station houses, wood sheds, turn tables, &c., the items of which are particularized in the engineer's report, herewith.....\$195,204 91

SCHEDULE NO. 8.

Statement of Albany Extension Certificates.
Whole issue.....\$2,000,000
Converted into bonds.....\$250,000
" old stock.....1,358,500
\$1,608,500

Outstanding.....\$391,500

Re-issued.

On loans.....	\$661,000
*R. Schuyler.....	80,000
R. & G. L. Schuyler.....	12,000
	\$753,000
On hand.....	855,500
	\$1,608,500

The following is a copy of the resolutions offered, and the action of the convention thereon:

Resolved, That the Harlem Railroad is one of the most important avenues to and from the commercial Metropolis of the United States, and that as such it should be managed in the safest and wisest manner for the good of the citizens and the interest of its stockholders. Adopted.

Resolved, That while we condemn the conduct of some of the late officers of the Harlem Railroad Company, we advise the directors thereof to obtain in some manner the stock of said Company which has been fraudently issued by some of its late officers, and charge the cost thereof in the expense account of said road. Adopted.

Resolved, That while entertaining a high regard for the individuals now composing the Board of Directors of the Harlem Railroad Company, it is for the interest of the stockholders that a more active and efficient Board should be elected from the stockholders, to take charge of its immense interests. Lost.

Resolved, that in the opinion of the stockholders the expenses of the Harlem Railroad are far beyond its requirements, and that a thorough reform is demanded in its management. Adopted.

Resolved, That a committee of five be appointed to nominate Stockholders for Directors of the Harlem Railroad Company, for election at the next annual election of Directors, and that a special notice of such election containing the names of the candidates, be sent by mail to each stockholder, at the expense of the Company. Adopted.

Resolved, That the Board of Directors make out and have printed a full and detailed report of the condition and affairs of the Harlem Railroad, to be distributed to the Stockholders on or before the first day of February next. Adopted.

Resolved, That a committee of five Stockholders be appointed to investigate the affairs of the

* These bonds were obtained fraudulently, and notice has been published that they will not be recognized in the hands of the holders.

Harlem Railroad Company, and inventory and value their property, and suggest such reforms and plans for the future management of the road as the may think proper, at the next annual election of Directors. Lost.

South Western Railroad Company, Ga.

We learn from the Savannah Republican that regular semi-annual meeting of the Board of Directors and Managers of the South western Railroad was held at Macon on the 10th inst. when the operations of the road were presented and a dividend of four per cent. for the last six months was declared payable on the 15th inst.

From the report it appears that the total of the earnings of the road for the year ending August 1st, 1854 were.....\$220,851
viz: From Freight.....\$139,202 10
" Passengers.....75,649 24
" Mails.....6,000 00

The current expenses for the year....\$99,246 13

Net earnings.....\$121,605 21
From which have been declared dividends, as follows,
Feb. 1854.....4 per cent.
Aug. 1854.....4 per cent.

The increase in the business over the preceding year is

Gross.....\$80,343 09
Net.....44,797 62
The number of bales of Cotton transported from 1st August, 1852, to 1st August, 1853, was.....38,834
From 1st August, 1853, to 1st August, 1854.....105,083

Average number of passengers during the year ending 1st inst., was 171 per day against 106 per day for the previous year.

It thus appears, says the Republican, that the business of this most successful road is rapidly increasing, and gives promise of great results in the future.

The Passenger Trains run now within ten and a half miles of Americus, and will run into Americus by the first day of October next. On the 12th October, the President and Directors of the Company are to meet the people of South Western Georgia at Americus, to consult upon the further extension of the road. In view of the immense advantages to result from an extension into the heart of the great cotton region of the State, and considering that this city has contributed so great a sum to the establishment of the existing railroad line in this direction, we do earnestly hope that the Agriculturists of the South West will appear at Americus at the contemplated meeting in great numbers, with a determination to subscribe with marked liberality. If our fellow citizens below Americus, in the respective valleys of the Flint and Chattahoochee will agree on a line to suit all parties, there cannot be a doubt that the State will extend its aid in such manner as to secure the speedy and full development of a region, to which none other in the whole South is superior. We think the planters will come up to the work, for they see that this great road can pay eight per cent. per annum. Capitalists can nowhere find a better investment than in the stock of this Company. We are proud of its complete success, and gladly acknowledge the obligations of this city to L. O. Reynolds, Esq., President, and the Board of Directors and Officers generally, for their good management.

Prices of Wheat at Albany.

The following table of the prices of wheat for the past sixty-one years, is from the accounts kept at the Van Rennsalaer manor at Albany where large amounts of rents are payable in wheat or cash equivalent, on the 1st of January of each year:—

1793...\$0 75	1814...\$1 87½	1835...\$1 00
1794...1 00	1815...1 62½	1836...1 50
1795...1 37½	1816...1 75	1837...2 25
1796...2 00	1817...2 25	1838...1 62½
1797...1 50	1818...1 87½	1839...1 75
1798...1 25	1819...1 75	1840...1 12½
1799...1 18½	1820...1 09	1841...1 00
1800...1 56½	1821...77	1842...1 25
1801...1 81½	1822...1 12½	1843...1 87½
1802...1 00	1823...1 25	1844...2 00
1803...1 12½	1824...1 25	1845...93½
1804...1 25	1825...1 00	1846...1 18½
1805...2 00	1826...87½	1847...1 12½
1806...1 43½	1827...1 00	1848...1 31½
1807...1 37½	1828...1 00	1849...1 18½
1808...1 12½	1829...1 75	1850...1 18½
1809...1 00	1830...1 00	1851...1 12½
1810...1 56½	1831...1 25	1852...1 00
1811...1 75	1832...1 25	1853...1 18½
1812...1 87½	1833...1 25	1854...1 75
1813...2 25	1834...1 00	

In these sixty-one years, wheat has only five times been \$2 or upward per bushel, while it was seventeen times at \$1 or under—twice at seventy five cents. Only twice in thirty-seven years, that is since 1817, to wit: in 1837, has it reached \$2. The average price for the whole period is \$1 38. For the last thirty years it is \$1 25.

The entire wheat crop of the country in 1840, was 84,823,272 bushels, and in 1850, 100,503,899 bushels. The variations in price do not of course indicate any positive variations in production, but are the results of the mutual relations between supply and demand.

Utica and Binghamton Railroad.

At a meeting of the Directors of the Utica and Binghamton Railroad, held at Hamilton, on the 15th inst., A. J. Williams of Utica, was chosen President; Dr. D. White of Sherburne, Vice President, and J. Watson Williams of Utica, Secretary and Treasurer. It has been resolved to put the portion of the road between Utica and Sherburne immediately under contract.

Equation of Grades.

{ ENGINEERS & MECHANICS COLLEGE.
Cleveland, August 17th 1854.

The interest which has been awakened on the subject of the equation of Grades may possibly lead to satisfactory results. The differences on the subject among engineers have unquestionably arisen from having adopted various standards for the force of traction; and these differences will continue to exist until a uniform standard be adopted. It is, therefore, desirable that a correct one be established as soon as possible, by which the absolute motive power necessary for a definite amount of traffic on any railroad may be ascertained, and, as a corollary resulting therefrom, the relative power requisite on different roads.

How can this be ascertained? not by a few experiments on any one line, by one or more individuals, for the result must be necessarily empirical; but by a long series of experiments carefully carried out on several roads. I am not aware that such a series of experiments has been conducted on our American railroads: but in Great Britain, and on the continent of Europe, such experiments have been made. In my former communication published in the Journal of the 29th

ult. I gave the standard of traction arrived at with a considerable degree of precision by Dr. Lardner, on different railroads in England: I now subjoin in tabulated form the results arrived at by a commission, consisting of Lieut. Drummond, R. E., Sir John F. Burgoyne, R. E., Peter Barlow, T. K. S., Richard Griffith, C. E., and Colonel Jones, Royal Engineers, appointed by the British Government a few years ago to report the subject. There could not, probably, have been selected, gentlemen more competent to investigate the subject, and I would observe that their investigations were not limited to the British Islands, but extended over the various countries of continental Europe, in which railroads were in operation.

The following tables show the length of horizontal lines, as ascertained by the Commissioners, equivalent to the several ascending, and descending grades stated in the left hand column; the length of the grade being unity.

First Class Engines. Gross Load including Engine and Tender 100 tons. Equivalent Horizontal Lines.				First Class Engines. Gross Load including Engine and Tender 50 tons. Equivalent Horizontal Lines.			
Grades.	Ascending.	Descend'g.	Mean of the two.	Ascending.	Descend'g.	Mean of the two.	
1 in 90	2.50	1.00	1.75	1.99	1.00	1.49	
95	2.42	1.00	1.71	1.94	1.00	1.47	
100	2.39	1.00	1.69	1.89	1.00	1.44	
110	2.23	1.00	1.61	1.81	1.00	1.40	
120	2.12	1.00	1.56	1.74	1.00	1.37	
130	2.04	1.00	1.52	1.68	1.00	1.34	
140	1.96	1.00	1.48	1.64	1.00	1.32	
160	1.84	.83	1.33	1.56	.83	1.20	
180	1.79	.83	1.31	1.49	.83	1.16	
200	1.67	.83	1.25	1.44	.83	1.13	
250	1.53	.83	1.18	1.36	.83	1.09	
300	1.45	.83	1.14	1.30	.83	1.06	
350	1.38	.83	1.10	1.25	.83	1.04	
400	1.33	.83	1.08	1.22	.83	1.02	
500	1.27	.83	1.05	1.18	.83	1.00	
750	1.18	.83	1.01	1.12	.83	1.00	
1000	1.13	.85	1.00	1.09	.91	1.00	
1500	1.09	.90	1.00	1.06	.94	1.00	

Second Class Engines. Gross Load including Engine and Tender 80 tons. Equivalent Horizontal Lines.				Second Class Engines. Gross Load including Engine and Tender 40 tons. Equivalent Horizontal Lines.			
Grades.	Ascending.	Descend'g.	Mean of the two.	Ascending.	Descend'g.	Mean of the two.	
1 in 90	2.60	1.00	1.80	2.07	1.00	1.53	
95	2.51	1.00	1.75	2.02	1.00	1.51	
100	2.44	1.00	1.72	1.97	1.00	1.48	
110	2.38	1.00	1.69	1.88	1.00	1.44	
120	2.20	1.00	1.60	1.80	1.00	1.40	
130	2.10	1.00	1.55	1.74	1.00	1.37	
140	2.03	1.00	1.51	1.69	1.00	1.34	
160	1.90	.83	1.36	1.60	.83	1.21	
180	1.80	.83	1.31	1.53	.83	1.18	
200	1.72	.83	1.27	1.48	.83	1.15	
250	1.58	.83	1.20	1.42	.83	1.12	
300	1.48	.83	1.15	1.32	.83	1.07	
350	1.41	.83	1.12	1.27	.83	1.05	
400	1.36	.83	1.09	1.24	.83	1.03	
500	1.28	.83	1.05	1.19	.83	1.01	
750	1.19	.83	1.01	1.12	.88	1.00	
1000	1.14	.86	1.00	1.09	.91	1.00	
1500	1.09	.91	1.00	1.06	.94	1.00	

Third Class Engines. Gross Load including Engine and Tender 80 tons. Equivalent Horizontal Lines.				Third Class Engines. Gross Load including Engine and Tender 40 tons. Equivalent Horizontal Lines.			
Grades.	Ascending.	Descend'g.	Mean of the two.	Ascending.	Descend'g.	Mean of the two.	
1 in 90	2.66	1.00	1.83	2.14	1.00	1.57	
95	2.58	1.00	1.79	2.08	1.00	1.54	
100	2.50	1.00	1.75	2.02	1.00	1.51	
110	2.36	1.00	1.68	1.93	1.00	1.46	
120	2.25	1.00	1.62	1.85	1.00	1.42	
130	2.15	1.00	1.57	1.78	1.00	1.39	
140	2.07	1.00	1.53	1.73	1.00	1.36	
160	1.94	.83	1.43	1.64	.83	1.23	
180	1.83	.83	1.33	1.57	.83	1.20	
200	1.75	.83	1.29	1.52	.83	1.17	
250	1.60	.83	1.21	1.41	.83	1.12	
300	1.50	.83	1.16	1.34	.83	1.08	
350	1.43	.83	1.13	1.29	.83	1.06	
400	1.37	.83	1.10	1.25	.83	1.04	
500	1.30	.83	1.06	1.20	.83	1.01	
750	1.20	.83	1.01	1.13	.87	1.00	
1000	1.15	.85	1.00	1.10	.90	1.00	
1500	1.10	.90	1.00	1.07	.93	1.00	

Fourth Class Engines. Gross Load including Engine and Tender. 60 tons. Equivalent Horizontal Lines.				Fourth Class Engines. Gross Load including Engine and Tender 30 tons. Equivalent Horizontal Lines.			
Grades.	Ascending.	Descend'g.	Mean of the two.	Ascending.	Descend'g.	Mean of the two.	
1 in 90	2.51	1.00	1.75	2.00	1.00	1.50	
95	2.44	1.00	1.72	1.95	1.00	1.47	
100	2.36	1.00	1.68	1.90	1.00	1.45	
110	2.33	1.00	1.66	1.82	1.00	1.41	
120	2.14	1.00	1.57	1.75	1.00	1.37	
130	2.05	1.00	1.52	1.69	1.00	1.34	
140	1.97	1.00	1.48	1.64	1.00	1.32	
160	1.85	.83	1.34	1.56	.83	1.20	
180	1.75	.83	1.29	1.50	.83	1.16	
200	1.68	.83	1.25	1.45	.83	1.14	
250	1.54	.83	1.18	1.35	.83	1.09	
300	1.45	.83	1.14	1.30	.83	1.06	
350	1.39	.83	1.11	1.26	.83	1.04	
400	1.34	.83	1.08	1.22	.83	1.02	
500	1.23	.83	1.03	1.18	.83	1.01	
750	1.18	.83	1.01	1.12	.88	1.00	
1000	1.13	.87	1.00	1.09	.91	1.00	
1500	1.09	.91	1.00	1.06	.94	1.00	

In a future communication I intend to lay before the readers of the Journal, (with your permission Mr. Editor,) tables showing the steam pressure required in the cylinders for different loads; the relative velocity with these loads &c., which cannot fail, I apprehend, to be of great practical utility to engineers.

The results furnished by Mr. Vose merely show the amount of motive power required for ascending grades, but throws no light on the power required in descending, which is a necessary element in determining the *mean motive power*,—the bases of all economical calculations. Moreover, the power required for moving a train of 50 tons, with a velocity of 20 miles an hour, as furnished by Mr. Vose, affords no data for determining the power requisite to move a train of 100 tons, or that of any other weight, with the same, or a different velocity; because the power necessary in order to put the engine itself in a condition to move, that is, the power requisite to overcome

the friction of the engine gear without a load, the surface resistance, and the friction of its own axles and wheels, as well as those of its tender; and lastly the resistance or pressure of the atmosphere against which the pistons are constantly acting, these forces together, which must be all overcome by an expenditure of steam power, before the surplus power can become applicable to traction, are the same in a train of 50 tons, as in a train of 100 tons.

Trusting, Mr. Editor, the importance of the subject will excuse my trespassing on your valuable columns at such length.

I remain yours very respectfully,

E. NUGENT, *Principal.*

Cincinnati, Hamilton and Dayton Railroad.

Fears were entertained by many that the recent competition between the Cincinnati, Hamilton and Dayton, and Little Miami Railway Companies, by which the fares from Cincinnati to Buffalo, were reduced to an unprecedented figure, would result in reduced earnings and dividends. It will be gratifying to such to learn that their fears were groundless; that however low the fares may have been reduced the earnings have steadily increased in the same proportion and the Cincinnati, Hamilton and Dayton Road have been enabled to declare the usual five per cent. dividend on their stock, payable from the earnings of the last six months.

This Dividend is good evidence of the capability of the management under which the road is operated. It shows that the managers know what it costs them to carry a passenger from the Ohio to the Lakes, and that low fares have acted as a premium for the inducement of travel which has filled up the cars and enabled the Company to run full trains at little if any more expense than though their loads were light; the difference in number going to swell the earnings beyond the previous aggregates; and also that while the two lines mentioned were engaged in strong competition their managers were wise enough to preserve their tariffs at remunerating rates.

Such is the true policy of Railway management; to cheapen the cost of travel and transportation, gradually, as the capacity of the country to furnish traffic will admit of it, just so fast as by inducing all the increase of traffic over the route, the net earnings may be kept up to a fair interest paying point, upon the capital invested. To ascertain this point, requires the constant watchfulness of far-sighted, sagacious men, and not unfrequently the auxiliary aid of a *healthy competition*. This latter is the case in the Miami Valley where the business requires, and is amply remunerating two roads at remarkably low rates.

South Carolina.

We observe that a convention was held at Columbia, on the 27th ult., to receive and consider the report of a committee appointed at a previous meeting, for drafting a plan and resolutions with reference to the construction of a railroad from Columbia to Augusta, Ga.

On taking a map of South Carolina it will be seen that the capital of that State is in the direct line of the great north and south line of Railroads, being nearly within a straight line drawn from Weldon, N. C. through Raleigh to Augusta, Ga.

Besides the advantages of this position, Columbia is already a focal point for three important lines of railroads from the north, and north-west, and when indentified with the great line of communication now proposed will become one of the principal railroad centers of the south. Add to this the fact of its being at the head of the steam-boat navigation of the Santee, and in railroad communication with Charleston, and it is difficult to imagine greater advantages of situation for an inland town.

To secure these advantages, the people of Columbia, with the characteristic enterprise with which they have aided the roads running north and north-west, have instructed their town councils to subscribe for the corporation \$300,000 to the stock of the Columbia and Hamburg road, conditioned that \$400,000 more be otherwise subscribed, and that the railroad company pay interest on the instalments as paid in.

The four districts of Richland, Lexington, Orangeburg and Edgefield, intersected by the line of the proposed road, contained in 1850, over 96,000 inhabitants, thus offering a strong security for local support.

The convention on the whole have adopted an active programme of operations, and inviting, as they have done, the co-action of the North Carolina Central road and of the people of Augusta, we do not doubt that the cherished enterprise will be speedily consummated.

James G. Gibbs, Esq., has already made a preliminary survey which, accompanied by an able report, was consulted at the convention and received the united and formal thanks of the members. We shall give an abstract of this report in our next.

Car Ventilation.

We have received some further communications on this subject, but as we are averse to filling the *Journal* with matter which is neither new nor interesting we do not give them all entire.

"P. M. H." it seems, cannot possibly comprehend that Mr. LANCASTER's plan contemplates inner and outer walls, and, consequently,—when applied to cars already constructed,—inner and outer windows, the latter being closed, at the option of the person occupying the seat opposite. In the construction of new cars, though a slat may be substituted for the *inner window*, the outer one remains glazed, or sealed as before.

We supposed this was made perfectly clear in his advertisement and the cuts accompanying it, but it appears that "P. M. H." did not get a clear understanding of it.

Below we give Mr. H. M. PAINE's account of his own invention.

(For the American Railroad Journal.)

Most cheerfully do I respond to your suggestion that "each one of our correspondents state what he deems the causes of the difficulty, and then state explicitly how he expects to overcome it."

If when riding in a car, with the "Espy" or other exhausting ventilator in its roof, you place your hat in the opening in the roof you will find that the draught is sufficient to retain it there. The air thus drawn out through the roof of the car is drawn in at the windows, and this *inward* draught is the great cause of the entrance of dust at the window. But if the car should have no exhausters on its roof, the dust would still enter at the

window openings. The air in the interior of the carriage will be in a comparative state of rest, while the external atmosphere is moving in rapid eddies, caused first by the head of the train displacing the air, and second, by the impingement of the displaced portions against the side of the train. These whirling eddies retain the dust they hold in suspension, while they traverse the solid work of the car, but the moment an opening is reached, the particles are thrown through it into the car with great force; the superior gravity of the matter in suspension carrying it even beyond the air currents from which it is projected. These are the causes why a railroad car is dusty. I will now state how I propose to remedy these difficulties. If you place a shingle in the windows at an angle of about 30° with the car's side, a strong current will be endured outward: the whirling and impinging external currents will be deflected by the projecting angle of the shingle, and a vacuum formed at the point of their departure from the deflecting plane, which the interior will rush in to supply and thus create the outward current. If such a shingle be placed in every window and no openings be made in the roof, there will be no effect, but if an opening be made in the roof, then a strong current of air will be drawn down into the car and pass out through the windows, thus effectually preventing the entrance of smoke, cinders, or dust. Now if the windows of a car are so constructed as to present a deflecting angle, at the will of the passenger, and operate as the shingle, it will be as impossible for dust to enter the car, as it is for the train to move without power. The exclusion of the dust is but one of the points of such an arrangement. Its great ventilating qualities are apparent to any mind conversant with the subject. To supply copious quantities of pure air without inducing local currents, is the great attainment of perfect ventilation. During the winter of 1853, a car so fitted, on the Hartford and Springfield Railroad had its temperature reduced from 95° to 50° above zero in four minutes without any sensible currents.

This system of ventilation requires no continuity attachments, but leaves the car intract as a whole, while the cost of a new car is not increased one cent. But there has been one difficulty to overcome and render it perfect. The smoke and hot gases from the stacks will enter the feeds on the roof. Dispose of this difficulty and a days work of two men on any car now running will perfectly ventilate it and render it dust proof.—There are good reasons to believe that the difficulty is overcome. The smoke has been thrown under the train by means of a syphon attached to the stack, but the complaint is that the bright work of engines is blackened when coming to stations. Another experiment is being made to dissipate or "dilute" the smoke and gases to such an extent that the keenest smell will not detect their presence.

H. M. PAINE.

(For the American Railroad Journal.)

Mr. Editor—Allow an old subscriber to return you his thanks for the liberality you have shown and are showing by opening your columns for the discussion of the principles of ventilation as applied to railway cars. It is a great matter and one destined to effect great changes in the value of railway property. I never have for a moment

doubted the feasibility of getting rid of that fatal drawback to the success of our roads. The time is near if indeed not already with us, when the people will abandon traveling for pleasure altogether; the falling off is immense already and unless the eyes of our railway managers can be cleared of dust, it need not be expected that they will be able to see what they should long since have seen; that the only and true way to increase receipts is to make that mode of transit popular by making it agreeable.

Go on therefore in the good work; you cannot fail; the truth will come out.

New York, August 19th, 1854.

H. H. J.

Machinists' Tools.

SHRIVER & BROTHERS' MANUFACTORY.

Among the most gratifying results of successful railway enterprises is the extraordinary impetus given to all industrial and manufacturing interests along their routes. No sooner is a railway project started and sufficient stock subscribed to insure its success than the vacant lands in the vicinity of its line are occupied. As each successive division is opened for traffic and its depots established, villages spring up, with all their concomitants of carpenter, blacksmith, cooper, tin shops and numberless other small manufactories which it is not necessary to enumerate here, giving employment to all, imparting activity to everything in the vicinity and rendering each citizen dependent upon his neighbor for some of the necessities of life. In these places there are no drones upon society. The spirit and necessities of the time and age seem to have communicated themselves to all parties till there is no one left who can find no employment. Instead of such places pushing business, it exacts the reverse; business pushes them ahead.

The Baltimore and Ohio and New York and Erie Roads are lined with enterprising places of this character all of which, or nearly so, owe their existence to those enterprises. Many of these places are also manufacturing seats of considerable note. Some of our best locomotives, cars, and other railway equipments are manufactured at these inland cities of a few years. Their cheap rents, the low price of fuel, meats and vegetables and often times the facilities for the use of water power which they offer tend to cheapen the cost of manufacture of all such articles in a great degree; while the convenience of transit afforded by the railways admits of the products of the manufactories being forwarded in all directions required with as much dispatch as from the seaboard. These are no slight advantages in a manufacturing business which are being daily better appreciated in all parts of the country.

It will be seen by our advertising columns that Cumberland, Maryland, about half way from the Atlantic to the Ohio on the Baltimore and Ohio Railroad, is rapidly advancing in the manufacture of iron and steel. Messrs. SHRIVER & BROTHERS, are making Machinists' Tools of the best character such as are suited to railroad shops. Many Southern and Western Companies will find Cumberland the most convenient point from which to get their supplies for their repair shops. It will be observed that they invite orders for all the most essential portions of the fixtures for such establishments, and we think the managers

vicinity will consult the interests under their charge by giving the Fulton Works at Cumberland a fair examination.

American Railroad Journal.

Saturday, August 26, 1854.

Erie Railroad.

No one will suspect us of partiality to the Erie Railroad; but it strikes us that the position it now holds in public estimation, presents a striking contrast to its former popularity, not justified by facts, and not at all flattering to the sagacity or consistency of its former friends. It was *once* the favorite security of New York. Certain assumed results of its construction carried its stock to a high figure. These, and even greater results, have been realized, yet it is fast running to a point at which it will be difficult apparently to give its stock away. What is the cause of this great change? Not that the road has not redeemed its pledges by which it was received into popular favor, but that the public, in spite of its success, has lost confidence in it. The road is a valuable and productive as it was ever claimed it would be. It is the popular sentiment that has changed, a change, if this sentiment was ever correct, due to caprice rather than to any newly discovered evidence impeaching the value of the road.

In our opinion the road is worth vastly more than it ever was. The value of it depends upon its management. It is earning enough to pay a reasonable income on its cost. If it be economically managed, it is doing so. The value of the securities of this company turns upon this fact. A momentous question this is in every road. A conviction that it was not well managed led us to attack its direction. The result was that new men were called to its charge. Under the direction of these, important reforms have been effected, particularly in the superintendent's department, upon the conduct of which, the success of every road depends.

The mode of reasoning applied to other roads will show the groundlessness of the present panic in Erie. Its earnings of the past half of the year ending July 1st, have been \$2,500,000. Estimating that the receipts will be 10 per cent. greater for the balance of the year, as has uniformly been the fact, the total will be \$5,250,000. This sum is equal to nearly 15½ per cent. on a cost of \$34,000,000. Allowing 50 per cent. for expenses leaves \$2,625,000 for interest and dividends, or 7¾ per cent. on the cost of the road. There does not appear to be any fallacy in this mode of reasoning; nor is there, if our premises be correct, and the road be well managed, both of which we assume. We admit that we are agreeably disappointed in the earnings of the road. They are much greater than we anticipated; so much so, that we are satisfied the receipts are large enough to pay 7 per cent. net on a capital of \$34,000,000. If such be the fact, would it not be wiser for the stockholders to look a little more sharply into the management and value of their property, instead of giving way to unaccountable panics, and selling their stock, without knowing whether it be worth 10, or 400 cents, or the dollar. If the manner in which the holder of Erie stock went into it, was calculated to inspire distrust, as to the soundness

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	86
Androscoggin and Kennebec.. "	55	824,363	1,043,540	2,036,140	177,003	80,053	none	82
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,620,981	168,114	100,552	none	42
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	6	96	24
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	27
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	106
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	85
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	42
Northern	82	3,016,634	.....	.....	328,782	163,075	5	88
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	104
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	.....
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	10
Sullivan	26	.....	.....	673,500	.....	.....	none	21
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	9
Rutland	120	2,486,000	2,429,000	5,577,467	495,397	266,539	.....	4
Vermont Central	117	8,500,000	3,500,000	12,000,000	.....	.....	the Vt. C.	82
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to Recently opened.	.....	cent.	.....
Western Vermont..... "	51	392,000	700,000	.....	.....	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	81
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	100
Boston and Maine..... "	83	4,076,974	150,000	4,111,315	803,024	418,358	8	79
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	64	96½
Boston and Worcester..... "	49	4,500,000	590,541	4,850,754	887,219	413,289	7	40
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	62
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	62
Eastern	52	2,850,000	1,192,975	3,120,391	620,810	310,875	6	92
Fall River..... "	48	1,050,000	6,208	1,050,000	294,183	126,589	8	87½
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	117
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	50
Boston and New York Central "	74	1,159,228	953,370	2,221,068	90,315	35,214	none	96½
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,897	122,866	none	.....
Taunton Branch	11	250,000	none.	307,136	159,738	21,490	8	111
Vermont and Massachusetts.. "	77	2,233,929	1,139,615	3,207,818	244,323	13,144	none	60
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	93½
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	65
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	70
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	65
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	116
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	.....
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	40
New London and New Haven. "	55	750,500	650,000	1,380,510	Recently opened.	.....	none	50
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	.....
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	none	.....
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	130	.....
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	46½
Hudson River	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	44
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	35
Long Island..... "	95	1,875,148	516,246	2,446,891	205,068	44,070	none	28
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	89
Ogdensburg (Northern)..... "	118	1,679,969	2,969,760	6,133,834	480,137	195,847	.....	12
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	.....
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,420	149,941	79,252	7	.....
New Jersey	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,106	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	68
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	68½

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	85
Philadelphia and Trenton.....	80	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	52
Washington branch.....	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna.....	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.....	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.....	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.....	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina..... S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.....	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina.....	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester.....	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia.....	211	4,000,000	1,214	.....	934,424	466,468	7½	.....
Macon and Western.....	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee.....	71	.....	.....	In prog.	59,690	21,731	.....	.....
South Western.....	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River..... Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.....	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point.....	88	688,611	.....	1,330,960	173,842	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..... Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga.....	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	38	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.....	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.....	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.....	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	59
Cleveland and Toledo.....	147	2,000,000	1,600,000	.....	.....	.....	.....	71½
Cleveland and Erie.....	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.....	135	3,027,000	408,200	3,655,000	777,793	483,454	12	100
Columbus, Piqua and Indiana.....	46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.....	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton.....	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	.....
Cincinnati and Marietta.....	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western.....	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan.....	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami.....	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro.....	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami.....	84	2,668,402	482,000	3,169,733	667,559	352,133	10	.....
Mansfield and Sandusky.....	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.....	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central.....	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania.....	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana.....	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley.....	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia.....	64	1,291,700	26,000	1,310,062	314,434	168,612	10	.....
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central.....	.....	.....	.....	.....	.....	.....	.....	.....
Indiana Northern.....	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine.....	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati.....	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	.....
Lafayette and Indianapolis.....	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru.....	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	.....
Terre Haute and Indianapolis.....	72	632,387	663,100	1,353,019	105,944	71,446	4	.....
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.....	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central.....	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago.....	92	.....	500,000	In prog.	473,548	286,152	.....	123
Michigan Southern and Ind. N. Mich.....	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	94
Michigan Central.....	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	86
..... Mo.	88	.....	non	In progress	Recently opened.	.....	.....	.....

of their judgments, the manner in which they are quitting it, is well calculated to inspire contempt.

Stock and Money Market.

We have nothing new to report as to the state of the stock market, with the exception of the fall in Erie, which is some 9 per cent. lower than at our last quotations. On Tuesday, it sold for 33½, which is the lowest point yet touched. Other securities are tolerably well maintained, though necessarily affected somewhat by the panic in Erie. As this panic seems to be the result of foreboding as to the future, and probably, to a distrust as to the healthy condition of the company's affairs, we think the company should take immediate steps to provide, if possible, for the bonds that are to fall due in February, as well as to give the public a clear idea as to how it stands, and what it is doing. If as is claimed, satisfactory statements can be made in reference to both particulars, no time should be lost in taking measures to quiet the alarm which exists.

The general market shows no improvement; and none is to be expected, probably for some weeks to come. There is much apprehension that we have not yet reached the foot of the hill, and that embarrassments of the mercantile communities may tend to disturb the money market for some time to come.

We learn that there is a steady, though not large, foreign demand for railroad securities. Foreigners seem better to appreciate their value, than our own people.

We send our new lithograph map to any address, by mail, on the receipt of one dollar. It shows all the railroads in operation, progress or projected in the United States and Canadas.—Railroads supplied in quantities at a liberal discount.

New Publications.

We have the *Mining Magazine* for August, published by William J. Tenney, 98 Broadway, N. Y. This Journal is devoted to the whole range of mining operations throughout the country, embracing all the locations, processes and machinery for the raising and conversion of all kinds of minerals, coals and earths. It contains scientific discussions of the mineral character of all localities, and upon various systems of mining and purification; besides being a current record of active operations in all the mining districts of our country, from Maine to California. To describe a work having so peculiar and comprehensive a character, it may be said that it includes the geology, chemistry, history, progress, economy and finance of mining, in all its departments. Its contents attest excellent facilities for information, and considering the extent of the interest which it represents, it may be said to be a valuable and creditable member of the periodical literature of the United States.

Memphis and Charleston Railroad.

The Huntsville (Ala.) Democrat understands that the Directors of the Memphis and Charleston Railroad sold \$400,000 of 7 per cent. bonds to their own stockholders and other capitalists of the Tennessee Valley on the terms proposed by them. This, it is stated, will enable the Company, with their other means, to lay their track through Alabama—150 miles—except 25 miles of iron west of Tusculumbia.

Improvement of the Locomotive.

By ZERAH COLEBURN.

The Boiler.

The object of the present article is to consider the means for increasing the *extent and efficiency* of the tube surface of the boiler. With the view that the extent of tube surface is one principal basis of evaporative power I shall show that it may be increased beyond the usual limits, and shall also direct attention to means of increasing the evaporative efficiency of a given area of this description of heating surface.

The increase of room, obtained by any disposition of the engine, which admits a 52 inch boiler in place of one of 44 inches, is equivalent if occupied by tubes to an increase of 33 per cent. of their surface. The arrangement of the engine does not fix any definite limit to the lengths of the tubes, but this dimension depends upon the distance through which heat, received through an opening such as that at the tube-end, can be economically carried; and also upon the increased difficulty of keeping long tubes firmly fastened in their sheets. Let us consider both of these points.

The amount of heat which a tube can take up is proportional to the extent of its opening into the furnace and to the strength of the draught by which it is solicited. It must be remembered however, that the whole strength of the draught is obtained by a contraction of the exhaust-steam pipes, and that a *load* is thereby imposed upon the engine proportional to the extent of the contraction. So, unless a given amount of blast-pipe contraction can be made to produce a stronger draught, (and which I will hereafter consider) we must increase the size of opening into the furnace to take up and convey a greater amount of heat.

These openings are of very small size, principally because of the small size of the tubes, and partly because the tubes, if of copper or brass, require to be fastened to their sheets with an internal thimble of cast iron, reducing the internal diameter of the tube about one quarter of an inch. The tube openings of many engines are as small as $1\frac{1}{8}$ or $1\frac{1}{4}$ inches. Now, the air passing into these openings from the furnace is heated to 3000° and is thereby so much rarified as to be increased six times beyond its ordinary volume. It is questionable if these openings are not altogether too small for tubes of 11 feet length. Yet, small tubes are preferred to those of larger diameter, as affording more surface upon the number of tubes which can thereby be placed within a given space.

It needs but a moderate increase of diameter of tubes to remedy the evil complained of, inasmuch as the areas of the tube openings increase as the squares of their diameters; and at the same time, with the same increase of diameter, but very little of actual surface would be lost. Again, if iron tubes could be used in place of copper, (and long experience sanctions their use) we could, besides gaining other great advantages, dispense with tightening thimbles, and thereby obtain a material increase of the area of tube opening.

By using, therefore, wrought iron tubes of from $2\frac{1}{4}$ to $2\frac{1}{2}$ inches in diameter, we could increase the distance through which heat could be economically carried, and upon that consideration could carry out tubes to 14 feet length, if desirable, for passenger engines.

Every engine builder is ready, however, to pro-

nounce against "long tubes," until called to complete an engine of unusual power, when he finds that in increasing the length of the tubes is the only mode of securing proportionate heating surface. Long tubes have given difficulty by leaking. But they did not leak merely because they were long, but by the combined circumstances that they were of copper or brass, having a greater rate of expansion, when heated, than iron; and that they were of small diameter, and were therefore not so stiff and not so well able to retain their places firmly in the tube sheets.

Again, after having secured by these dispositions, a greater extent of heating surface than is usual with powerful engines, I believe it could be made more efficient in evaporation, by making a separate chamber or water-reservoir at the forward ends of the tubes. A sheet, drilled like either of the tube sheets could be placed across the boiler at two feet from the ends of the tubes, and the space included between such sheet and the tube sheet be filled by the feed water, which, after being heated, would pass into the boiler through an ordinary check valve. In this heater the water could be raised to the boiling point. The economy of heating the feed water has been ascertained, by the experiments of Daniel Kinnear Clark, to be as a saving of one per cent. of fuel for every 10° elevation of the temperature of the feed water, or a saving of 15 per cent. in using feed water at 212° instead of at 62°.

Convention of Railroad Managers.

A convention of the officers and managers of the great lines leading from New York to the West was held at the St. Nicholas Hotel, in this city, during the past week. The object of the convention was to effect a concert of action in regard to mail compensation, in regard to the through travel going from New York to beyond Lake Erie and the Ohio, and in regard to "railroad runners," and other matters in which all of the companies represented have a common interest.

The delegates from the different companies were as follows:

On behalf of the New York Central R. R.

Erastus Corning, President.
Dean Richmond, Vice President.
A. C. Paige, } Directors.
John H. Chedell, }

Chauncy Vibbard, General Superintendent.
J. V. L. Pruyn, Secretary and Treasurer.

On behalf of the Hudson River R. R.

E. D. Morgan, President.
Nelson Robinson, Director.
Mr. Sykes, Assistant Superintendent.

On behalf of the People's Line of Steamboats.

Isaac Newton, General Agent.

On behalf of the New York and Erie R. R.

Homer Ramsdell, President.
D. C. McCallum, General Superintendent.
Daniel Drew, Treasurer.

On behalf of the Pennsylvania R. R.

J. Edgar Thompson, President.
Herman Haupt, Chief Engineer.

On behalf of the Philadelphia, Wilmington and Baltimore R. R.

S. L. Spafford, Superintendent.

On behalf of the Baltimore and Ohio R. R.

Wm. G. Harrison, President.
John H. Done, Master of Transportation.

On Tuesday, August 15th, on motion of Mr. HAUPT, the Convention was organized by the election of Hon. ERASTUS CORNING, President of the New York Central Railroad as President, and JOHN H. DONE Esq.; Master of transportation of the Baltimore and Ohio Railroad, as Secretary.

The subjects expected to be presented to the consideration of the convention, were stated by J. EDGAR THOMPSON Esq.

On motion of J. H. CHEDELL, Esq., the subject of Mail Pay was referred to a Committee of one from each Railroad represented.

The Chair appointed the following Committee;

MR. MCCALLUM,	MR. HAUPT,
MR. MORGAN,	MR. SPAFFORD,
MR. CHEDELL,	MR. DONE.

This Committee at a subsequent day made the following report:

REPORT.

The Committee to whom was referred the consideration of the compensation proper to be allowed to railroad companies for mail services respectfully report:

That they have given the subject their attention, and while they appreciate the difficulties and embarrassments which attend the attempt to establish the rates, they believe that the following principles should govern the lines here represented in the determination of the allowance to be claimed from the Post Office Department.

The operations of this Department, tending as they do to confer important benefits on the public, should not only meet with no impediment from transportation companies, but should receive from them every assistance which it is in their power to bestow, not incompatible with the other interests which it is their duty to protect.

But while they recognize the right of the public to claim reasonable accommodation, your Committee are of opinion that the Post Office Department should not expect the performance of the mail service without adequate compensation. They do not consider it either expedient or right that railroad companies should sacrifice the interests of their stockholders and depreciate the value of the property which they are appointed to protect, by performing any public service at less than cost.

Your Committee believe that no arrangement can be regarded as equitable that does not recognize the principle of compensation for the service actually performed, taking into consideration the number and weight of mails, the offices to be supplied, and the manner of supplying them, the character of the accommodation furnished, and the rate of speed.

Experience has proved that the lowest rates at which ordinary freight, carried in freight trains at a speed of ten or twelve miles per hour, and in large quantities, can be made to pay interests and expenses, will average about two cents per ton per mile for heavy agricultural products, three cents for groceries, and four cents for dry goods. Express freight, carried at high speed with passenger trains, usually pay double these rates. The accommodation furnished to the Post Office Department will average the half of one eight-wheeled car for each mail in each direction. The capacity of the car being ten tons, and expense of transportation nearly the same whether filled or empty, at four cents per ton per mile each way, which is less than the ordinary charge for dry goods, carried in freight trains, the annual compensation for 365 days, will amount to \$292 for daily mails. Whether the mails occupy but half or whole of the car it is of very little consequence to the companies transporting the same, as the remaining half would generally be insufficient for baggage; and a necessity would often exist for the transportation of an eight-wheeled car exclusively for mail accommodation, short or four-wheeled cars being excluded, by common consent from all passenger trains on all well-managed railroads in consequence of their tendency, at high speed, to leave the track.

Although in the opinion of the committee, railway Companies would be justifiable in charging for the transportation of the mails as much per ton

or per car as is received for express freight carried in the same trains, which is at least fifty per cent more than is paid for the highest class of ordinary freight at slow speed, yet as pecuniary considerations are not the only ones by which railroad or Transportation Companies should be influenced in the decision of this question, a schedule of rates is herewith recommended, but slightly exceeding those charged for ordinary freight, and sufficient only to protect from loss.

With a view to afford such protection, the following tariff is submitted for the consideration of the Convention.

For a single daily mail each way, requiring a car capacity of six tons, running 365 days, and fitted and furnished to conform to the plans and arrangements of the Post-Office Department, \$250 per mile.

For the half of an eight-wheeled car, fitted as above, and running 365 days, \$200 per mile.

For two daily mails each way, requiring a capacity of six tons each, \$375 per mile.

For two daily mails each way, requiring a capacity of half a car, \$300 per mile.

Way offices to be supplied without charge to the Department, when the service can be performed by the Company's Agents but when extra expenses are incurred in supplying way or terminal offices, all such expenses shall be paid by the Department.

Agents of the Post-Office Department in charge of the Mails carried in the mail car, and Special Agents traveling on ordinary business of the Department, at their own risk of personal injury from accident or otherwise, shall be taken without charge.

With these expressions of opinion, but without further recommendations, the Committee submit the subject to the consideration of the Convention.

H. HAUPT,
J. H. DONE,
C. VIBBARD,
D. C. McCALLUM, } Committee.

Which report was accepted.

On motion the subject of mail pay was referred to the Presidents of the several Railroads represented in this Convention.

The following resolutions contain the essential features of the remaining business transacted by the Convention.

1. *Resolved*, That the employment of runners, drummers, and soliciting agents is unnecessary, and that the practice be discontinued on or before the 1st of December next.

2. *Resolved*, That the expense of an Agent for the distribution of bills and advertisements at each point or district in the West at which the establishment of such agency may be considered requisite, shall be paid jointly by the Companies interested, the Agent to be appointed and his compensation fixed by the Superintendents of the various Roads.

3. *Resolved*, That whenever, in the opinion of the Superintendents of the four Lines here represented, it shall be expedient to establish common offices for the sale of tickets, such arrangement may be made and the expenses equally divided.

4. *Resolved*, That the fare on first-class passengers, and the charges for freight between the City of New York and any point west or southwest of Buffalo, Dunkirk, or Pittsburg, and Wheeling, shall be the same by each and all of the routes here represented; the rates to be determined and changed when required by the four Companies.

5. *Resolved*, That the local rates on either of these lines shall not be less at any time than the through rate established under the previous resolution.

6. *Resolved*, That all passengers over twelve years of age shall be charged full fare; between five and twelve years, half price.

7. *Resolved*, That the rates of transportation which may be fixed by the Companies here re-

presented, shall be exclusive of commissions, insurance or allowance, which if made shall form a separate and additional charge by each line, and no drawback shall be allowed.

8. *Resolved*, That the classification of through freight shall be the same on all lines, to be fixed by the Superintendents of the several Roads interested, at a meeting to be held for that purpose, and to go into effect at the earliest period practicable.

9. *Resolved*, That each Company shall, simultaneously with their issue, forward to each of the others copies of all handbills and other publications of similar character containing official announcements in reference to transportation business, and such publications shall always be issued with a responsible signature.

10. *Resolved*, That a person shall be employed, at the joint expense of the Companies interested, for the distribution of bills and other notices at Cleveland, Cincinnati, St. Louis, Louisville, Chicago, and any other points, or for any other districts at which such arrangements may be considered necessary. The Superintendents of the several Lines to prescribe the geographical districts in which these agents shall operate.

11. *Resolved*, That no free pass will hereafter be issued or renewed to any shipper or forwarder of freight, as such.

12. *Resolved*, That from and after the 1st of November next no return pass will be issued to any owner or driver of stock, nor will any owner or driver be passed free on any other train than that which conveys his stock.

13. *Resolved*, That on or before the 1st of November next the Companies here represented will abandon their offices on Broadway, and confine the sale of tickets to the terminal offices of the several lines, if satisfactory arrangements can be made.

14. *Resolved*, That it is the sense of this Convention that all free passes should be abolished, and that the Presidents of the Companies here represented be requested to correspond with other Railroad Companies, with a view to effect this object, at the earliest period; and that hereafter no annual passes shall be given by the companies here represented.

15. *Resolved*, That no letter of introduction or certificate shall be given to any employee or other person recommending him to the courtesy of a free pass over any Railroad.

16. *Resolved*, That a Committee of one from each Road be appointed to carry out the details of arrangement in accordance with the principles embodied in these resolutions.

17. *Resolved*, That there shall be only two classes of passengers conveyed on either line, viz: that of first class and emigrant.

On motion, the following resolution was unanimously adopted:

Resolved, That all matters not specifically provided for by the action of the Convention, are hereby referred to the Superintendents of the four lines, with power to act in the premises.

The action of the several companies upon the results of the convention also involves a general advance on the rates for passengers and freights, and a reduction of speed and of service. Through fares after September 1st, will be \$8 from New York to Buffalo, and \$9 in the winter months. The advance in freight charges will be about 10 per cent. for the present, with a further advance hereafter.

It is seen that the arrangement with reference to through fares and freights to beyond Lake Erie and the Ohio, applies only to passengers and goods leaving New York; the action of the convention being apparently dictated by the interests of the two great New York corporations.

Every investment in railroads, economically made, should pay; if the business can be made to do so, no matter what the charges. So long as the

railway is an improvement upon the turnpike in facility and convenience of transportation, the builders have a right to have their road paid for. But this right to charge for transportation a sum corresponding to the cost of the road is coupled with an implied obligation to construct the work in the cheapest manner possible. For instance, should the Central and New York and Erie Companies carry their construction accounts up to \$100,000,000, by costly but useless works, or by dividends declared in stocks, or bonds, out of supposed or expected profit, and to pay an interest on such sums, they should attempt to levy a corresponding toll, the public would very properly refuse to pay the extravagant charge, and it would not require much argument to prove who was in the wrong. The right of a railroad company to be paid a fair return upon its investment depends upon the fact whether they have really made the expenditure upon which they ask pay; for if a large portion of the capital be fictitious, or be lost through incompetency or extravagance, the authors of the wrong should suffer, not the public, who are innocent parties and who are not to be taxed, when no equivalent has been received.

Now it does not appear that either the New York and Erie, or the New York Central, Companies, have not been securing a sufficient income from their business to pay a reasonable dividend upon the cost of their roads. If so, (and we submit that this is the point first to be determined,) then they have no right to increase their charges. This is the true issue to be made, and this is the one that will be made, eventually. It may be that railroad companies cannot in the long run collect a revenue from fictitious capital, any more than a merchant can make bad debts the basis of a regular income. A man must get up early to make what is absolutely lost, productive; or to increase his stock of goods by adding 50 per cent. to his invoices.

We submit that the action of the above companies comes too late to secure the full result proposed. If the wise men who figured at the convention, had, by judicious management restricted the capital accounts to a sum \$10,000,000 less than their present amounts, there would have been no necessity of a combination to put up prices, or of imposing additional burdens upon their patrons which may only annoy them without securing the desired results. It may be that there is an unvarying law between cost and income. Whether this be so or not, we desire to see it the conviction of every railroad company.

But we have no particular objection to the action of the convention. If they are entitled to more pay, we wish them to have it. If not, the public will in time drive them from the positions they have taken.

Terre Haute and Alton Railroad.

The Terre Haute and Alton Road is already laid down on a good portion of the distance between that city and Paris, and will be finished, on either side of the "deep cut," near St. Mary's; on the 26th of this month; and the whole grade will be finished, the track laid, and the cars running by the first of September as far as Paris; and by the first of January, 1855, the road will be completed to the eastern branch of the Illinois Central Railroad, ten miles west of Charleston. The passenger cars, engines, and all other things necessary for "stocking" the road, have arrived in that city, and are in readiness to be put upon the track.

Important Connection in the Southern Line of Travel.

The Southern traveller is aware that on reaching Washington by the railroad line, he is transferred to a steamboat and is six hours in accomplishing the next 54 miles of his journey to "Aquia Creek," the northern terminus of the Richmond and Potomac Railroad. Four hours of this time are likely to be dispensed with at no distant day, as will be seen by examining the connections now forming.

At the last session of Congress, a bill passed authorizing the extension of the Alexandria and Washington road to connect with the Baltimore depot, in Washington. The projector of this road, James S. French, Esq., will, it is understood, lose no time in completing the work upon the authority now secured.

On reaching Alexandria, the Manassas Gap Railroad, will extend a connection to the Richmond, Fredericksburg and Potomac road, at a point between Aquia Creek and Fredericksburg. Alexander Worral, Esq., an Engineer of the latter company is now engaged upon the survey of this connection.

National Revenues and Commercial Aggregates.

The Treasury department has returned its quarterly statement of the receipts up to June 30th, 1854, from whence we derive the following comparative statements for the past and present years. The Federal revenue for the years ending respectively June 30th, 1853 and 1854 has been as follows:

	1853.	1854.
Customs	\$58,931,865	\$64,224,189
Lands	1,667,085	8,470,797
Miscellaneous	738,623	854,710
	\$61,337,574	\$73,549,700
Excess of 1854 over 1853		12,212,126

The *Economist* has employed these figures in approximating the imports of the country for the two years, as follows.

Under the present tariff the duties average 25 per cent. of the imports dutiable; hence the imports of 1854, compared with those of 1853, are as follows:

	1853.	1854.
Dutiable goods	236,595,113	256,896,756
Free goods	27,182,152	27,000,000
Specie	4,201,382	5,000,000
Total	\$267,978,647	\$288,896,756
Increase imports		\$20,918,109

The exports of the ports of New York and New Orleans compare as follows -

	New York.	N. Orleans.	Total of all ports.
1853	\$70,628,714	\$68,292,658	\$230,420,704
1854	107,575,070	60,989,992	258,565,062

Inc.	\$36,946,556	\$28,144,358
-----------	--------------	--------------

The figures for New York and New Orleans are official. The result is an increase of \$28,144,358 export value over last year, and the "balance" of the two years will compare as follows:

	Imports.	Exports.	Excess Imp'ts.
1853	\$267,978,647	\$230,420,704	\$37,557,943
1854	288,896,756	258,565,062	30,331,694
Increase	\$20,918,109	\$28,144,358	
Decrease			\$7,226,249

The large freights on breadstuffs shipped this year have enhanced really the export value without its appearing in the figures.

It must be remembered that these figures do not indicate any real improvement in the productive

resources of the country, as values are employed instead of quantities. The advance in the price of breadstuffs alone would account for the advance of over 50 per cent. in the exported values of our own port. The exported quantities of the South may, perhaps, be as great now as ever, but as cotton has not shared in the appreciation of prices the exported values of New Orleans are less than for the previous year.

If the commercial values, thus stated, are fairly determined upon correct bases, they show, on the whole, an improved state in our national exchanges.

The relation of the Federal revenue to the national indebtedness and expenditure may be stated as follows:

Total national debt Jan. 1, 1854	\$54,398,757
" " " " July 1, 1854	47,180,506
Yearly revenue (1854)	73,549,700
" " Expenditure, very indefinitely estimated at from \$60,000,000 to \$90,000,000.	

Favorable.

Our banking houses, dealing in Europe, are now receiving larger orders for American railroad securities than for several months past. We learn that large orders for bonds, and also for a considerable amount of stocks, were received by the steamer *Union*. The tone of the English press, and the substantial evidence of foreign purchases both indicate the practical view which has been taken in London as to the ultimate effects of the fraudulent developments in our stock market. While the Schuyler fraud has operated to depress our stock quotations generally, English capitalists have seen that such a result was to be of but temporary character, and they have also reasonably anticipated greater safety against any similar future calamity. This feeling has been so strong, indeed, as to change the disposition of investments; most of the foreign purchases being heretofore for bonds, while late orders include many depressed stocks. Among late purchases of bonds on foreign account are reported \$50,000 of the New York Central, 7 per cent. new loan, at par; and also a large quantity of Illinois Central Bonds.

In Philadelphia, the Finance Committee of the Pennsylvania Railroad Company have resolved as far as possible to suspend, for the present, all further contracts for new construction work. The Reading Railroad has already done so, while it is believed on good grounds that the North Pennsylvania Railroad Company will adopt the same course. Thus these three great corporations will withdraw as borrowers, whence it is inferred that greater facilities will attend the negotiation of mercantile paper.

New Work on Cast and Wrought Iron.

The application of Cast and Wrought Iron to Building Purposes. By William Fairbairn, C. E., F. R. S., &c. New York, John Wiley, 167 Broadway.

Modern researches into the strength and economical disposition of metals have initiated some of the boldest and most useful applications of metallic construction. One of the earliest results was a smooth, light and strong iron girder, now known everywhere as "Railroad Iron." Fusible and Malleable Iron soon became ordinary materials for bridge and warehouse architecture. Iron ships, and, at a later period, the "Britannia Bridge," attested vast and novel capabilities of the same

materials. The beautiful and original examples of metallic architecture, which under the name of "Crystal Palaces" have challenged and received the admiration of the world are due to the careful researches of scientific men.

Among the names identified with our present attainments in the applications of iron, that of Fairbairn occupies a first rank. Combining originality as an Engineer and as an author, he has been identified with the most successful applications and the ablest expositions of useful research in this department. He was side by side with Stephenson in the origination and perfection of the Britannia Bridge. We may say so much as popular facts, not to enforce a claim for the author of the book under notice, but to dispense a favor to those who would seek it as authority.

In his preface the author says he has "endeavored to collect the sum of our practical knowledge on the use of iron, in its combination with other materials, in the construction of fire proof buildings." In analysing the strength of cast and wrought iron beams under various conditions of form, dimensions, temperature, age, and with various combinations and qualities of material, he has covered the greater share of the most useful architectural applications of iron. The result of his labors is directed to establish the comparative superiority of wrought over cast iron, as a material for beams and girders. Upon that point it is only necessary to say that Mr. Fairbairn has established some very successful examples of wrought iron bridge and warehouse construction in his own country, and that the application for which he contends is finding favor in America. We have to day seen a wrought girder, of one of his favorite forms, and of 50 feet span, raised on the walls of the new Nassau Bank of this city.

The book is illustrated by a view and detailed sketches of the Saltaire Mills, a work in which all the essential results of the author's researches are developed.

New Process of Rolling Railroad Iron.

It occurred to us several years ago, that iron could be better, quicker and cheaper rolled by a succession of single-grooved rollers than by a single pair having several grooves. As we then knew but little of the manufacture, we satisfied ourselves with the thought, that, were there any merit in such an idea, practical men would have applied it. We therefore feel more interest in its application now that it has been tested, and found successful. We find in the *Miner's Journal*, that Mr. William Harris, of Pottsville, Pa., has constructed a mill for rolling railroad iron, and that instead of having a single pair of horizontal rollers with nine separate grooves, it has nine vertical rollers, each with a single groove. The rolls are arranged in a continuous line, with close boxes or ducts between them, so that the "pile" is fed in at one end and comes out a finished bar of railroad iron at the other.

The obvious advantages of this arrangement, already confirmed by experience, are, a great saving of time, as the progressive motion of the bar is not arrested from the time the "pile" enters the first rolls until it leaves the last pair as a finished rail; a great saving of attendance, as the bar is both drawn forward and finished by the motion of the machinery; and lastly, an improvement in the working of "red short" iron for rails. This qual-

ity of iron, although very good, is of very different ductile capabilities at different temperatures, but, by the new process, the time of passing through the rolls is so much lessened as to give the advantage of any state of temperature best suited for rolling.

Actual trials have already shown that while a bar of 21 feet length is rolled by the old process in 2½ minutes, it can be rolled by the new plan in 30 seconds. And also that where ten men and boys are usually required in the rolling process, the new method requires but one man. We shall observe the future success of this improvement.

Boston, Concord and Montreal Railroad.

The eighth annual report of this company shows the receipts for the year ending April 1st, 1854, as.....\$233,234 81
Expenses.....112,400 31

\$120,834 50

mostly expended in the payment of \$40,529 interest on bonds, \$41,803 38 interest and interest commissions on floating debt, and \$31,136 67 in two 3 per cent. dividends on \$636,500 of preferred stock.

The company have completed their road during the past year to Wells River and closed their construction account.

The condition of the company at the date of the report is as follows.

Cost of road, bridges and buildings.	\$2,030,683 53
" " equipment	282,603 25
Interest paid to stockholders to Feb'y 1st, 1853, principally in stock.....	298,580 69
Discount on bonds.....	60,571 24
Accounts receivable.....	61,363 13
Property and materials on hand....	60,050 18
	\$2,793,852 02

Original capital stock.....	\$1,053,914 02
Preferred stock.....	636,500 00
Partial payments on do.....	3,195 75
Bonds issued.....	689,600 00
Received on account of bonds to be issued.....	11,702 55
Bills payable and balances.....	398,939 70
	\$2,793,852 02

A contract was completed on the 1st of last July to run the trains of this company over the White Mountains Railroad for one year for \$7,000.

No passenger has been injured on the road during the year.

Railway Traffic Returns.

Great Western of Canada 229 miles.

Earnings for week ending August 18th.

From Passengers.....	\$10,866
" Freight.....	4,984
" Sundries.....	1,052
	\$16,902

Number of Passengers.....	6,725
Total since 1st Jan. 1854.....	\$621,721
" Passengers	215,379

Grand Trunk Line of Canada 292 miles.

Earnings for week ending August 5th.

From 5,668 1st class passengers.....	6,860
" 885 2d "	243
" 3,706 tons mdze.....	7,229
" 541 M. feet lumber.....	1,651
" 691 cords firewood.....	992
" Mails &c.....	779
Total.....	\$17,765
Total from July 1st 1854.....	\$86,321

Vermont Central Railroad.

This corporation is indeed in a woful plight. It was fondly hoped during the last year that the increase of earnings would relieve the Company, from its worst fate. But unhappily although the earnings have increased the expenses have increased in a higher ratio. In Mr. Lee's report for 1853 he showed the net earnings of the previous year to have been \$252,573, out of which there was a demand for rent of the Vermont and Canada road and for interest of \$313,634 50, a clear deficiency of \$61,061 25. For the last year however we have a still worse picture. The balance of earnings over operating expenses is but \$214,793 12, being about \$100,000 deficient of the permanent charge for rent and interest. Now why is this picture of difficulty presented?

First, because the Vermont Central is one of two roads, designed to secure a business which is only sufficient for one.

Second, because \$3,000,000 have been sacrificed by discounts, frauds, failures and blunders.

Third, because, having no great local support, and being compelled to carry a large through business it can do so only at low charges and by paying high tolls to roads below, or those nearer Boston. Compare the charges for each class of freight on this road with others as follows:

Charges in cents per ton per mile.				
Name of Road.	1st Class.	2d Class.	3d Class.	4th Class.
Vermont Central, local.....	5.57	4.43	3.67	2.15
Do. through to Boston.....	3.83	2.99	2.23	1.88
New York and Erie, Summer.....	4.26	3.14	2.34	1.7
New York and Erie, Winter.....	4.69	3.45	2.57	1.87
Baltimore and Ohio, Summer.....	3.95	3.10	2.64	2.11
Baltimore and Ohio, Winter.....	4.74	3.95	3.42	2.64
Western Railroad.....	3.5	2.5	2.0	1.6
Hudson River Railroad.....	4.17	3.47	2.77	2.08
Rutland and Burlington.....	5.00	4.67	3.17	
Burlington and Boston Via. Rutland Railroad.....	4.28	3.21	2.14	

Fourth, because the principal business of the road is in freight, from which no road can generally realize as great profit as from passengers.—The Freight and passenger earnings of the road for last year (ending June 30, 1854) were as follows:

Freight.....	\$535,525 40
Passenger.....	257,586 12

Fifth, the road owns and maintains a disproportionate motive power, at an expense which is out of proportion to the amount earned from its employment. At the date of Mr. Lee's report in 1853, the Company owned forty two locomotives, and for the year just past the repairs on this stock amounted to within a trifle of \$100,000, or nearly one half of the whole outlay for the same purpose on the New York and Erie road for 1853. The adaptation of the greater part of these engines is wholly unfit for the road, considering its grades, character, and the preponderance of freight business.

Some of the causes adduced for the condition of the road are permanent; others, may be modified. On the whole, the history of this road is a warning to others, showing in an appalling form the results of over-doing railroad enterprise, and more especially of incompetent management, entrusted with the operation of railroads.

Pacific Railroad in Texas.

The Governor of Texas has concluded a contract with the Hon. Robt. J. Walker and his associates, for the construction of that portion of a railroad to the Pacific lying in Texas, by which the latter have secured the immense grant of land made by the State, to aid in the construction of the road. Walker and his associates deposit with the State the bonus of \$300,000 exacted by the latter, and agree to commence work within thirty days from date of the contract, to build fifty miles of the road within 18 months, and 100 miles yearly for each succeeding year, till the whole line shall be completed. The distance from the State line of Louisiana to the Del Norte is about 800 miles, requiring nearly ten years for the completion of the road according to the agreement entered into. We presume the company expect to build the road in a much shorter time.

The above grant secures to the company some 12 or 15,000 acres per mile of road, and, if good land, would contribute largely toward the means for the above work. But with our present information, we believe that very little really saleable land can be secured. Texas has an area of about 220,000,000 acres. Nearly if not quite 120,000,000 acres have been sold. Now we understand that nearly one-half of the State is a desert, incapable of being cultivated and consequently comparatively worthless. A considerable part of it is covered by the Staked Plain, so called, which is one of the most desolate portions of this continent. A considerable portion of the line of the above road is said to be without wood or water. If one-half and more of the lands of this State have been sold, and one-half be barren, there must be dry picking for those who would build their works entirely with the proceeds of the public lands.

Cincinnati Railroads.

There are now only five railroads in the western country the shares of which are above ninety cents on the dollar, and it is gratifying to notice that among these few, the Little Miami, and Cincinnati, Hamilton and Dayton, are foremost. It is worthy of notice, that although the shares of "our roads" are worth 90 to 95, there are few sellers, while other stocks are pressed upon the market at prices ranging from 75 down to 40. This confidence on the part of the public is not misplaced. The business of these roads is steadily increasing, and their prospects for the future are more favorable now than at any former time.

The travel between the East and the West is about equally divided, and the passenger traffic is so great, that notwithstanding the large reduction in prices, both roads are doing a paying business in this line. So far as regards this branch of traffic, the roads come into competition with each other; but aside from this, each company has a large and valuable local business, which is steadily increasing as connecting roads are extended.

The Little Miami road, is gaining rapidly, from the extension of the Zanesville and Wilmington, and Central Ohio roads, and soon the Marietta road will serve as another important feeder. The Central road, will in the course of three or four weeks be completed to the Ohio river, affording a connection with the Baltimore and Ohio railroad at Wheeling. This in addition to an important passenger business, will throw a large freight traffic on the Little Miami, especially in seasons of low water like the present. A considerable quantity of freight for this city is now at Wheeling, detained in consequence of the suspension of river navigation. This would all come by rail, if the connection was completed; and as it is, some of it is being wagoned from Wheeling, about twenty-

five miles to the present terminus of the Central road.

The business of the Cincinnati, Hamilton and Dayton R. R. is increasing from its western connections. The work on the second track between this city and Hamilton, is progressing satisfactorily, and when this is completed it will afford great facilities for the accommodation of the connecting roads. In addition to the local trade, it is doing a large through freight business. This is also the case with the Little Miami. Shipments are daily making on both roads for Pittsburgh, the Lake ports, and also for New York; and merchants bringing goods from the East, greatly prefer bringing goods on this route to the canals, especially for light goods.

Another fact in connection with these roads worthy of remark, is their *efficient management*.—To this in a great measure, their prosperity is attributable. In every department of the business, from the duties of the Directory down to the minutest details, every necessary attention is given, with a view to securing business, pleasing the patrons of the road, and providing satisfactory dividends. In a word without disparagement of others we may say that the Cincinnati, Hamilton & Dayton and Little Miami Railroads are the model roads of the country, both as regards efficient management, and profits. To the former, the latter, as already stated, is mainly attributable; and both together have placed the stocks in an enviable and foremost position in the market.

The Ohio and Mississippi Railroad is now doing a large business, which is rapidly increasing. This is a road that when finished, Cincinnati will have every reason to be proud of; and to it we may look with confidence for a large increase in the general business of the city. It will be—*must* be the great thoroughfare between the West and the East.

This road now affords certain connections with Louisville and Indianapolis. By our advertisement columns, it will be seen that a new time table went into operation on the 7th, by which three daily passenger trains leave for Louisville, each of which connects with trains for Indianapolis. This road is now also carrying freight, and as soon as the track is extended along Front street to the proposed temporary depot, it will do a large business in this line.

Dayton and Cincinnati (Short Line) Railroad.—The completion of the tunnel of this road was relet yesterday to Wm. C. Davis, and Gen. A. T. Dunham, responsible and reliable men; the terms have not yet been made public, but we are assured, no further delay will hereafter occur in prosecuting the work to its completion.

Pennsylvania Anthracite Coal in London.

We are happy to learn that a movement is about being made to introduce Anthracite coal into use in London and arrangements are in progress for the importation of it into England from Pennsylvania. It is said that the English bituminous Coal is retailed there this summer at seven dollars twenty-seven cents; that last winter it was retailed at ten dollars eighteen cents per ton, and will probably be higher the coming winter. The writer, suggests that with our Anthracite Coal, our grates for burning it should be sent, as they differ somewhat from those now in use in London. Stoves, he believes will not be tolerated in England, but the grates will be acceptable. He concludes by saying that "Londoners, he is convinced, will give the thing a fair trial, and it only wants this to make them give up reveling in their own smoke." He has been in this country and understands the subject well, particularly the difference in the quality in the two coals. If their Bituminous Coals sell at the above prices, the greater durability of our Anthracite must certainly render it far more economical to the people of London.

Pennsylvania Coal Company.

The recent report of this Company states their net earnings for the past year, to have been \$353,336 44, or equal to 11½ per cent. on the capital stock. Two dividends of 5 per cent. each, have been declared, leaving a balance of \$46,061 44; of which, \$40,000 have been appropriated toward sinking the original cost of opening mines, and the residue, 6,061 44, added to the surplus of previous years, leaving a reserved fund to the credit of profit and loss of \$138,984 63. The coal brought to market during the year amounted to 513,000 tons, or 13,000 tons more than was estimated in the last annual report, exceeding the production of the previous year 87,000 tons. The mines in operation are now producing 2,400 tons per day, and with the quantity already mined, would supply, if such amount could be brought down the canal during the present season, upward of 570,000 tons coal, while their capacity will be further increased, on the completion of the openings now in progress, to an extent equal to an annual supply of at least 80,000 tons.

Statement of the Business of the Pennsylvania Coal Co., for the year ending May 1, 1854 Dr.

To coal on hand per last report, and cost of coal mined, &c., in 1853.....	\$557,073 96
To road expenses.....	306,161 50
To freight and tolls on canal.....	810,764 53
To Port Even expenses.....	57,746 73
To salaries, Current expenses, &c.,.....	24,334 78
To Interest on \$600,000 Mortgage Bonds.....	42,000 00
To coal yard and harbor expenses, Rents, depreciation of tools, implements, &c.,.....	109,491 42
To tax paid State of Pennsylvania....	14,986 50
To balance.....	353,336 44
Total.....	\$2,275,885 86

By sales of coal, to May 1, 1854.....	\$2,188,005 45
By amount received for transportation of Merchandise over Co.'s Road, profits on lumber, barges, &c.,.....	32,543 36
By balance of interest Account.....	20,398 16
By coal on hand.....	83,938 91
Total.....	\$2,275,885 44
By balance.....	\$53,336 44

Production of Iron.

On this subject the Miner's Journal Pottsville Pa. remarks that in the U. States since 1850, the production has very materially increased over that of previous years; but we have no data at hand to indicate clearly to what extent the increase has attained. In that year, however, there were 377 furnaces in operation yielding a product of 564,000 tons of pig iron, while the British product reached 2,380,000 tons from 459 furnaces. The produce of other countries is stated as follows:

France	348,000 tons	Russia	189,000 tons
Austria	160,000 "	Sweden	133,500 "
Prussia	112,000 "		

Making a total of 3,887,300 tons from all the iron producing countries, nearly one-sixth of which is American.

In 1850, the U. S. imported of foreign iron hardware and cutlery, over 520,000 tons, principally from England, and exported 4136 tons, of which about one-half was home manufacture, making our home consumption for that year 1,080,000 tons. The official returns of the two countries show the following state of things:

	UNITED STATES.	ENGLAND.
Home produce of iron tons,	564,000	2,380,000
Foreign iron imported	520,000	28,000
Iron and hardware exported	4,136	809,100
Iron consumed at home	1,080,000	1,598,900

Bytown and Prescott Railroad of Canada.

Twenty four miles of this road, to Kempville, were opened with appropriate ceremonies on the ninth of the present month. The final completion of this road, connecting the St. Lawrence with the great valley of the Ottawa, will have a wonderful effect in developing the vast agricultural capabilities of the latter region, and in directing its products, under the new reciprocity treaty, into the United States at Ogdensburg, whence they will be contested by the Ogdensburg Northern and the Black River roads, to Boston and New York respectively.

Upon the development of an important trade and travel over the line of this road, a result which is certain to follow, a heavy accession will result to our trade with the provinces, and an immediate improvement in the material prosperity of northern New York.

Had the Bytown and Prescott road been finished five years ago, giving time for some development of its vast tributary country, we should be receiving this season an immense and acceptable importation of Canadian wheat, and prices of breadstuffs might rule lower than now.

Vermont Central Railroad.

The gross earnings of the Vermont Central road for the year amounted to \$820,119 60, of which sum \$535,525 40 is credited to the freight department. The passenger receipts were \$257,586 12. For the mails \$17,046 were received. The expenses for the year were \$605,326 48, divided as follows: Passenger department, \$34,167 58; freight, \$87,057 95; motive power, \$268,669 51; maintenance of way, \$164,775 69; general expenses \$50,655 75. Of the above sum, \$83,161 37 is regarded as "extraordinary expenditures" upon engines, cars, and the track.

Connecticut and Passumpsic Railroad.

We learn from the Boston Traveller that the annual meeting of the Connecticut and Passumpsic Rivers Railroad Company was held at White River Junction on Monday, 31st ult. The report shows that the earnings of the road for the year ending May 31 were \$162,688, or about \$2000 less than those of the previous year. The expenses were \$107,115, a large portion of which was for relaying the track for the first forty miles of the road. Of the net earnings, \$46,620 was appropriated for the payment of interest on bonds, leaving \$8,953 to be carried to the contingent account. The report recommended a delay in the proposed extension of the road from St. Johnsbury to the Canada line at Derby, till the public confidence in railroad securities shall have recovered from the recent shock occasioned by frauds here and in New York. The following directors were chosen—Mr. Keyes being subsequently elected President, in place of Mr. Fairbanks, declined; Erastus Fairbanks, William Thomas, William W. Weld, B. P. Cheney, C. W. Chapin, E. Cleveland, Portus Baxter, Josiah Stickney, Emmons Raymond, B. B. Mussey, Fitz Henry Homer, E. B. Chase, Arthur Latham, Henry Keyes.

Madison and Swan Lake Railroad.

The stockholders of the Madison and Swan Lake Railroad Company held an election in this place, at the office of S. Mills, Esq., on the 1st day of this month, and elected the following Board of Directors:

L. J. Farewell, S. Mills, F. G. Tibbits, M. B. Van Slyke, C. J. Pettibone, H. S. Haskell, M. B. Munn, N. H. Wood, W. D. McIndoe.

At a subsequent meeting of the directors, held on the same day, L. J. Farewell was elected President; A. C. Ingham, Secretary; and Simeon Mills Treasurer.

We learn that it is the intention of the company to make a survey of the route from this place to Portage City at once.—Wis-State Journal.

Albany Northern Railroad.

The members of the Board of Trade of the city of Albany have returned from an excursion over the above road, and have adopted resolutions expressive of their sense of the business capabilities of the district of country intersected by its route. They say "we have seen with our own eyes marble enough to build a city, and slate enough to shingle it over, and both apparently of the best quality; and since there are now facilities by which it can easily be brought to market, we venture the assertion that the slate and marble from these localities will soon figure largely in market, and its use be essentially extended."

Vicksburg, Shreveport and Texas Railroad.

On the 8th inst, the work of construction of this road was commenced with formal ceremonies and in the presence of a large and spirited concourse of spectators. The point of commencement was at the eastern terminus of the road, opposite Vicksburg, Miss. N. D. Coleman, Esq., President of the Company, made an able and interesting speech to the people present, and afterward formally "broke ground" upon the line of the road, being followed by Gov. McRae, of Mississippi, and by several other distinguished individuals.

This road is the *third*, in the order of its commencement, of the roads extending westward beyond the Mississippi, and has the same general objects as the two which had been already commenced,—the New Orleans and Great Western and the Pacific roads. These three roads, starting from the Mississippi at widely separated points, all look to the development of large districts of new territory, and also each by itself to being ultimately identified with one of the great national highways to the Pacific.

Whatever may be the ultimate relation of the Vicksburg and Shreveport road to the Pacific route, it possesses abundant local strength in the agricultural resources of the country traversed by its line. The upper parishes of Louisiana although being among the smallest in size in the State, have yet an average population equal to that of all the parishes of the State, excluding only Orleans, in which the city of New Orleans is situated.

The surveyed line of the Vicksburg, Shreveport and Texas railroad is 206½ miles in length, extending from the west bank of the Mississippi, opposite Vicksburg, to the Texas State line. For the first 80 miles the road runs through a level country, rising but 40 feet in the whole distance, and will be built upon embankment of from one to four feet high, with about six miles of trestle work. West of Monroe the line passes over more hilly and desirable ground.

The estimated cost of the whole road, equipped for commencing business, is \$3,153,342, averaging only \$15,233 per mile.

The authorized capital of the company is \$4,000,000, of which the State of Louisiana has subscribed one fifth, or \$800,000. Previous to the act of subscription on the part of the State, \$285,000 of individual subscriptions had been received, while large city, parish and individual subscriptions have been since received.

On the completion of the Southern road of Mississippi, the Alabama Central and intermediate connections, Vicksburg will become a point in the great North-east and South-west railroad line, of which the Texas road will become the immediate

and true prolongation. In that issue this road, sustained also upon the local strength of its line, will not fail to pay a handsome profit on its estimated cost.

To Engineers and Surveyors.

A YOUNG man, 18 years old, wants a situation (to learn the business) as chain carrier, in a railroad survey. No objections to go to any part of the country, or world. Good reference can be given if required. Address A. S., Office of this Journal. [32 1m]

RAILROAD STOCKS, BONDS & STATE SECURITIES.

The subscriber offers for sale—
Ohio and Mississippi Railroad Company, 7 per cent. second mortgage, convertible Bonds. Interest payable semi-annually in New York.
Scioto and Hocking Valley Railroad Company, 7 per cent. first mortgage, convertible Bonds. Interest payable semi-annually in New York.
Cincinnati, Western Railroad Company, 8 per cent. Real Estate Bonds. Interest payable semi-annually in New York.
Hamilton County, Ohio, 6 per cent. Bonds. Interest payable semi-annually in New York.
Louisville and Portland R. R. Co. Bonds.
Maysville and Lexington R. R. Co., 6 per cent. second mortgage, convertible Bonds.
Louisville City Bonds.
Cincinnati, Logansport and Chicago R. R. Co., 10 per cent. Income Bonds.

RAILROAD STOCKS.

Covington and Lexington R. R. Stock.
Cincinnati, Hamilton and Dayton R. R. Stock.
Little Miami R. R. Stock.
Ohio and Mississippi R. R. Stock.
Southern Bank of Kentucky Stock.
Columbus and Xenia R. R. Stock.
Cincinnati and Chicago R. R. Stock.
Central Indiana R. R. Stock.
Cincinnati and Indianapolis R. R. Stock.
Indianapolis and Bellefontaine R. R. Stock.
Cincinnati, Wilmington and Zanesville R. R. Stock.

WANTED—\$100,000, for which the best securities will be given.

WANTED—\$40,000, on commercial paper.
ISAAC OSBORN DAVIS,
Stock Exchange and Financial Agency Office,
No. 28 Third street,
Cincinnati, Ohio.
[32 1m]

ON THE APPLICATION OF IRON TO BUILDING PURPOSES.—JOHN WILEY, No. 167 Broadway, has just published—

FAIRBAIRN ON THE APPLICATION OF CAST AND WROUGHT IRON TO BUILDING PURPOSES. By William Fairbairn, C. E., F. R. S., F. G. S., etc. 1vol. 8vo., with numerous Diagrams and Illustrations, and tables for calculating the strength of materials &c. Price \$2.

SELECTIONS FROM CONTENTS.—On Cast Iron Beams for supporting the Floors of Buildings—Cast Iron Beams with Flanches—Experiments made at Leeds by the Author—Rules for the Strength of Cast Iron Beams—Table of Result—On Compound or Trussed Cast Iron Beams or Girders—Rule for Calculating the Strength of do.—Comparison of Cost—Process of Toughening Cast Iron—Experiments—Cupola—Air Furnace—On Wrought Iron Beams for supporting the Floors of Buildings, and for other purposes—Experiments on the strength &c., of do.—On Wrought Iron Trellis Girders—Formula for Calculating the Strength of Trellis Beams, &c., &c.

"No engineer can do without this book."—*Scientific American.* [34. 2t.

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,
RICHARD W. TYSON,
No. 25 South Charles str.

Baltimore, July 1st, 1854.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,
RICHARD W. TYSON.

Baltimore, July 1st, 1854. [33 3m]

500 TONS No. 1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.

90 and 101 John st.

N. B.—The above Iron constantly imported. [32 1f]

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to
EDW. BECH & KUNHARDT, 62 Beaver St.,
Or, A. TOWAR, Agent Pokepsie Iron Works,
231f Pokepsie, N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars, adapted to Railroad purpose, which will be sold at a reasonable price. For further information, apply to
SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.,
64 Courtland st., New York,
19 1f

To Contractors for Railroad Iron.

PROPOSALS will be received until the 29th September for nine thousand tons of railroad iron T pattern, sixty pounds to the yard, One-half to be delivered at Charleston, South Carolina, and one-half at Wilmington, North Carolina, delivery to commence in January and close in August, equal quantities to be delivered in each month at each place.

Payment will be made immediately on the delivery of each cargo, in North Carolina Funds. The contract will be given to the lowest responsible bidder provided the price be satisfactory. Bidders will endorse their bids—"Proposals for Railroad Iron"—and address them to Cyrus P. Mendenhall, Secretary, North Carolina Railroad Company, Greensboro, N. C.
WALTER GWYNN,
Chief Eng. N. C. R. R. Co.
Raleigh, August 3d, 1854. [3t. 1d.]

Machinists' Tools. SHRIVER & BROTHERS, Cumberland, Maryland,

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools. These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others requiring first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address
SHRIVER & BROTHERS, Fulton Works,
Cumberland, Maryland.
August 19th, 1854. [32. 6m]

Rensselaer Polytechnic Institute.

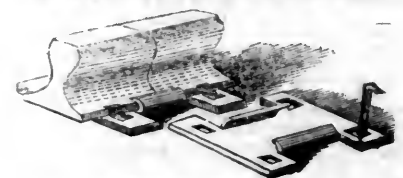
DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS,—including Railway, Hydraulic, Topographical, and Mining Engineers.
For copies of the Annual Register, giving full information respecting the Institute, apply to
R. FRANKLIN GREENE, Director, R. P. I.
Troy, New York.
[32 3m]

Lowmoor iron.

W. BAILEY LANG & CO, 54 CLIFF STREET, have in stock and offer for sale an assortment of Round, Flat and Square Bars LOWMOOR IRON, which they will sell by the ton or single bar. The attention of manufacturers, Railway Managers and Mechanics is particularly directed to the quality of this Iron, as its great strength, uniformity, and freedom from flaws, render it the best Iron in the market, where first quality is required.

W. BAILEY LANG & CO., being Sole Agents in the United States and Canada for the LOWMOOR CO., will execute orders at manufacturer's prices. [3t. 3t.]

RAILROAD SPIKES.



WROUGHT IRON Chairs and Fastenings.

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.
The best quality of Refined Iron is used and all orders filled with despatch.

S. HOPKINSON SMITH,
No. 25 South Charles st.

Please direct the name in full.
Baltimore, July 1st, 1854. [33 1f]

ZERAH COLBURN, ENGINEER AND AGENT

FOR the Design, Construction, Valuation and Purchase of Locomotives and Railroad Machinery.

Offers his services to Railroad Companies in either of these departments, having long experience and the best facilities for all.

As CONSULTING ENGINEER he will advise as to the value or adaptation of any system of motive power, and furnish drawings, estimates and specifications for any arrangement of engine.

As ACTIVE ENGINEER he will superintend the construction, survey, or reconstruction of any railroad machinery, and guarantee satisfactory results.

As CONTRACTING ENGINEER, having connection with the most reliable and successful manufacturers, he will negotiate for the purchase of Locomotives of the very best construction and proportions. Also Wheels, Tires and Repair Shop Machinery.

Having much experience in Patent Business he will undertake the preparation of Drawings, Specifications, Applications for Patent or Caveat and other papers necessary for inventors. He is able to give material assistance in bringing inventions and improvements in Railroad Machinery into favorable notice.

CHILLED TIRES FOR LOCOMOTIVE DRIVING WHEELS.

Zerah Colburn retains the principal agency for the sale and right of use of this valuable improvement, and will furnish the most substantial guarantees of its Safety, Durability, Adhesion and great Economy.

Office, 3d floor American Railroad Journal Building,
No. 9 Spruce street,
New York.

REFERENCES.

The New Jersey Locomotive and Machine Co.
James Jackson, Pres't., Paterson, N. J.
Onas W. Elliott, Vice Pres't., 59 Beaver str., N. Y.
Henry V. Poor, Esq., Editor Railroad Journal, New York.
Geo. D. Phelps, Pres't. Del., Lack and Western Railroad.
Geo. W. Whistler, Vice Pres't. New York & New Haven R.R.
William Raymond Lee, Esq., Boston.
Bush & Lobdell, Wilmington, Del.
Oliver M. Hyde, Esq., Mayor City of Detroit.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

New York and Erie R. R.

PASSENGER TRAINS

leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, over the N. Y. & E. R. R. and the B. & N. Y. C. R. R., without change of baggage or cars.

DUNKIRK EXPRESS, at 6 a. m. for Dunkirk.

MAIL, at 8 1/4 a. m. for Dunkirk and Buffalo, and intermediate stations. Passengers by this Train will remain over night at any Station between Binghamton and Corning, and proceed the next morning.

WAT EXPRESS, at 1 p. m. for Dunkirk.

ROCKLAND PASSENGER, at 4 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAT PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

EMIGRANT, at 6 p. m., for Dunkirk and Buffalo and intermediate Stations.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Elmira with the Elmira and Niagara Falls Railroad for Niagara Falls; at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

OFFICE CINCINNATI, HAMILTON & DAYTON R. R. Co.
Cincinnati, August 8th, 1854.

THE Board of Directors of this Company have this day declared a Dividend of Five per cent. out of the net earnings of the Company for the Six months ending 31. July, payable in Scrip bearing Seven per cent. interest redeemable in three years. The Scrip will be delivered on and after Sept. 1st, to the Stockholders registered in Cincinnati on application at the office of the Company, and to those registered in New York at the office of the Ohio Life Insurance & Trust Company in that city. The Transfer Books will be closed for ten days from this date.

32 1m]

FRANK S. BOND, Secretary.

For Sale.

A STATIONARY Engine, having cylinders 13 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
jul.14 29 tf.] or 74 Broadway, New York.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF ERIE CANAL—WESTERN DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Buffalo, until the 1st day of September next, at 10 o'clock, A. M. for the following described work between Tonawanda and Black Rock:—

Section 360, with penalty in bond of...	\$14,000.
" 361, " " " " " "	20,000.
" 362, " " " " " "	17,200.
" 363, " " " " " "	10,000.
" 364, " " " " " "	9,800.
" 365, " " " " " "	10,600.
" 366, " " " " " "	15,800.
" 367, " " " " " "	12,000.
Guard Lock and Section at Black Rock...	14,000.
Waste Weir on Section 360.....	500.
Culvert on Section 362.....	600.
Bridge Abutments on Section 360 to Lock	
Section inclusive.....	2,000.

The above work to be completed by the first of April, 1857.

Sealed proposals will be received at the Engineer's Office in the city of Rochester until the 4th day of September next, at 10 o'clock A. M., for the following described work between Rochester and Spencerport:—

Section 266, with a penalty in bond of...	\$7,500.
" 267, " " " " " "	8,500.
" 268, " " " " " "	6,700.
" 269, " " " " " "	6,100.
" 270, " " " " " "	6,500.
" 271, " " " " " "	5,200.
" 272, " " " " " "	5,600.
" 273, " " " " " "	7,200.
" 274, " " " " " "	4,200.
" 275, " " " " " "	10,200.

Culverts on Sections 266 and 275, both inclusive do. do.....	3,500.
Bridge Abutments on Sections 266 to Section 270 both inclusive.....	3,000.
Bridge Abutments on Sections 271 to Section 275 both inclusive.....	2,000.

The above work to be completed by April 1st, 1856.

MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse until the 7th day of September next at 10 o'clock in the forenoon for the following described work:—

Section 135, with penalty in bond of....	\$5,400.
" 136, " " " " " "	6,200.
" 137, " " " " " "	5,100.
" 138, " " " " " "	4,100.
" 139, " " " " " "	4,700.
" 140, " " " " " "	4,000.
" 141, " " " " " "	5,200.
" 142, " " " " " "	6,700.
" 143, " " " " " "	6,100.
" 144, " " " " " "	4,800.
" 145, " " " " " "	4,700.
" 198, " " " " " "	3,200.
" 199, " " " " " "	4,000.

Culverts on Sections 135, 136, 137, 138 and 139.....	4,600.
Culverts on Sections 141, 144, 145, 146, 147, 148, 149.....	4,600.
Bridge Abutments on Sections 135, 136, 137, 140, 143 and 145.....	3,600.
Waste Weir at Cowassalon Creek.....	800.
Dam and Guard Gate do. do.....	600.

The above work to be completed April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus

defined will be received or acted upon; and no proposition will be considered complete unless price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 273, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, August 1st, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT,
CORNELIUS GARDINIER, } Canal Comm'rs.
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 35]

SATURDAY, SEPTEMBER 2, 1854.

[WHOLE No. 959, VOL. XXVII.

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

Erie Railroad.....	544
Railroads entering New York City.....	549
Railroad Bridges.....	550
Cleveland and St. Louis R. R.....	550
Charleston and Savannah R. R.....	550
Lake Superior Canal.....	551
Speed on Railroads.....	551
Cincinnati and Marietta R. R.....	551
Metropolitan R. R.....	552
Williamsport and Elmira.....	552
Tunnel under Chicago River.....	553
Alexandria and Hampshire R. R.....	554
Columbia and Hamburg R. R.....	554
Henderson and Nashville R. R.....	555
Greenville and Columbia R. R.....	555
New York, Newburgh and Syracuse R. R.....	556
Equation of Grades.....	557
Lebanon Valley R. R.....	558
Crawfordville, Kokomo and Fort Wayne R. R.....	558
North Carolina R. R.....	558
New York and Virginia Air Line.....	559

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, September 2, 1854.

Erie Railroad.

The continued depression of the securities and stock of the Erie Railroad, consequent upon the distrust felt as to their *value*, is the great feature in the stock market. The effect of this depression extends far beyond the loss involved in the decline that has been, or is likely to be suffered, even should the whole investment in the road turn out to be entirely *valueless*. *Erie* securities cannot seriously decline, without a corresponding decline of all *others*. Look at it as we may, the success of *this* road must and will be regarded, to a very considerable extent as a test of the productiveness and value of American Railroads. The business capacities of its route, and its favorable character both for economical construction and working, have been believed to be unquestioned. The want of success, if the road fail, will be regarded as proving one of the two things; either that our railroads cannot be made to earn an interest on their cost; or what practically amounts to the

same; cannot be made to do so in consequence of corrupt or incompetent management. The degree of the success of the Erie Railroad therefore will be taken as a test of the probable success of our whole system. There is none for which success has been more confidently claimed, upon grounds that appeared to be incontrovertible. Its line is in the right direction. Its route is not only exceedingly favorable, but for its local traffic, is entirely free even from the fear of competition. For this local traffic, it enjoys a monopoly of a most magnificent domain. Resting upon the commercial metropolis of the Continent, it extends by an unbroken line to the great interior waters upon which floats a commerce second only to that of the ocean, and upon the shore of which are springing into existence towns that are fast rivaling in business, and population, and trade, our Atlantic cities. If under such conditions favorable to success the Erie road fail, confidence will withdraw from *others*. The hypothesis upon which we have been constructing railroads will be looked upon as an untenable one, and the whole fabric of our system as resting upon an unsound and insecure basis. Regarded in this light, and it is the one in which it must be considered, the success of the Erie Railroad is what every individual in the United States, and vast numbers outside of them, have a direct *pecuniary* interest. If our railroads are valueless, the 6 or \$700,000,000 which they have cost, is lost. If they cannot be made productive, one of the fairest hopes for the progress of our race and the melioration of its condition is blighted. If our system in the main be a sound one, yet if the Erie Railroad does not succeed through a fault of its route or management, the effects we have described will temporarily be experienced, because the public cannot and will not discriminate between the accidental and the real; the *exception* and the rule. It cannot fail therefore without entailing the most disastrous consequences, not only upon this city but the whole country. It must not be allowed to give way, unless it have an inherent weakness, which will render attempts to save it impossible. If it possess the elements of success though under a temporary cloud, it *must* be sustained. The business community of New York cannot afford to let it languish in embarrassment for an instant. There is no

man having fifty thousand dollars in railroad securities, but could better sacrifice \$10,000 than to have Erie Railroad protested for a dollar. The thing is not to be thought of, unless we are willing to see the whole fabric which our people have labored so long and at such cost to erect, fall with a crash to the ground. The present, therefore, is no time for irresolution or indecision. The crisis must be met as it demands. If Erie be irretrievably lost, then we have good ground for apprehension and fear. If it still possesses the elements and capacity for success, it should be vigorously and efficiently sustained. To attempt under such circumstances to weaken confidence in it, or destroy its value, is treason against society, and the wrong is just as great as it would be to burn a block of buildings; and the parties engaged in such nefarious business, with no other object than that to make money by ruining the road, should be regarded in precisely the same light as the incendiary who lights the flame for the opportunity of stealing in the confusion that follows.

To understand the present position of Erie, a brief review of its early history is necessary. The road was first proposed as an act of justice to the "southern tier of counties" and as an equivalent to the advantages secured to the Central part of the State by the Erie Canal. It was first suggested as an act of *justice*, rather than as an opportunity or means for the profitable investment of capital. It, therefore, lacked in the outset the most important requisite to an economical administration of its affairs, a feeling of personal interest and responsibility on the part of its management. A road is only eminently successful, when the directors invest, and superintend the expenditure of, their own money, and when the object they set themselves to accomplish is a *paying* work. Now it was not so much a leading object of the managers of Erie, in the construction of the road, to keep expenses within the lowest possible limits, as to *build* the road. After the construction of the Western Railroad of Massachusetts, and the improvements of other States, the *Erie* came to be regarded as necessary to the maintenance of the commercial supremacy of this city, which tended to confirm the feeling that the *construction* of the road outweighed the question of its *financial* success, and directed attention rather to the *result*,

than the *means* by which it was accomplished. We do not speak of this by way of censure, only as a matter of history. It was not to be expected that any body of men would volunteer their services for years without compensation, and labor with that patience and assiduity they display in their own affairs. It would be natural for the directors of Erie to say, "whatever may be the cost of the road, the public will be vastly the gainer by its construction; and if the public expect us to build it, by *financiering*, and they must pay for it." The road was built by masterly and successful strokes of financiering, and not with extravagant losses as far as *raising* money was concerned. Its securities, under the circumstances, sold at a fair price. The company did not suffer so much from this quarter, as from the lax sentiment of responsibility and accountability which gradually worked itself into the management of its affairs, and which prevailed we may almost say, from the employee in the most responsible position, to the lowest. Added to this, the company never numbered in its service a man of pre-eminent ability, to direct and guide affairs, and without whom *no* enterprise is ever eminently prosperous. The company suffered exceedingly for the want of a competent *chief* of the engineering department to give consistency and uniformity to the estimates and expenditures. No proper idea seems ever to have been formed of the cost, or the magnitude of the work, but estimate after estimate of *final* cost appear to have been made from the extent of the demands *immediately* pressing upon the company. Hence the wide discrepancy between the statements made from year to year, and the *result*; a discrepancy well calculated to place the action of the directors in a disadvantageous light, and which has contributed so much to weaken their present position before the public.

We have spoken of the past history of the road for the purpose of showing that a certain amount of losses, and abuses in the management of the company, were the inevitable result of the peculiar circumstances under which it was constructed and not as implying that the directors have not done as well as an equal number of gentlemen taken from any other business community would have done, but which notwithstanding have laid the company open to attack, and which are the principal reasons for the distrust felt toward its securities, and explains the cause for the position the road holds in popular estimation.

That the road has cost vastly more than was estimated, is not of it itself evidence that it has cost *too much*, as the estimates embraced only *portions* of the items of cost. But there is no doubt that the road could have been built for much less than its present capital; and would have been, had the parties who built it, expended their own money. But the question of the success of the road may not turn so much upon this fact, as upon what the earnings of the road are, or may be made to be; for if the company possess extraordinary advantages of *route*, it may, notwithstanding the great cost of its works, earn a reasonable dividend upon such cost, though the rates of these earnings might have been much greater with a more economical expenditure of capital.

The best evidence of the business capacity of the route of the Erie Railroad is found in its *earnings*. But waiving this for the present, and

reasoning *a priori*, it can readily be shown, we think, that its business, both from local and other sources must be enormous; quite sufficient to pay a fair income on the cost of the road.

The route of the Erie Railroad commands the local traffic of an area of country equal to 25,000 square miles, (or greater than the areas of the States of Massachusetts, New Hampshire, Connecticut, and Rhode Island, which have a population of over 2,000,000, and 2,500 miles of railroad), with a population of 800,000, or about one-third of that of the States named. For the trade of this immense region the Delaware Valley, which is a deep gorge in the convenient direction both to New York and Philadelphia, for nearly one hundred miles, through lofty ranges of mountains, must be taken. Through this valley the Erie road has selected the only *practicable* route. Although the country dependent upon this road is only thinly settled, as the above statement shows, its capacities for future improvement is much above the average for the whole country. It possesses an excellent soil, while the road follows upon the *northern* boundary of the great *coal* and *iron* fields of Pennsylvania. Coal and iron are the *prime* elements in the prosperity and wealth of every people, and when, as upon the line of the Erie road, they lie under a rich soil, such a fortunate concurrence of such circumstances is certain to create a manufacturing interest, paramount, often, in importance, to any other. Upon the line of the Erie Railroad, therefrom, must grow up immense manufacturing communities, for the products of which the road will supply an outlet in either direction. As yet the road has derived little advantage from the source of *prospective* income. The local earnings of the road thus far, have been from the carriage of lumber, and agricultural products, which in amount equal only a tithe of what the country is ultimately capable of furnishing. The road has been in operation for three years only. A considerable time must always elapse, before *any* road is in receipt of the appropriate business of its route. Its trade has been accustomed to other channels, or the people on its line have not had time to adapt their labor and industry to the new channel opened for them. The earnings of the Erie Railroad from local traffic are by no means a criterion of what they are to be. The population on its route is increasing much faster than the ratio for the nation, while the experience both of American and English roads shows, that the traffic of the *same* number of people increases at a rate of from 10 to 15 per cent. annually. If with such an imperfect development of the resources of the country upon its line, the earnings of the Erie Road have been equal, upon its mileage and cost, to those of the best established and most productive railroads in the country, what may we not anticipate, when time shall allow its resources to become more perfectly developed?

As before stated, the country, the local traffic of which is commanded by the Erie Railroad, is equal to an area of 25,000 square miles, exceeding that of four New England States, having 2,500 miles of railroad, costing over \$100,000,000.—There is, no doubt that the natural resources of the territory upon the Erie road are much greater than any portion of New England. Neither is there a doubt but that the inhabitants of the former are capable of supplying a traffic to a rail-

road equal to that of the States named. Allowing the ratio to be the same, the receipts on the Erie road per ton, or for passengers moved, are *twice* as great as upon New England roads, as the returns of the latter show both freight and passengers to be carried *twice* as far upon the former, as upon the latter. The receipts upon all the Massachusetts railroads for 1853, were \$8,966,000, which is nearly nine dollars to every inhabitant of the State. Estimating the receipts per inhabitant on the Erie Railroad, only to equal those of the Massachusetts roads, this would give a total of \$5,950,000 for *way* traffic alone. Now although this exceeds the amount yet received, it is only because the local business is not yet developed.—There is no doubt that within two years this sum will be exceeded now that the average earnings per person will go beyond those of the Massachusetts roads. In addition, the population of the country tributary to the Erie Railroad is increasing at the rate of five per cent annually, which is twice as great as the increase of the New England States, and will soon exceed per mile the average for the States named. The average for New York alone would give the country dependent upon the Erie Railroad a population of 1,700,000, or nearly three times its present number. But the business of a road increases much faster than the population on its line, as such increase implies a greater development of commercial and manufacturing interests, which supply to railroads a much larger traffic than *agriculture*.

Persons residing at either end of the Erie road have but a faint conception of the amount of traffic between different parts of its line. A New Yorker naturally supposes that all the business of the road comes to, and leaves that city. This is so far from being the fact, that the receipts *between* the different stations upon its line are much greater than the receipts from *way* business at both termini, and greater than the *through* receipts.—The following statement will show the proportion of receipts from through and way business, compared with those from traffic, *between* stations for 1852:—

Receipts from <i>through</i> passengers.....	\$409,735
" <i>between</i> way stations and termini.....	323,012
" <i>between</i> way stations only.....	639,525
Total passenger earnings.....	\$1,372,272
Receipts from <i>through</i> freight.....	544,606
" <i>between</i> way stations and termini.....	528,538
" <i>between</i> way stations only.....	739,116
Total Freight earnings.....	\$1,813,259
" Passenger ".....	1,372,272
Total earnings.....	3,185,531
Total earnings <i>between</i> stations.....	\$1,878,641; or more than 40 per cent. of the whole!
The proportion for 1853 is as follows:	
Through Passengers.....	\$474,291
Way do.....	418,476
Passengers <i>between</i> termini.....	738,157
Total.....	\$1,630,924
Through Freight.....	916,669
Way do.....	587,010
Freight <i>between</i> stations.....	956,064
Total.....	2,459,743
Passenger receipts.....	1,630,669
Total earnings.....	\$4,090,412

Rate of do. upon cost.	Cost.	Do. per mile.	Earnings.	Do. per mile.	Rate of do. upon cost.
8	\$2,764,396	\$58,045	\$349,207	\$7,392	13 1-2
8	2,836,200	59,557	353,367	8,948	14 2-3
0	2,914,078	61,187	426,403	8,963	16 3-4
0 1-2	2,900,000	60,892	487,455	10,237	16
1 1-2	3,485,232	67,694	554,712	10,771	17
6 1-4	4,113,609	77,983	722,170	13,696	16 1-2
5 1-4	4,650,392	70,345	716,284	10,801	15 1-2
4	4,908,332	71,915	703,361	10,616	14 2-3
3 4-5	4,882,648	71,540	757,947	11,450	15 1-2
3 1-2	4,862,784	71,249	743,922	11,229	15 1-3
3 1-2	4,845,966	71,032	758,819	11,454	15 1-2
5 1-3	4,850,784	71,073	887,219	13,392	18

ERIE RAILROAD.

Year.	Cost.	Do. per mile.	Earnings.	Do. per mile.	Rate of do. upon cost.
'52..	\$27,551,205	\$59,334	\$3,318,725	\$7,152	12
'53..	31,222,834	67,204	4,318,962	9,523	14
'54..	34,500,000	74,353	5,500,000	11,852	15

The Western Railroad was opened in 1841. We have shown the earnings of the Erie road for the past three years of its operation to have been not only vastly greater per mile, but in much greater ratio on its cost, than the Western, proving the route to be greatly superior in a business point of view. The receipts of the Western road for the past year only, or 12 years from its completion, reached the amount of earnings per mile of the Erie for the *second* year of its operation. The *first* year after the completion of the latter, its earnings per mile were nearly $2\frac{1}{2}$ times greater than those of the Western at a corresponding period. The *second*, more than *three* times, and the third fully three times. At a similar rate of increase, the business capacities of the route of the Erie Railroad will be three times greater than that of the Western; yet the Western has cost nearly as much per mile, is a more expensive road to run, yet it has been a regular *eight* per cent. stock for several years past. The Boston and Worcester Railroad was opened in 1835, and for the first three years its earnings per mile did not equal one-third the earnings of the Erie. It has been in operation seven years, before it reached the sum per mile earned by the Erie the first year after its opening. Both the Western and the Boston and Worcester have routes the most favorable possible for a large business, traverse a country much more densely inhabited than the line of the Erie, a country filled with manufacturing establishments, and crowded with a busy, active and industrious people. They are the two great railroad corporations of Massachusetts, bearing the largest earnings, ranking as her most expensive works per mile, and at the same time the most successful and productive. Yet they are much less productive on the cost than Erie and vastly less so per mile.

A comparison of earnings per mile is a much better test of the value of the route of the Erie Railroad than the ratio of earnings upon cost, as neither in excellence of construction or equipment, did the Western or Boston and Worcester compare with what Erie was at a corresponding period. It required ten years to place the former in as good condition as the Erie is at the present moment. The rate of earnings per mile show the relative business capacities of the several routes. With an equally economic expenditure, the *profits* of the several roads would be in proportion to *receipts*. It can be operated at a cheaper rate, from its greater length, and business, in consequence of which a train is never moved that does not run an *economical* distance, and with a full load. The route of the Erie Road is on the whole more favorable in its alignment and grades, while the article of fuel does not cost that company more than one-half of what it costs on the Massachusetts roads.

The earnings of the Erie Railroad Company compare equally favorably with those of the New York Central. The mileage of the latter is some 60 miles greater, and its total cost some \$4,000,000

greater, while both the road and the rolling stock of the former is in much better condition. Yet the earnings of the Erie for the present year will fully equal those of the Central. The earnings of both for the first six months of the present year have been as follows:

	Erie.	Central.
January.....	\$368,544	\$328,690
February.....	345,026	309,648
March.....	476,316	429,069
April.....	516,532	526,020
May.....	489,089	511,888
June.....	398,750	492,734
Total.....	\$2,594,257	\$2,598,049

The earnings of the Erie for *June*, would probably have equalled those of the Central, but for the engineer's strike, which materially interfered with the operations of the road, making the total receipts of Erie exceed those of the Central by \$100,000, and showing the former to have a better line for business, notwithstanding the Central traverses, from Albany to Buffalo, one continued village. But the Central line had been in operation ten years before the Erie was opened. A sufficient time had elapsed, therefore, for the thorough development of its business; while upon the line of Erie, this process has just commenced. At the time of the opening of the Central, the population upon its route was much greater than upon that of the Erie road, while its earnings for the first three years of its operation were only about one-third as great, as will be seen by the following statement;

Years.	per mile.	Earnings.
1844.....	\$3,517	\$1,142,204
1845.....	4,036	1,311,811
1846.....	4,463	1,454,630

If the route of the Erie road yield twice as much per mile as those of the Western and Boston & Worcester and Central, at corresponding periods of their operation, while the cost of the former, in equally good condition will not exceed that of the latter by more than 15 per cent., why should not the value of the two be in the ratio to their earnings, and when the Western and Boston and Worcester and Central, stocks are at *par*, why should not Erie be at 150?

The above question cannot be answered in the *negative*, except by saying that the Erie road has not been well managed. This is the explanation, and the true one. The road is admirably constructed and has an ample business, yet it has failed to be productive. We do not believe that the *net* have thus far exceeded one third the gross earnings. We have already alluded to the cause of this want of success. It arose primarily from the lack of a *direct personal* interest in the financial, or pecuniary success of the road; the grand object being to *complete* the road irrespective of its *cost*. This feeling imperceptibly rendered the directors less vigilant as to the economy of expenditure, and accountability of subordinates, who in time began to use their positions, to make the most out of the work of construction, instead of helping forward with zeal and energy, such a result. Another great mistake was the neglect of the company to employ a competent *Chief Engineer* during the progress of the work. No body of men could have rendered more efficient service in raising money for the work. But *there*, their functions should have ceased. The superintendence of the work of construction and manage-

ment should have been delegated to competent and experienced men. This was not done, and the directors were consequently forced to assume functions for which they were not qualified, and submit to impositions and abuses which they were not able to detect, or remedy. An inefficient incompetent, and in some respects, a corrupt system of management, was the result, and which has required the utmost efforts of the directors to reform. As severe as were our criticisms upon the *past* management of this company, we do believe there is a director who does not feel that they were justified by the facts; and that, without the reforms that have been effected, and which are still going on, the road could not have been made a profitable one.

It is not necessary here to point out the mistakes in the management of the Erie road, as we believe they are beginning to be understood, and that time is only wanting to render them fully so. The person to correct these abuses, and render the Erie road what it is capable of being—a *successful* work—is a *Superintendent* who unites *training*, with a mind full of expedients; an iron will, with affability of manner; the closest adherence to method with expansive and liberal views; and to crown the whole, a man of unsullied character, always intent upon a conscientious discharge of his duties. Such a man we believe fills this office at the present time. Already has he effected important reforms, and brought the road up to a standard of efficiency never known before.—Every *sinecure* has been abolished. Under the old *regime*, there was at the most considerable points on the line, an organization which was an almost exact miniature of that at head quarters.—There was a *chief* with a salary, say, of \$2,000 per annum. This salary implied a *dignity* which rendered nearly all kinds of labor incompatible. An assistant was therefore allowed, with a salary say of \$1,200. Such further dignity required a clerk with a salary of \$800, and a second assistant with a salary of \$600. The man at the foot of the ladder was expected to do the most of the work; but as all ideas, especially such as insist upon the vulgarity and inconvenience of labor, are very contagious, the man-of-all-work soon imitated his superiors, and shirked everything he could. All these lofty fabrics have been tumbled over, and the former *chieftain* suddenly finds himself living upon a moderate salary, with the duties of boss, assistant, clerk, and man-of-all-work, centered in *one* person—himself. The result is a very large saving of money, with a much more efficient service.

Another reform, (for we have only time to refer to but few,) has been the discharge of some 40 engineers, and an equal number of firemen. With so large an equipment as that upon the Erie road, there are, upon the average, 40 locomotives in *ordinary*, undergoing repairs. Under the former management the engineer and fireman as a matter of course were allowed a *furlough* with full pay, while their engine was in the repair shop; so that the company from this cause, had some 80 idlers constantly under pay, which had not only a direct tendency to incapacitate them for faithful service, but to spread a spirit of insubordination throughout the whole line. The system which prevailed was a direct premium for bad conduct, for an engineer had only to disable his engine to be freed

from duty! The rule now adopted, is "no work, no pay." The interest of the company and the engineer are at once rendered harmonious, to the vast benefit of the former. The latter takes good care of his machine as a means of keeping his place. Under the old system the engineer was arrogant, unaccommodating and exacting. For a driver of a *passenger* locomotive to take a *freight* engine was considered entirely beneath the dignity of an engineer. Now there is a laudable desire to be "generally useful," and every engineer on the road stands ready to fill any place assigned him. The company are already the gainers by the recent *emuel* on the road, which was an attempted resistance of the engineers to the reforms that were being carried out. The triumph of the company was a triumph of principle and good management over selfishness and insubordination. Other reforms equally useful are going on, great leaks are being stopped in the department of repairs, both of road and equipment. A more rigid system of accountability of agents has been put in force. Measures have been taken to put every employee of the company at "*hard work*." By the simple process of *cleaning*, and putting in order the *axle bearings* of the rolling stock, it has been made nearly twice as effective as formerly. By an arrangement now perfected, the superintendent can tell at any hour in the day, the precise location of every car and engine on the line of the road, and the duty it is performing. Formerly, the utmost confusion prevailed in this department, so much so, that in the greatest press of business, cars in perfect order have stood for months upon switches without being put to the least service, and without its being known where they were. All these reforms are being steadily carried out as fast as the ground gained can be held. Perfected, they will render the Erie Road what it has the capacity of being, the *great* road of the country both in the amount of its business and income.

We have stated our reasons for believing the Erie Railroad to be good property, *provided* it be well managed. Our data and reasoning from them are before the public. That the necessary reforms will be effected, we have not a doubt. The present superintendent *appears* to be the suitable person to accomplish them. If he be not, some other man must and will be found. He has in his favor a wide experience, the result of a long training. He is practically familiar with every grade of service. His moral character commands respect, and we believe he is serving the company with a single eye. We think him the proper man for his place. If not, the *right* man must be found.

The road is in admirable condition. The equipment is ample, and in good order. The superintendent informs us that, with a further expenditure of \$200,000 the present season, no further sums will be required for construction for the *ensuing* year. The road itself has been *kept up*, to a fault. It may be safely stated to be the best built and best conditioned road in the United States, and has a sufficient extent of double track and sidings to preclude all necessity of any material *increase* of the construction account, while the increase of earnings for the next five years will exceed 10 per cent. per annum. The construction account during the same period will not equal one-half that rate.

We do not propose at this time to speak parti-

cularly of the *profits* of the road. Other roads with a similar ratio of earnings to *cost*, are profitable. The route of the Erie is favorable to the economical working of it. If the earnings for the present year will equal \$5,500,000, we see no reason why one-half of this sum, or \$2,750,000 should not be *net* earnings; a sum equal to 8 per cent on a cost of \$34,500,000, or 7 per cent. on a cost of \$39,000,000. As before stated the road will earn a dividend on its cost if it be well managed. That it cannot be well managed is a proposition which we will not admit for an instant. The earnings for 1855 will probably exceed \$6,000,000, without any considerable increase of the construction account. Forty per cent. of this sum is equal to 7 per cent. on \$34,500,000.

If the Erie Road only lacked *good management* to render it successful, and if it be probable that it is receiving such management, are not the holders of its stock and securities making a wanton sacrifice by forcing them off at the present rates? Is there any *reason* in the panic which prevails? Is it founded on any well grounded conviction? Would it not be more rational for the stock and bond holders to look more carefully into the management and value of their property, instead of blindly giving themselves up as the sport of every wind that blows?

Superior Performance of a Locomotive.

We have received from Richard Norris & Son, a memorandum of the performance of one of their engines upon the 275 feet grades of the "Mountain track" of the Virginia Central Railroad. As showing what locomotives of a given description can accomplish upon such inclinations, the report is worth publishing.

The engine, "Charles Ellet, Jr.," drew, on the 9th of August, over the 275 feet grades of the mountain track, three loaded eight wheeled cars, averaging each 13½ tons in weight, being a whole load of above 40 tons. The grade of the track is 275 feet per mile from west to east on straight lines and 238 feet on curves of 300 feet radius.—The pull over such grades is two miles long.

The details of this engine, as furnished to us by her builders, are as follows. The weight on the driving wheels, is omitted.

DESCRIPTION OF THE LOCOMOTIVE "CHARLES ELLET, JR."

Cylinders 14 by 26 inches, with Norris's half-stroke valve. Furnace shell outside 50 inches long, 44 inches wide Throat 25 inches deep. Cylindrical part of boiler, 11 feet long; 43½ inches diameter at Throat, and 42 inches diameter at Smoke Box end, containing 134 2 inch diameter flues, 10 feet 11 inches long, Driving wheels 54 inches diameter coupled 7 feet apart. 4 Truck wheels 28 inches diameter. The extreme bearing points of wheels or wheel base 20 feet 6½ inches. The engine arranged by Mr. Ellet's directions with a water tank holding 100 Cubic feet of water, and 1 cord of wood—all complete with pump attachments. The hind drivers arranged with a strap and pulley brake of great power. The front wheels have Fire on 8 inches wide without flanges. The weight of the engine is as follows:

Engine empty	41,165	lbs.
Wood and water	4,080	"
2 men	320	"
100 cubic feet of water	10,000	"
Weight of tank and wood	1,243	"

56,808

Equal to 25¼ tons.

The gravity of 136,000 lbs. equal to the weight of engine and load, upon a grade of 275 feet per mile, would be 7,072 lbs. The other resistances of the engine and tender could not be estimated below 928 lbs. making a total resistance of 8,000 lbs. to be overcome by the tractive power of the engine. To produce such a power it would be necessary to have a pressure of upwards of 84 lbs. per square inch in the cylinder of the engine. Although we have often supposed the pressure in the cylinders of locomotives to reach, at times, 100 pounds per inch, we have seldom found that the resistances overcome by any large engines, in "crack trips" would exceed 75 lbs. pressure on the piston. The ability of the engine under notice to generate and apply a continuous pressure of 84 lbs. per inch of the piston for two miles, is proof of a state of superior efficiency.

This system of working the mountain track with tank engines, dispensing with the incumbrance and gravity of the tender, appears likely to prove very successful.

How Shall our Railroads Enter the City?

The growing dissatisfaction with the use of locomotives in the streets is throwing upon the Hudson River road the solution of the problem of landing their passengers "down town" in the shortest time and without the aid of the ordinary motive power of their road. The limit for approaching the city with engines is perhaps to be fixed as high as 125th street, seven miles from the Chambers street terminus of the road. From 125th street we presume the company can use horses, but only at increased cost and with greater delay than at present. One hour is the least estimate of time in which the distance can be run, enough to send an express train 50 miles on its way after leaving the city.

We do not suppose it to be impracticable to disguise a locomotive as was formerly attempted in the "Dummy" by which all smoke might be avoided, as well as all noise not inseparable from the ordinary motion of a passenger car. The writer of this would engage to build one which should emit neither steam, sparks nor smoke, and which by no sign should be different in its outward appearance or quietude of motion from an ordinary baggage car. By using steam power there would be less danger from an entire train so moved, than by eight or ten disconnected cars as now drawn.

But the very intrusion of railroad cars, not devoted to the internal traffic of the city, is very objectionable in our crowded thoroughfares. At any rate of speed, or standing still, these cars are trespassers. The only object in running through the city is to reach the *terminus*, and not particularly for any benefits to be dispensed along the route.

The road can avoid the streets either by going over or under them, but in either plan, only at an enormous expense. The elevated track would be unsightly, the tunnel disagreeable to passengers.

But by stopping their trains seven miles up town and transferring their passengers to a steamboat, the Hudson River road would save the cost and maintenance of any great structure, elevated or underground; the cost and danger of running cars by horse power in the streets, and with a pos-

itive gain of time and an increase of comfort to their passengers. Let us see.

The time of running by locomotives from 125th to 31st street is about 20 minutes; detention at 31st street, 5 minutes; horse power to Chambers street 30 minutes; time consumed in securing baggage say 15 minutes, making altogether one hour and ten minutes. So much for time, now for comfort. The passage of the Hudson River track on West street is anything but grateful to constitutions just refreshed by the perfume of new-mown hay along the banks of the river and beyond the town. A current episode, from the facile pen of Willis, will be understood by any one who attempts the passage in warm weather. Independent of the violation of olfactory sensibility, the heat, after entering the city, appears to increase with the approach to the terminus. In Chambers street the claim for baggage takes the tone of a personal controversy between the passenger and the hackmen.

Dispensing with all of this description, the lower three or four miles of the present track of the Hudson River road are well known to be the most disagreeable to travellers, as well as the most inconvenient to our citizens.

By a large and rapid steamboat the distance of seven miles could be accomplished in half an hour, while by running the baggage cars of the train directly upon the boat the whole detention at 125th street would not exceed five minutes. Upon the boat, the passengers would have a pure breeze, with ample time to clear themselves of dust and to secure and arrange their baggage, by which they could proceed to their destinations as soon as they should leave the boat. By comparing the two systems it is seen that half an hour can be saved, besides avoiding much positive physical discomfort.

It is submitted that the cheapest and best plan to be adopted by this road is to run boats from 125th to Canal streets, the latter being the proper point of distribution of travel entering the city.

Large Railroad Bridges.

Our railroads, among all our public works, furnish some of the boldest and largest examples of construction, such as in old times would have made an empire remarkable. The Britannia bridge in England has a boldness of conception, and an impress of physical force exerted in its construction which challenge the greatness of the Egyptian pyramids. The viaducts of England surpass, except in lineal extension, the aqueducts of Rome.

At home, engineering skill overcomes great natural obstacles by structures of corresponding character. The Erie road furnishes prominent illustrations in its Cascade Bridge and Starrucca Viaduct. Chasms otherwise impassable are crossed by a graceful arch at a single leap of 275 feet, and at an elevation which makes the brain grow giddy if the eye pause to look down.

The Lexington and Danville Road in Kentucky, will cross the Kentucky River by one of the boldest suspension bridges on the globe, 1,200 feet at a clear span.

So also the Bridge of the Illinois Central Company, over the Illinois River, at La Salle, is fully equal to any structure of the kind in America. It extends across from bluff to bluff; is more than half a mile long, and seventy feet high, supported

by seventeen massive stone piers and abutments. The estimated cost is \$750,000. The lower floor is for common vehicles, the upper for cars. Spanning, as it does, the entire valley of the Illinois, it can be seen to a great distance up and down the river, and the effect is exceedingly imposing.

Cleveland and St. Louis Air Line Railroad.

The projectors of this road are still exerting themselves to push it forward, although encountering new and rival interests every season. The particular merit of this road, as urged by its friends, has always been that it would secure a direct line of but 525 miles between Cleveland and St. Louis. This distance has been reduced, upon survey, to 510 miles. To gain so much however every place of any importance in Indiana was left off from the line. But it will be seen in another part of our present issue that the Crawfordsville and Fort Wayne road offers a route of but 514 miles, and includes all the important and flourishing villages and cities of Terre Haute, Crawfordville, Frankfort and Fort Wayne, besides important intermediate towns.

A late statement issued by the "Air Line" interest, sets forth its objects and the general features of the proposed work. We extract a portion descriptive of the line, that our readers may have the means for comparing and judging for themselves.

This enterprise embraces a line of railway extending from Cleveland to Paris, in the State of Illinois, a distance of 342½ miles, by the actual surveys and location of E. G. Goddard, Esq., the Chief Engineers of the companies, upon a route differing from a perfectly straight line, between the termini, by a distance of only three miles.

The line, commencing at Cleveland, passes across the States of Ohio and Indiana, and about ten miles within the State of Illinois, to a junction at Paris in that State, with the Terre Haute and Alton railroad, now under construction, and to be finished in June, 1855; thus affording an extension of the line to the city of St. Louis, the whole forming a line unexampled in this country for its directness and low grades, and to which, in its details, the attention of capitalists, and all others interested in its construction, is invited with great confidence.

The entire distance between Cleveland and St. Louis, by this line, is 510 miles, which may be easily reduced by improvements west of Paris, to 500 miles.

* * * * *

The whole distance from Cleveland, to a connection with the Terre Haute and Alton Road, at Paris in Illinois, is 342½ miles, which does not exceed an air line more than three miles; or one mile in every 114 miles. Of straight line there are 330½ miles, or twenty-seven twenty eighths of the whole distance, rendering collisions impossible.—Of that straight line, 188 miles, from Tiffin, in Ohio, to Lebanon, in Indiana, are continuous, immediately preceded, on one end, by a straight line of 26 miles, and succeeded on the other, by a straight line of 30 miles, making 244 miles of contiguous straight lines, 188 miles of which are continuous. The angles connecting these lines are so slight as to be of no practical moment, and the only reason why the entire 244 miles are not placed in a single straight line is the desirableness, arising solely from business relations, of reaching the two extreme points, Tiffin and Lebanon, which otherwise would be left northward from one to two miles.

West of the Wabash river, near the westerly end of the line, occur two maximum curves of 1-432.5 feet radius. Aside from these there are none of a less radius than 2,865 feet, while the majority have a radius of 5,730 feet, or over one mile.

The maximum grade is 39½ feet per mile, and occurs ascending west from the Wabash River, in all 5 70-100ths miles.

Of level line there are 75 86-100ths miles near by one quarter of the whole distance.

For about 244 continuous miles, and on the straight lines, no grades exceed 21.12 feet per mile leaving the heavier grades at the remote ends of the line.

Trains passing east ascend no grades exceeding 26.4 feet per mile, and are favored with 219 miles of level and descending grades.

St. Louis will unquestionably stand midway on one of the great lines destined to be speedily constructed to the Pacific Ocean. In this case the Cleveland and St. Louis Railroad must form an essential and important part of such a line. Its terminus at Cleveland is common to all the Eastern cities, while, with the Cleveland, Terre Haute and Alton and St. Louis Railroads, it makes a line absolutely straight from Buffalo to St. Louis. This line to San Francisco will be found shorter than any other.

Charleston and Savannah Railroad.

A charter was obtained last winter for a Railroad to connect, by the shortest route, the two cities of Charleston and Savannah. On the second of February last, the earliest moment at which examinations could be commenced, John McRae, Esq., was appointed to complete surveys of the routes practicable for the proposed road. The results of his labors are before us, in a report in which several routes are described and compared.

The air line distance between the depot of the North Eastern Railroad Company in Charleston, and the depot of the Central Railroad in Savannah is 84½ miles. A route called the "lower route," crossing the Edisto, Ashepoo, Combahee, Pocotaligo, and Coosawhatchie rivers below the head of schooner navigation, is reported to be 104¾ miles long, having a maximum grade of 21 feet per mile and is estimated to cost, equipped for business, \$2,039,251 79, or less than \$20,000 per mile.

An "upper route" crossing the same streams above the head of schooner navigation, and passing 12 miles south of Walterboro in Colleton district, and through Coosawhatchie in Beaufort; is represented as 117 miles long, having the same maximum grade as the lower route, but for a greater distance, and at more points, and is estimated to cost, equipped like the other, \$2,057,876 14.

Imperfect examinations have made it probable that a line can be secured between the assumed termini, of but 96½ miles length, but no certain means exist for comparing its cost with that of the other lines.

By the Upper route, a branch of 32 miles is proposed from Coosawhatchie to a point on the Georgia Central Railroad, 46 miles from Savannah.—This would provide a connection with Macon, an object which has been proposed to be gained by diverting the Charleston and Savannah road to Lawtonville and extending a branch thence to Millen on the Central road, 79 miles from Savannah.

By the lower route, a branch occupying the same general location may be had, making the distance from Charleston to the point of connection with the Central road six miles less than by the upper route, the distance being respectively 99 miles for the former and 105 for the latter route. It is probable that the adoption of the line designated by the engineer as the "lower route"

will secure both the most direct connection with Millen, and points westward thereof upon the line of the Georgia Central railroad.

The construction of the Charleston and Savannah road is of especial importance to the city of Charleston, and for nearly the same reasons to Savannah. The North Eastern road connecting with Wilmington, N. C., brings Charleston upon the great coast line of land travel, while the construction of the new link now under notice, and also of the roads leaving Savannah direct for Mobile, will make Charleston one of the most important, and in reality the governing point in the whole line. The construction of the Savannah road and its branch will give to Charleston three Western and South-western channels of distribution for the travel concentrated upon her by the north line.

Of the local strength of the proposed line, it is sufficient to say that besides connecting two cities of an aggregate population of very near 70,000 inhabitants, it intersects two of the most populous and wealthy districts of South Carolina, Colleton and Beaufort, numbering together over 80,000 inhabitants. With such immediate resources, a road built with the judgement and managed with the rigid economy so characteristic and so creditable of southern roads, could not fail to pay any reasonable rate of profit.

Sault Ste Marie Canal.

We are gratified to learn that the completion of this important work will not be delayed beyond the period stipulated in the contract for its construction, viz: May 27th 1855. Every city on the Lakes, from Buffalo to Chicago, looks to this work as being, when finished, the key to the vast mineral and ultimate agricultural treasures of the great country surrounding Lake Superior. The iron business of Cleveland, Detroit and Chicago, especially, will be at once stimulated to a degree which, sustained by the demand for iron in the west, will equal the productive activity of places now noted for its manufacture in the East. And in thus opening new fields for industry and new sources of wealth, every railroad approaching the Lakes will derive new support, and thereby strengthen the great commercial interests of the entire country. The wealth of the Lake Superior country, we do not doubt, surpasses, at this moment, that of Cuba. And a country developed is as great a national advantage as a country acquired.

A correspondent of the Detroit Advertiser writing from the Sault, under date of August 16th, says no doubt is entertained on the spot of the completion of the canal in next May. There are over 1,000 men at work under the personal supervision of J. W. Brooks, Esq., whose interest in the improvement and whose well known energy are guarantees of punctuality. John T. Clark Esq., of New York had just arrived to succeed Col. Glen as Chief Engineer. The present progress of the work has covered about three-fourths of the excavation. One lock is nearly completed, the other fairly begun. The guard lock at the head of the Portage is about to be drained. The coffer dam is finished for that purpose, and the steam pump in operation. The coffer dam at the foot of the Portage, or commencement of the canal, is just begun. The correspondent of the Advertiser says of the work

"Less than a mile—5,267 feet exact measurement—it is probably the most important work now being prosecuted in the world. Its bed, for the most part, is either solid rock or a succession of enormous boulders, which seem to have been thrown there by resistless torrents during past ages, or to have been heaped together in some tremendous encounter of the gods.

The width of the canal is 100 feet at the top, sloping to 75 feet at the bottom. There is a basin 450 feet long by 150 feet wide. There are two locks, each 300 long, the first of which lifts 10 feet and the second 11 feet. At the pier, above the rapids, crafts passing through the canal will find 12 feet of water. The fall of the river in the length of the canal is $17\frac{1}{4}$ feet."

Copper in South Western Virginia.

In the region of Floyd county, Virginia, contiguous to the line of the Virginia and Tennessee railroad, have been lately discovered extended deposits of copper ore. A correspondent of the Lynchburg Republican says:

The whole distance through which the Copper ore has been traced and shown to exist, with more or less certainty and distinctness, is some forty miles. Its general course corresponds with that of the Blue Ridge. It seems to follow the sinuosities of the mountains, being upon an average of about fourteen miles distant. On this line, copper ore in considerable quantities and of good quality has been discovered. At Carters it is very abundant and of fine quality; and the owners of that property are now putting up buildings and removing mineral. Examinations have also been made and various explorations are in progress at other points on this line—more or less promising in their character.

In no instance so far as I have learned, has it been necessary to extend the excavations to the depth of forty feet, and nearly all the mineral deposits have been found at much less than that depth. From the formation of the metal, tunneling is practicable at nearly every point, thus affording the cheapest and most efficient mode of procuring the ore.

Indications of the presence of other metals are not wanting. Mingled with copper in some instances, and separate from it in others, are evidences of the presence of tin, bismuth, zinc, lead and even silver and gold.

Should these mines become productive to any considerable extent they will develop new manufacturing interests at Lynchburg, besides increasing the business of the railroads centering there.

Speed on Railways.

In 1816, thirty-eight years ago, Mr. Meigs often predicted in the newspapers, and two years after in the Legislature of New York, that the time would come when Railways would be traveled at an average speed of 15 miles an hour! Few believed him. He has recently published a book, in which he states that the Emperor Nicholas, of Russia has taken the first great step in the construction of Railways, which looks to the attainment of the highest practical speed in travelling on them. Instead of opening narrow cuts, and going round every obstacle, the road from St. Petersburg to Moscow 500 miles, is made on a straight line, and opened it 200 feet wide, so that the Engineers can see every thing on the way.—The gauge of the track is broad, and the locomotive is on wheels of large diameter, and the signals and time are perfectly fixed, and the roads crossing the track are shut off by gates, as the trains approach. In this way a speed of 100 miles an hour is attained, and Mr. Meigs thinks this may be increased to 300 miles. On some straight runs, 60 miles an hour has been made in the United States, and 100 in England.

A line of road is now in progress of construction from Savannah, Georgia, to the Gulf of Mexico, on a perfectly straight line, and is to be opened 160

feet wide. If open way is secured, curves avoided, and proper machinery provided, we see no reason why 100 miles an hour cannot be as safely run as 30 is on our common roads.—*Cincinnati Gazette.*

All very well. So, too, we see no reason why a man may not run as safely at thirty miles an hour as he now can at seven. The only trouble is in getting the power of doing so. The popular opinion of railroads includes no idea of the rapid increase of resistance with increased speed. We have known engineers to propose engines of a particular construction to run 100 miles an hour. They would however, look to a large driving wheel as the only means of doing so, never providing corresponding boiler power to turn it. Upon any known principles which govern the application of steam power the cost of carrying passengers 300 miles an hour would preclude the possibility of anybody of ordinary means indulging in such a ride.

Cincinnati and Marietta Railroad.

We will give next week the names of the new Board of Directors elected at the recent meeting of this Company at Chillicothe. Only two members of the old Board retire to give room for the Directors elected from the Parkersburg Company, as was provided to be done in the agreement of consolidation.

Over two million dollars have been expended in construction since the date of the previous annual report. Thirty-eight miles of the road, between Chillicothe and Blanchester are *ironed*, and an early completion to the Cincinnati connection promised. Between Charleston, in Vinton county and Marietta, the grading, masonry and bridging are two-thirds done. N. L. Wilson, Esq., the Vice President of the Company, now in London, has succeeded well in the face of a stringent money market, in disposing of their securities. The work done although inside of the President's programme for last year, is more than has been accomplished in any previous year. The most expensive work of the company is finished, including thereby the heavy bridging and filling in the Scioto Valley.

The completion of the Cincinnati connection, and the extension of the track eastward to the coal fields being anticipated at nearly the same time, it is expected that the road will be able to supply coal in season and in such quantities as to prevent any extraordinary rise in the price of coal in that city after the river has closed.

The finished portion of the road is described as among the best constructed in the country. The track for nearly the whole distance being perfectly straight, and there being no curves of less radius than 2,800 feet, and no grade exceeding 50 feet to the mile. The track is laid of compound rail. The report of President Cutler states that the work is in such a state of forwardness along the lines as to make it perfectly practicable to finish the road to Marietta during the ensuing year, and through to Wheeling in the same time should the state of the money market justify the outlay.

Pennsylvania Railroad Freight Depot.

The new depot of the Pennsylvania Railroad in Pittsburg will be the largest superstructure in that city. It is to be seven hundred feet long and two stories high. When the Pennsylvania road shall have been connected with the Ohio and Pennsylv-

vania road, across the Alleghany river the freight business at Pittsburg will be immense.

American Railroad Journal.

Saturday, September 2, 1854.

Metropolitan Railroad Company.

A Company was organized in Washington city, above one year ago, to construct a line of railroad through Rockville and Frederick to Hagarstown. By the recent report of the Engineer, Wm. H. Grant, Esq. we learn the shortest line to be 77½ miles from Georgetown D. C. to Hagarstown, Md. and intersecting the Baltimore and Ohio Railroad 41¾ miles from Georgetown. The maximum grade from Georgetown to Frederick is 50 feet per mile; from Frederick to Hagarstown, 66 feet. Curves chiefly of one mile radius. Two tunnels will be required of an aggregate length of 3,500 feet. The estimated cost exclusive of buildings and equipments would be \$3,465,000, equal to \$44,883 per mile. An estimate, embracing all the outlays necessary to commence business, is made at \$3,715,000. \$1,000,000 may be assumed as the ultimate cost of the work. The object of this road is to place Washington and Georgetown directly upon the interior railroad line leading through the Cumberland and Susquehanna Valleys, and connecting with lines north and west, so as to secure a direct route to Washington avoiding Baltimore. The Metropolitan Company also claim a large business from the west which it is expected will leave the Baltimore and Ohio road for Washington and Georgetown at the intersection near Frederick. It is probable however that the Alexandria, Loudoun and Hampshire road if built would intercept this travel at Piedmont on the Baltimore and Ohio road, 207 miles from Baltimore and 175 from Alexandria.

\$500,000 of stock subscriptions are already reported as received, of which \$50,000, sufficient for the prosecution of the surveys, have been paid in.

Among the Directors are John W. Maury, W. W. Corcoran, Jos. Bryan and George Parker, of Washington.

Williamsport and Elmira Railroad.

This road has at length been completed throughout, and trains have been regularly running upon it for some time. The business upon it, is reported to be as large as was estimated. The completion of the Catawissa connection is looked for by the 10th of September, when a communication will be opened, nearly direct, from Philadelphia to Buffalo and all points on the Lake boundary of New York.

The Williamsport and Elmira road is destined to become an important link in the interior line from Lakes Erie and Ontario to Philadelphia, Baltimore and Washington, and it will also serve an important purpose in supplying the Lake cities with bituminous coal. The road under notice is part of the first important north and south through line constructed in the State of Pennsylvania, one which when completed will change the direction as well as promote the activity of the trade of the central portion of that State. From the coincidence of the line of this road with the Susquehanna Valley, it may be said to occupy a route of great value, and one which cannot be contested by any other work having similar objects.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,748	113,520	none	86
Androscoggin and Kennebec.. "	55	824,363	1,043,540	2,036,140	177,003	80,053	none	82
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	42
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	95
York and Cumberland,..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	27
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	105
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	.....	.....	328,782	163,075	5	42
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	88
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	21
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	41
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to	the Vt. C.	cent.	82
Western Vermont..... "	51	392,000	760,000	.....	Recently	opened.	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,150	2,044,536	434,699	114,098	6	81
Boston and Maine..... "	83	4,076,974	150,000	4,111,315	803,024	418,358	8	100
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6½	79
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	95½
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern..... "	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	62
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	92
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	87½
New Bedford and Taunton... "	20	500,000	none.	520,964	188,442	46,839	7	117
Boston and New York Central "	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,897	122,866	none	96½
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	11½
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	60
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	93½
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	65
Providence and Worcester... "	40	1,467,500	300,000	1,791,999	291,417	120,892	6	70
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	116
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently	opened.	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	50
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently	opened.	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	none	.....
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently	opened.	none	130
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,008,865	33,070,863	4,318,962	1,800,181	7	46½
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,733	none	44
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	85
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	28
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	89
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	6,133,834	480,137	195,847	.....	12
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	.....
Pittsburg and Montreal.... "	23	174,042	131,000	349,775	Recently	opened.	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently	opened.	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	80
Troy and Rutland..... "	32	237,890	100,000	329,577	Recently	opened.	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently	opened.	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,400	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,255,720	603,942	316,259	10	131
New Jersey Central..... "	63	986,104	1,500,000	2,379,880	260,899	124,740	3	.....
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently	opened.	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	68
Philad., Wilmington and Balt. "	96	5,000,000	2,399,166	8,067,285	868,038	541,769	5	68½

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn. 250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	85
Philadelphia and Trenton....	" 30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	" 47	.....	.....	.....	.....	.....	.....	102½
Baltimore and Ohio.....	Md. 381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	52
Washington branch.....	" 38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..	" 57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....	Va. 65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	" 27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	" 64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	" 73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg....	" 22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	" 76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	" 62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	" 107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	" 73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac....	" 32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh.....	N. C. 161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina.	S. C. 110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia....	" 140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina.....	" 242	3,858,840	3,000,000	7,002,896	1,000,717	609,711	7	125
Wilmington and Manchester.	" 100	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central.....	Ga. 191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia.....	" 211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western.....	" 101	1,013,083	163,000	1,277,334	278,739	149,960	9	101
Muscogee.....	" 71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western.....	" 50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River	Ala. 55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston....	" 93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	" 33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point.	" 88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern.....	Miss. 60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia.	Tenn. 80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga...	" 125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington....	Ky. 73	1,430,150	900,000	In prog.	.....	.....	.....	.....
Frankfort and Lexington....	" 29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort....	" 65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington....	" 100	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh....	Ohio. 100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	59
Cleveland and Toledo.....	" 147	2,000,000	1,600,000	.....	.....	.....	.....	71½
Cleveland, and Erie.....	" 95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus....	" 135	3,027,000	408,200	3,655,000	777,793	483,454	12	100
Columbus, Piqua and Indiana.	" 46	.....	.....	2,000,000	.....	.....	.....	65
Columbus and Lake Erie.....	" 61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton	" 60	2,100,000	500,000	2,659,653	321,793	200,967	.....	.....
Cincinnati and Marietta....	" 62	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western.....	" 40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan.....	" 20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	" 36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami.....	" 31	.....	.....	.....	.....	.....	.....	.....
Hillsboro.....	" 37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami.....	" 84	2,668,402	482,000	3,169,733	667,559	352,133	10	.....
Mansfield and Sandusky....	" 100	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie....	" 167	2,887,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central.....	" 57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi.....	" 187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Pennsylvania.....	" 100	.....	.....	In prog.	.....	.....	.....	.....
Ohio and Indiana.....	" 44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Scioto and Hocking Valley...	" 54	1,291,700	26,000	1,310,062	314,434	168,612	10	.....
Columbus and Xenia.....	" 31	.....	.....	In prog.	237,506	.....	.....	.....
Evansville and Illinois.....	Ind. 31	.....	.....	.....	.....	.....	.....	.....
Indiana Central.....	" 131	.....	.....	.....	.....	.....	.....	.....
Indiana Northern.....	" 83	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine	" 90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	90
Indianapolis and Cincinnati..	" 62	.....	.....	.....	.....	.....	.....	.....
Lafayette and Indianapolis....	" 159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	.....
Madison, Indianapolis & Peru	" 72	632,387	663,100	1,353,019	105,944	71,446	4	.....
Terre Haute and Indianapolis	" 135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Rock Island and Chicago....	Ill. 135	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.....	" 92	.....	500,000	In prog.	473,548	286,152	.....	123
Illinois Central.....	" 315	.....	3,741,564	7,276,616	1,200,922	586,929	17	94
Galena and Chicago.....	" 282	.....	3,977,563	8,618,505	1,145,598	582,816	8	86
Michigan Southern and Ind. N. Mich.	" 88	.....	non	In progress	Recently opened.	.....	.....	.....
Michigan Central.....	Mo. 88	.....	.....	.....	.....	.....	.....	.....
Pacific.....	" 88	.....	.....	.....	.....	.....	.....	.....

Unfounded Report.

We should have made no allusion to the report, followed by its prompt contradiction, of the failure of A. De Graffe, the well known railroad contractor of Ohio, except that it forms an occasion of an important illustration of the substantial value of railroad enterprises, even under the present depressing influences. It must be admitted that at the present time, when railroad contractors in the West are generally compelled to make regular cash payments upon stock contracts, or possibly upon bonds which require to be forced upon the market, the position of a contractor, responsible for large amounts, is one of hazard, demanding all the financial tact and all the popular confidence at his command. When so many new roads are laid over under the pressure of the times, it is gratifying to learn that a contractor largely involved in the soundness of several western roads, now under construction, is able to sustain himself, and prosecute his contracts to the letter.

Tunnelling Chicago River.

A committee of the Chicago council have accepted the proposition of a New York Company to tunnel the river so as to open a connection independent of draw bridges between the two divisions of the town. The business of Chicago is already crowding the streets and the river to an extent seldom realized out of the large Eastern cities, and this new improvement will doubtless be occupied to its capacity as soon as completed.—We believe an additional tunnel will be ultimately required for the railroads entering the north and south divisions of this city, and have upon a previous occasion urged the importance of such a connection to the railroad interests of Chicago.

Cincinnati and Marietta Railroad.

At the recent annual meeting of this company, held at Chillicothe, the following gentlemen were elected Directors for the ensuing year: Wm. P. Cutler, John Mills, Douglass Putnam, N. C. Wilson, W. S. Nye, A. B. Walker, John Madeira, F. Campbell, M. Scott Cook, A. Hegler, H. Smart, Alphonse Taft, and S. B. Keys.

The annual report of the company, which we shall be able in a short time to present to our readers, exhibit an encouraging state of the progress of the road. The road is expected to be open to Chillicothe early in September.

Pacific Railroad of Missouri.

The people of Jackson County, Mo., have subscribed \$75,000 to the Pacific Railroad, payable by taxation. This county having a population of less than 14,000 had previously subscribed \$100,000.

Ohio and Mississippi Railroad.

On Monday, August 21, the trains of this Company commenced running from Illinoistown, opposite St. Louis, to Carlyle, fifty miles east.

Population of Portland.

A recent census of this city shows its population to be 25,418, an increase of 4,599 since 1850, or 22 per cent. Very few Eastern cities are growing at so rapid a rate.

Virginia Central Railroad.

The City Councils of Richmond have recently voted a subscription of \$100,000 to the stock of the Virginia Central Railroad.

Alexandria, Loudoun and Hampshire R. R.

The project of a railroad from Alexandria to the coal region near Cumberland has been for a long time entertained. The company assuming the construction of that work, impressed with its magnitude and importance, have thus far devoted their energies mostly to the ascertainment of a practicable and economical route; and have in fact done little towards soliciting subscriptions in aid of their enterprise until they should have fully determined upon the route to be followed. As the result of careful and widely extended surveys, although made preliminary to the final location of the road, the company now announce their line as settled upon its general ultimate location.

The road is to commence at Alexandria and terminate at Piedmont on the Baltimore and Ohio road, the terminus of the road having been fixed five miles beyond Paddytown, the point contemplated heretofore. The whole distance on the shortest surveyed line is $169\frac{1}{2}$ miles. Two practicable gaps for passing the Blue Ridge chain of mountains have all along been considered. These are locally known as Keys and Snicker's Gaps, and are respectively six and eighteen miles south of Harper's Ferry, and are considered as the only available passes appropriate to the direction and objects of this road. The shortest line occupies the southern or Snicker's Gap. Hence it crosses the Shenandoah River, passes near Winchester, thence westerly to near Romney, and thence runs to the Baltimore and Ohio road at Paddytown and follows the track of that road to Piedmont. By the northern line to Keys Gap, which breaks the Blue Ridge six miles south of Harper's Ferry, the whole length is 175 miles. The maximum grade going east with loaded coal trains will be 53 feet per mile, and going west with empty coal trains 79 feet per mile. Each line would require fourteen tunnels, their aggregate length upon the south line being three and seven-tenths miles. The estimated cost of the southern or shortest line, with a single line of rails, but graded, tunnelled and bridged for a double track, is \$8,360,300, which sum might be reduced, by grading at first only for a single track, to \$7,575,400. To this sum would be added \$2,000,000 for an equipment of the annual capacity of 1,000,000 tons of coal. For an annual movement of 600,000 tons of coal and a mixed passenger and freight business, an equipment of \$1,572,000 value is estimated, including 80 locomotives and over 1,500 cars.

It is estimated that the road can be built in the best manner, but having no work for double track except at tunnels and bridges; equipped sufficient for opening business, including 40 locomotives and 750 cars, for a little over \$8,000,000.

Assuming that the road could carry coal to its full capacity, at $1\frac{1}{4}$ cents per ton per mile, it is shown that after allowing a most liberal cost of operation the road would pay over 2 per cent. upon a cost of twelve and a-half millions.

It is one great step, which we look upon as now accomplished, to prove the existence of a practicable route for this road. It is this result to which the company have devoted their energies, and pending which they have postponed any general organization to secure the funds necessary for the construction of their road.

So soon as their operations become active it is believed the State will extend aid in the manner

it has already done to similar enterprises. If sectional jealousies do not prevail in the State councils this aid may be looked upon as certain. And then it remains for the people of Alexandria, Winchester and other points to make up the balance.

If the road is built and operated as a first class work, it will increase the business of the whole lines through Wheeling, Parkersburg, Piedmont, Baltimore and Alexandria. It will maintain competition and increase the accommodation of railroad facilities. So long as it confines itself to the coal movement it will have ample employment, and need not interfere with the Baltimore and Ohio road, but will be on the contrary an advantage to it. The demand for coal, and the growing importance which will attach to the use of Cumberland coal for ocean navigation will tax the capacities of all the works now engaged in or contemplating its introduction to market.

Wheat.

The operation of many important western railroads, traversing vast wheat growing districts and bringing their products to the eastern markets, has equalized to a great extent, the price of wheat all over the country. At distant points like St. Louis, the price of wheat has risen to such an extent as to compel some millers to close their mills. Prime and choice red wheat is now quoted there at \$1.30 to \$1.35 per bushel, which are nearly the highest prices ever known to be paid in any period of the history of St. Louis. In Maryland the course of the wheat trade has been in some cases entirely changed, the wheat necessary for supplying the mills at Frederick and Hagerstown being carried thence from Baltimore. Contrary to what is often supposed, our country has no great surplus of wheat production, and any increase of demand consequent upon the circumstances of foreign countries, carries up prices immediately, and often disproportionately, at home. In good seasons the average wheat crop of the country is about 150,000,000 bushels, and the average export 15,000,000 bushels, or one-tenth only of the entire production. This year the production will be below an average, while the exportation, under the inducement of high prices, will be increased. Under such circumstances, the price of wheat must rule still higher at home.

In our own State, the amount received at tide water by the canals is but about one-half of the measurement for the same period of last year.

Cincinnati Steam Fire Engine.

The construction of this new apparatus for extinguishing fires is now attracting considerable interest in eastern cities. During the period of more than one year, in which it has been in successful use in Cincinnati, it has been regarded, outside of that city, as an *experiment*. Now it is to be looked upon as a fixed fact.

In construction, the steam fire engine is arranged upon a three-wheeled carriage, having a light, wrought iron, lattice-truss frame. Two of the wheels are upon one axle at the hind end of the machine, the single wheel being forward, and used for steering.

The boiler is upright and at the hind end of the engine. This has every arrangement for raising steam in the shortest time and with the least consumption of fuel. For these ends, the water is contained in a "worm tube" coiled within the fur-

nace, so as to be suspended in the place of greatest heat. An air pump is used to exhaust the air from the boiler on starting, so as to get under steam in the least time.

The cylinders of the engine are placed toward the forward end of the carriage, being laid horizontally, and resembling the ordinary arrangement of an outside connected locomotive. They are of nine inches diameter with two feet stroke. The piston rod of each cylinder goes through each end, one end working the back axle by the ordinary connecting rod; the other being formed directly into the piston of a horizontal six-inch pump. The two cylinders are connected to the back-axle with right-angled cranks, and the wheels may be connected or disconnected at pleasure by sleeve couplings.

The pumps have large air vessels, connected together by a semi-circular four-inch pipe, having eight nozzles for attaching hose; six of which throw three-quarter inch streams, and two, streams of $1\frac{1}{4}$ inches. Or, a single two-inch stream may be thrown to almost any required distance.

In addition to the working pumps, there is an independent pump, generally known by the ridiculous name of "the doctor," for supplying the boiler from a tank on the forward end of the engine. This may be so managed as to provide continually for the supply of water except after the boiler is blown off. Sufficient water can always be left in the boiler at the end of one trip to raise steam for the next.

The whole weight of the engine is about four tons, and it is usually drawn to fires by four horses. In working, the pumps make about ten double-strokes per minute. The pumps draw water by suction from cisterns which have been placed in various parts of the city.

It is possible, that we may yet have something of this kind in New York. The report of the Chief Engineer of the Fire Department of Cincinnati is interesting in its illustrations of the working of the "paid department" and of the steam fire engines.

Columbia and Hamburg Railroad of South Carolina.

The report of James G. Gibbes, Esq., the engineer entrusted with the charge of the surveys of a road running from Columbia to connect with the roads now centering at Augusta, Ga., was alluded to last week.

The distance in an air line from Columbia to Hamburg, opposite Augusta, is $63\frac{1}{2}$ miles. Two routes have been surveyed, one called the "direct line" of $68\frac{1}{2}$ miles, and the other the "ridge line" of $74\frac{1}{2}$ miles. The direct line crosses the Congaree and Edisto rivers, and numerous smaller streams. The ridge line is upon a more difficult route, but intersects some of the very best cotton lands of Edgefield district. Both routes have tolerably severe physical features, but in no respect sufficient to injure seriously the utility or economy of the improvement. The maximum grades will be 53 feet per mile, the minimum curves of 1910 feet radius. A large amount of earth cuts will be required on both routes. The estimated cost of the direct route, equipped for the commencement of business, is \$1,215,625, equal to \$17,746 31 per mile. For the ridge line the estimated cost, equipped like the other, is \$1,150,925, equal to \$15,448 65 per mile. These estimates include no al-

lowance for right of way which it is believed will be given by the proprietors on both lines.

The engineer does not urge either line in preference to the other, but considers that subscriptions should be taken on both lines, contingent upon the adoption of the respective routes.

The Columbia and Hamburg road is one of an important series of enterprises, all to be speedily completed, which will give to Columbia a new rank among the towns of the Southern States, and in the way-side cities of the great line of land travel. The connection of the Richmond and Danville road at Danville with the North Carolina road at Greensboro will bring Columbia directly within an important through line of travel. A short line to Camden, with the projected lines running through Cheraw to Raleigh, N. C., will bring Columbia also within another line, equal or superior in importance to the first.

When also the Blue Ridge line of railroad shall have been completed to Cincinnati, its ultimate terminus, the city of Columbia will find itself at the intersection of two of the principal lines of travel in the Southern States, a position strengthened by being the focal point of the products of the Broad, Saluda, and to an extent of the Cahawba valleys, and from whence she can receive and dispense trade and travel in every direction. How changed this picture, when Columbia shall be the principal focal point of the State system of railroads, from the former one where she was represented as a little interior town, for whose convenience a branch was laid from the South Carolina road at "Branchville." The importance of the town will yet require a more direct connection with Charleston, by the valley of Santee, leaving it near Eutaw springs direct for that city. Such an extension of the Blue Ridge road will be ultimately essential, a condition highly favorable both to the prosperity of Charleston and Columbia.

Henderson and Nashville Railroad.

We are in possession of the recent joint report of the Presidents of the two roads lying in Tennessee and Kentucky and united under the above name, and which when completed will form the only northern and north western connection of Nashville with the Ohio River; besides occupying a most important relation to the great north and south central line of railroads, extending to Chicago upon the North and Mobile, New Orleans, Charleston and Savannah on the South. Evansville in Indiana, opposite Henderson, is becoming an important focal point for railroads running to Indianapolis and Cleveland, Terre Haute and Chicago, and for lines extending from these to Toledo, Detroit and other points. On the South, important lines of road center at Nashville, from Charleston and Savannah, from Mobile, New Orleans and Memphis, and on the North-east of Nashville lines are to be built to Louisville and Cincinnati. The concentration of so extensive systems of railroads respectively upon two points would create a certainty of a large through travel and business between them, when separated only by the distance of 144 miles. Such is the position of the Henderson and Nashville road.

Locally, this road traverses some of the most productive and best cultivated lands in Tennessee and Kentucky. The first eighteen miles out of

Nashville are in the valley of the Cumberland River, beyond which the road traverses a wide district of the most superior agricultural lands. Ten thousand hogsheads of tobacco, seventy-seven thousand and five hundred barrels of flour, and large quantities of provisions, are the annual product of that portion of the Red River Valley commanded by the route of the Henderson and Nashville road. In going onward to the Ohio, the road passes for 16 miles through the coal fields of Kentucky, and runs thence to Henderson through a well timbered and generally productive country.

Making its local and terminal business resources a test for its prospective income, this road ought to prove more profitable than any usual investment of capital in Tennessee and Kentucky, besides adding immensely to the wealth of the district traversed, and incidentally to that of the two States. In its means of profitable employment this road has, economically managed, a certain guarantee of the most successful results which have attended the introduction of railroads into Ohio and Indiana.

At a period like the present, we feel like making the importance of this work and the embarrassments which, in common with all other new roads, it encounters in securing means, a commentary on the times. The results to be had by opening this road are as desirable now for its patron States, as were the fruits of any other lines of improvement to any other communities. Nor does the difficulty in obtaining money indicate any diminution in the value of these improvements. While we would not incite the conductors of any enterprises to make sacrifices to meet the pressure of the times, we contend that the absolute value of railroads has not changed either in the last one year nor five; that the benefits from extending these works into unoccupied districts are as great now as ever, and that those roads which avoid heavy debts based upon anything like bonuses for construction, and which are not intruded into occupied ground, will pay as well as has ever been predicted by their reasonable friends.

The Henderson and Nashville road announce their whole line as under contract to Van Bergen, Ward & Co.; the terms, payable one-third in cash and county bonds, one-third stock and one-third in the bonds of the companies. The present is an unfortunate time for making such a contract, as in stringent times credits can only be used when secured by a good premium. The cost of the whole road is estimated as \$4,183,966.

The financial resources of the companies are represented as follows:

IN KENTUCKY.

Individual subscription	\$325,000
Contractors' stock already earned	30,000
Right of way secured throughout including depots, mostly additional stock	15,000
Todd county bonds relied upon	100,000
Christian	150,000
	<hr/>
	\$620,000

IN TENNESSEE.

State line to Nashville, individual stock	\$300,000
Davidson county bonds	200,000
State aid, \$10,000 per mile	480,000
	<hr/>
	\$980,000

Total means in both States.....\$1,600,000

Additional subscriptions are looked for from Nashville.

To meet the contract, the companies must issue to the contractors \$1,394,655 of bonds, which will be secured by \$1,600,000 expended on the line, besides the paying capacity of the work when finished.

\$100,000 are stated to be already expended on the Kentucky portion of the line.

The report of the engineer, Charles Seymour, Esq., upon the location and topographical features of the line, is explicit and interesting. The air line distance from Henderson to Nashville is given as 127½ miles, and an air line from Henderson to Hopkinsville and from thence to Nashville as 133½ miles. The whole located line is 143½ miles between the termini, showing an increased length of ten miles to be due to curvature and deflection, and of 6 miles to be due to the divergence for passing through Hopkinsville. The length of the road in Kentucky is 95½ miles, in Tennessee 48 miles. Through Kentucky the ground is represented as highly favorable for the construction of a railroad. The maximum grades are 60 feet per mile, and one tunnel only in the whole distance will be required. This tunnel is nine miles south of Madisonville, and is to be 1,000 feet long. The bridging on the Kentucky portion is generally light being confined mostly to small streams. In Tennessee the work is of a heavier description, including about three-fourths of a mile of tunneling and two or three heavy bridges. The maximum grade also is 70 feet per mile.

Greenville and Columbia Railroad.

We have received the last annual report of this important road, which by its extensions and ramifications seems destined to embrace ultimately nearly the whole railroad system of the North Western portion of South Carolina.

This road, with its branches to Abbeville and Anderson is now 164 miles long, having been finished to Greenville on the 9th of December last.— Besides completing the work of construction, nearly 47 miles of track, from Columbia to Newberry, have been reconstructed by the company during the past year. The earnings of the road for the year ending May 31st, 1854, are \$214,865 13, but the report does not show the amount earned from passengers and freight respectively. The expenses, including those of an "extraordinary nature," such as for repairing the effects of freshets in 1852, and for relaying track between Columbia and Newberry, are \$206,774 41. The estimated income for the ensuing year is \$300,000.

The whole road in its present condition is stated to be worth \$3,000,000, but which has been attained by an expenditure for construction and outfit of \$1,999,080 41. The whole amount of capital stock and "assessments" paid in is \$1,293,464 25 while \$12,000 remain still uncollected.— Upon the completion of further improvements necessary for the safety and efficiency of the road, the deficiency of capital stock as compared with the whole cost of the road will be about \$800,000. \$600,000 of bonds had been issued previous to the completion of the road and the issue of \$200,000 more upon like terms was ordered within the current year. Owing to the difficulty of disposing of every kind of securities without heavy loss, \$269,500 of these bonds are retained, and the Directors have pledged their own credits on account of the

company, to the amount of \$136,000. The floating debt of the company on 31st of May was about \$438,000 for which assets were held, including all claims on the part of the company, of \$140,777, leaving a balance of \$297,528. Against this sum the company hold the \$269,500 of their unsold bonds, so that under the most favorable circumstances the floating debt might be reduced to \$28,028.

With a gross revenue of \$300,000 for the current year and allowing of this sum \$150,000 as net earnings, the road will pay \$56,000 as the interest on the entire issue of bonds, and 7 per cent. in addition upon the entire stock of the company.

During the past year an amended charter has been granted by the General Assembly of the State containing authority for several extensions of the Greenville and Columbia road. One provision authorizes the construction of a branch from a point on their road called "Ninety Six" to or near on Aiken the South Carolina road, so as to virtually unite the Blue Ridge and South Carolina roads on the most direct route, avoiding Columbia. Another privilege granted is the right to construct a road from Abbeville to the Savannah river, in the direction of Washington, Ga., while another provision authorizes the extension of the main road to the North Carolina State line, in the direction of Ashville. It is proposed also to unite the road from Newberry to Laurensville with the Greenville and Columbia road, so as to consolidate the interests looking for an ultimate extension to Ashville and thence north and north-west. The construction of all the authorized extensions of this road, and its absorption of the Laurens road, will make its whole length nearly 300 miles, making it the heaviest railroad interest in the State of South Carolina.

New York, Newburg and Syracuse Railroad.

We have received from the author, John J. Peck, Esq., a pamphlet devoted to the consideration of the value and importance of the above line of road to the city and State of New York. Some what *ex-parte* in his treatment of the subject, yet he presents some very interesting and useful facts. Although willing to believe the proposed road a useful one, we consider that the *cheapest* route by which the trade of Syracuse can reach New York is already in operation. As a route for travel, and as tending to stimulate the growth of three or four interior counties which have grown little, if any, for fifteen years, we believe the proposed direct road to Syracuse to be one of great ultimate value.

We give the more general considerations of the pamphlet before us.

CONSIDERATIONS

Respecting the Commerce of New York City, and the Construction of the New York, Newburg and Syracuse Railroad.

Thirty years ago Railroads were talked about and dreamed of, and twenty-five years have not elapsed since those speculations became practical realities by their successful operation. To-day, there are in this country more than 17,000 miles in operation, and over 12,000 in progress; the capital thus invested being over \$500,000,000. What mighty results for a people yet in their infancy? Twenty-five years more of this development will make the United States the most potent nation on the globe.

Our own State is foremost in the march of improvement, and doubtless will ever retain the distinction of the Empire State. She is the heart of

the Republic, pulsating with intelligence and power. Providence has given her many advantages of position, which her citizens have improved, and thereby made New York City the commercial key of the country. Glancing at the map of the United States, we find a chain of almost impassable mountains running near to and down the whole Pacific coast. A lesser chain runs from the banks of the St. Lawrence in New York, and from Vermont and New Hampshire to Georgia and Alabama, at distances varying from 150 to 300 miles from the Atlantic coast. These ranges divide our Territory into three great divisions, viz.: Atlantic Slope, Mississippi Valley, and Pacific Slope. The great problem of our day is to connect these vast sections by the most feasible lines of communication, affording the cheapest and most rapid transit for persons and property. For our purposes we may regard the Pacific Slope and Mississippi Valley as the Great West, and seek for the best highway between it and the Atlantic Slope. Nature has provided a stupendous connection, by which a boat may pass from the western part of New York, down the Alleghany, Ohio and Mississippi into the Gulf of Mexico, and be carried by the Gulf stream and tides, along the Atlantic coast into the Harbor of New York.

But this wonderful arrangement falls far short of satisfying the conditions of our problem, and we find that man has constructed artificial water courses at various points along the dividing ridge. The Chesapeake and Ohio Canal was commenced in 1828, with the view of connecting the Ohio at Pittsburgh, with the Potomac at Alexandria. This was regarded in the light of a National work, and it was supposed that it would command the entire business of the West; but the difficulties attending its construction were so great, that its extension beyond Cumberland was long since abandoned, and it is a more local work. The James River and Kanawha Canal, designed to connect Richmond with the Ohio River, by way of the Great Kanawha, was commenced in 1834, and is not more than two-thirds completed, with an expenditure of \$11,000,000. This will be an important local work, when finished. Pennsylvania entered the field in 1826, and began her Canal line from Philadelphia to Pittsburgh, 396 miles, which she completed in 1834, at a cost of \$15,000,000. In consequence of uncertain western connections, the portages over the Alleghanies and great cost of transportation, this line has never realized the expectations of the State.

New York began the Erie Canal in 1817 and completed it in 1825, at a very moderate expense, thereby securing the trade of the West, and the commercial supremacy of the Union. The obstacles in the way of the success of her sister States, (the Alleghanies) entirely disappear in Central New York, or become so unimportant as to be easily crossed by the channels of commerce between the East and the West.

Until within a very few years, Canal transportation, was deemed the best, and no one entertained a doubt of New York's complete and continued command of our domestic trade, and with it the foreign. Now, there are many who believe that Canals can be entirely supplanted, and that the commercial greatness of New York can be divided and subdivided among rival States and Cities, by means of Railroads. Acting with this belief, our former Canal rivals have entered the field with determined resolution and great resources, and goaded on by the remembrance of former defeats, the contest will be protracted and obstinate.

Georgia has completed a road from Savannah to the Tennessee River 440 miles, which Tennessee is pushing on to Nashville and to the Mississippi River at Memphis. South Carolina has connected Charleston with the Georgia and Tennessee lines in such a manner as to secure a direct communication with Memphis. She is also endeavoring to carry out her long cherished project of linking Cincinnati with herself by Railway.

Virginia is building two great lines, which will soon be in operation, viz.: the Virginia and Ten-

nessee, and the Virginia Central. The latter will not cost much less than \$20,000,000.

Maryland commenced the Baltimore and Ohio Road in 1828, which is not yet complete. It is 390 miles long, with over 20 tunnels, and has cost over \$20,000,000. Its connections with Cincinnati and St. Louis will divert much of the business of Philadelphia.

Pennsylvania has completed the connection between Philadelphia and Pittsburg, at a cost of \$18,000,000, which will swell to \$20,000,000, when the road is finished with double track, &c. This route will connect with the Steubenville, Cincinnati, Columbus, Indianapolis, Terre Haute and Atlantic and Mississippi roads, and place St. Louis within 98 miles of Philadelphia, being 150 miles nearer than New York, via the Lakes, and 251 miles nearer than Boston by the same route. By the construction of 82 miles from Blairsville to New Castle in Penn., a continuous road, requiring no transshipment will connect Philadelphia with Cleveland, Sandusky, Toledo and Chicago, four centres of inland trade whose joint commerce in 1851 amounted to \$106,000,000 of dollars. A branch is to connect Wheeling with the Pittsburgh and Philadelphia road. Philadelphia will soon be connected directly with the Port of Erie, by the Sunbury and Erie road, while a projected short link will place Oswego and Syracuse 18 miles nearer her, than they are to New York by any existing route, or any projected one save the Syracuse and Newburg Road. These are only some of the roads projected by Philadelphia, Baltimore and other cities, at a cost of over one hundred millions of dollars, for the purpose of recovering the commerce of the country; a commerce which they enjoyed exclusively, prior to the completion of the Erie Canal.

The comparative participation of New York and Philadelphia in the commerce of the country is thus shown;

	POPULATION		EXPORTS,	
	New York	Philadelp.	New York.	Philadelp.
			dolls.	dolls.
1820....	123,000	137,000	11,769,511	5,743,510
1821.....	.....	.....	.....	.....
1830....	202,057	168,000	17,666,600	4,291,700
1840....	312,712	258,832	32,408,685	6,820,145
1850....	700,000	450,000	47,600,000	4,602,000
1851.....	.....	.....	79,857,315	5,356,036

IMPORTS.

	New York.	Philadelp.
	dolls.	dolls.
1820.....	.....	.....
1821.....	26,020,022	8,158,922
1830.....	38,656,000	9,525,900
1840.....	60,064,000	8,500,000
1850.....	116,667,558	12,065,834
1851.....	144,454,016	14,168,618

Here we perceive that the exports of Philadelphia in 1820, were greater than in 1851. By reference to more complete returns, it will be seen that the exports and imports of New York during the years 1849, '50 '51, equalled those of Philadelphia for the whole 30 years. The table speaks volumes, and proves that New York has lost nothing by this rivalry of States and Cities. When Railroads came into use, she adapted them to her necessities, and stands to-day, with her Canals and Railroads, where the Erie Canal placed her, at the receipt of custom.

During the year 1851, there moved over the Canals of New York 3,582,733 tons of freight, and 1,977,751 tons reached tide water. Probably a much larger amount passed over them in 1852.—2,206,622 tons of freight passed over the New York Railroads in 1852, and their receipts for passengers and freight amounted to the sum of \$11,009,924. More tons of freight passed over New York Canals in 1851, to tide water, than over the St. Lawrence, New York Railroads, and Mississippi, all combined. Property to the amount of \$190,428,700 passed over the Canals and Railroads of New York in 1851, being \$43,502,267 more than the value of that passed over the Mississippi, and this too, with the Canals closed 130 days. These facts are conclusive as to the entire

success of our system of improvements, and warrant the belief that with the enlarged Canal, proposed low freight, and some new Railway connections, New York City must forever retain her commercial supremacy, and become in time the Metropolis of America.

The Great West is yet in its infancy. Its virgin soil is capable of sustaining hundreds of millions of human beings, and its production and manufactures may be made infinite. Senator Douglas of Illinois, in his address at a recent State Fair in New York, says: "As the Western States and territories become settled, and agricultural products accumulate, new Railroads and Canals become necessary to furnish means of transportation. The West is desirous of securing every avenue to the sea. It requires the navigation of the Mississippi, and the St. Lawrence; the Canals of New York, Pennsylvania, Indiana and Illinois, and all the Railroads now constructed or in process of construction from the sea coast to the Mississippi Valley. And all these facilities will yet prove insufficient to form adequate outlets for the constantly accumulating products of the western farmers. New lines of communication will be called into existence, and it is extremely doubtful whether the capital and enterprise of the country will be able to keep pace with the increasing demand for internal improvements."

In view of these facts New York should continue to act in a manner commensurate with the magnitude of her interests. To pause, is to go backward. Supineness and indifference will ultimately involve us in disaster and disgrace. Advance we must, if we would retain "Excelsior" for our watchword. Then, let us go on perfecting our national line of communication, by enlarging our Canals, shortening and straightening our Railroads, and by constructing and equipping them in the best possible manner.

This policy requires that Central New York should be connected with the City of New York, by a Railroad that will materially reduce the distance via Albany, and connect directly with the West. Such is the object in view in pressing the immediate construction of the New York, Newburg and Syracuse Road, and attention is invited to its consideration.

CHARACTERISTICS OF THE NEW YORK, NEWBURG AND SYRACUSE RAILROAD.

Syracuse is near the geographical centre of the State, 148 miles west of Albany, at the junction of the Erie and Oswego Canals, and of the New York Central and Oswego and Binghamton Railways. Newburgh is on the Hudson, 85 miles below Albany, and 60 above New York. It is connected with the latter city by the river, Erie, and Hudson River Roads, and will shortly be in connection with most of the New England Roads by the Fishkill and Providence Road.

The New York terminus is on the Jersey shore opposite the heart of the city.

From Syracuse to Chambers street Depot, New York via Albany, is 295 miles, while by this route it is but 238, by a hasty chaining; a saving of 57 miles. The Engineer and the Directors are sanguine that from 7 to 10 miles more will be saved by a careful survey. Calling it 7, we have 64 miles.

To this is to be added the difference in favor of steam over horse power. Passengers are taken from 81st street to the Depot by horse power, consuming from 25 to 30 minutes, when the streets are unobstructed. During this 25 minutes the Hoboken trains would run 15 or 18 miles, and land passengers at the dock. Allowing for the distance from 81st to Chambers street, we have a gain of 13½ miles, which added to 64, gives 77½ miles.

The element of horse power is a serious trouble to the Hudson River Road, as the rapid extension of the city, up the river, will force them to stop their engines some miles from their Depot in a few years. A bill is now before the Legislature to stop them at 125 street, about 7 miles from Chambers street.

This saving of 77½ miles, is equal to 2½ hours, in time.

Ogdensburg to New York.

Ogdensburg to Rouse's,.....	118 miles.	
Rouse's to Whitehall,.....	188 "	
Whitehall to Albany,.....	70 "	
Albany to Chambers St,.....	145½ "	521½

Ogdensburg to Watertown,.....	65	
Watertown to Syracuse,.....	60	
Syracuse to New York, equivalent,.....	217½	342½
		179

Oswego to New York.

Oswego to Rome,.....	73	
Rome to Albany,.....	109	
Albany to Chambers St,.....	145½	327½
Oswego to Syracuse,.....	35	
Syracuse to New York, equivalent,.....	217½	252½
		75

Dunkirk to New York.

Dunkirk to New York,.....	464	464
Dunkirk to Buffalo,.....	41	
Buffalo to Syracuse,.....	150	
Syracuse to New York,.....	231	422
		42

Buffalo to New York.

Buffalo to Hornellsville,.....	92	
Hornellsville to New York,.....	333	425
Buffalo to Syracuse,.....	150	
Syracuse to New York,.... miles,.....	231	381
		44

Canandaigua to New York.

Canandaigua to Elmira,.....	67	
Elmira to New York,.....	283	350
Canandaigua to Syracuse,.....	75	
Syracuse to New York,.... miles,.....	231	306
		44

Syracuse to New York.

Syracuse to Binghamton,.....	79	
Binghamton to New York,.... miles,.....	225	304
Syracuse to New York,.... miles,.....	231	231
		73

Saving of Time.

Ogdensburg,.....	6 hours.
Oswego,.....	2½ "
Dunkirk,.....	1½ "
Canandaigua,.....	1½ "
Syracuse, over Binghamton Road,.....	2½ "

Equation of Grades.

I wish, in this stage of the discussion of this subject, to do something towards giving it a practical direction. A knowledge of principles will do more good than that of any empirical results.

The relative disadvantage of grades, or inclines, as compared with levels, affects primarily the interests of the owners of a road, and is therefore to be estimated by a standard of money and not altogether of power. It is easily seen that one half of the expenses of most roads are for such objects as are wholly independent of the physical features of their lines. This fact affects the practical view of grades to a great extent. Again, if the actual power be ascertained, necessary to work any line, it makes all the difference in the world as to how such power is distributed or disposed. Both the Western Railroad of Massachusetts and the Baltimore and Ohio Railroad encounter grades of 88 feet per mile, but I will venture that the cost of carrying one ton over this grade upon the latter road does not exceed one half of what it does on the former. And in this comparison I would place the cost of fuel and wages as the same on both roads.

At the same time it is necessary to have means, as correct as possible, for estimating the power

absorbed by inclines, and especially to understand the resistance of inclines when compared with different degrees of speed on a level. The relative resistance of grades as compared with levels is really the only fact of value, to be ascertained.—The additional resistance of grades is one of gravity only, while the ordinary resistances upon levels are due to friction, concussions, atmosphere, etc., some of which are due not only to the weight or speed of trains, but more particularly to the condition of tracks and machinery. It is upon this mode of estimating the disadvantage of inclines that I attach much value to the table prepared by Mr. G. L. Vose, from the formula of John Scott Russell, and given in the Journal of Aug. 12th. The formula upon which it is based might require revision to apply to the generally inferior condition of American tracks, and also on account of the use of the truck-frame under all of our cars, instead of the English system of rigid wheels.

I do not attach much general importance to the advantage of descending grades, inasmuch as although there is generally surplus power in such cases, there are few cases in which the advantage can be realized by adding more cars to the train at the moment of commencing the descent. The whole advantage gained is restricted therefore to the saving of fuel, all other running expenses remaining the same, and the track being strained by the rapid speed of descent more than enough to offset the diminished power of traction. For that reason I think it was with propriety that Mr. Vose left out any consideration of the gain to be effected on descending grades.

Leaving out any consideration of the disposition of motive power,—a matter which is of first importance in estimating the financial disadvantage of grades,—it is useless to determine the exact amount of power necessary to work a train, unless we have just as accurate means of measuring the power of locomotives. But it is impossible to determine the amount of power exerted by locomotives under all conditions, by the application of any known formula. Although any intelligent engineer can at once comprehend the elements which enter into the determination of motive power, and be perhaps able to conduct experiments necessary to arrive at the result himself, he knows by the same means of information which guided him at first that the power of locomotives, that is to say the power actually exerted, is variable with every condition of the engine and train.

I do not make these remarks to embarrass the question of the equation of grades, but to show that any one who expects to establish any precise formula or standard of power or resistance, applicable to all circumstances alike, will expect a hopeless result.

The equation of grades with reference to the transportation of freight is of the greatest importance in our country, as the economy of this movement is more to be consulted than the passenger business. It is found in practice that an ascent of 20 feet in one mile, at a slow, freight-train speed, requires two engines where one at equal power is sufficient on a level. It is found also in practice that except cars be ready at the summit, at the moment of commencing the descent, little if anything is gained over a level in descending such a grade. And it is also found that for every additional 20 feet of ascent per mile another engine

is required. These are simple, practical facts, more to be considered than the results of any empirical formula.

I trust I shall be pardoned if I do not attach all the importance to theory which marks the steps of men unschooled in practice. I do not distrust theory, *in toto*, and in fact am very much addicted to theoretical examinations where practice cannot be conveniently realized. I wish to divest the equation of grades of all theoretical encumbrances as far as possible, as I consider that it is well settled by practical results, and that it is not now the resistance of grades which requires to be ascertained but the best means of overcoming it.—I have broached the subject of equating grades, occasionally in this Journal for the purpose of initiating an improved practical system for working undulating roads. And it is in such a connection that I anticipate any beneficial results to railroad companies in the discussion of the subject.

ZERAH COLBURN.

Engineering Office and Agency.

No. 9 Spruce St., N. Y.

Lebanon Valley Railroad.

We notice in one of the Reading journals the report of the Board of Directors of the Lebanon Valley Railroad, made to the Stockholders, under the date of April 3, 1854, from which we extract as follows:—

The line of the Lebanon Valley Railroad leaves the main track of the Philadelphia and Reading Railroad, opposite their freight depot, in Reading, and, crossing the Schuylkill River just below the mouth of the Tulpehocken, passing near the villages of Sinking Springs and Wernersville; inclines to the south of the borough of Womelsdorf, and, passing south of Stouchburg, Mifflin's Harbor and Myerstown, enters the borough of Lebanon parallel with, and north of the turnpike; whence, after being joined by the North Lebanon Railroad, (leading from the famous Cornwall Iron Ore Banks,) it passes near Annville, Palmyra and Hummelstown, crosses the Swatara River at the mouth of Beaver creek about seven miles from Harrisburg, its western terminus, which place it enters by "Poor House Run," and ends at the junction of the Pennsylvania and Harrisburg and Lancaster Railroads.

The whole length of the road between the termini stated, is 53½ miles.

In reference to the cost of constructing the road it is stated that—

Cost.—Two estimates were submitted by the Chief Engineer to the Board, at their last February meeting; one, of a line graded for 41½ miles of single, and 12 miles of double track, and 53½ miles of main, and 5 miles of turn-out tracks laid; with water and way stations, amounting to the following sum:

Graduation, masonry and bridging	\$1,170,396
Fifty-three and a half miles main track,	
60 lbs. rail	575,662
Four miles turn-outs, 52 lbs. rail	34,680
Switches, way and water stations	45,000
Contingencies and engineering	72,000
	\$1,897,738

And another estimate, for a double track graduation, bridging and masonry throughout, with a single track of the most approved character, laid with 75 lbs. rails, turn-outs and stations, the same as in previous estimate:

Graduation, masonry and bridging	\$1,417,736
Fifty-three and a-half miles main track,	
75 lbs. rail	669,188
Four miles sidings, 52 lbs. rail	34,680
Switches, way and water stations	53,750
Contingencies and engineering	84,000
	\$2,259,354

In consideration of the greater facility of grading a double track road, the inconvenience and risk of accident in grading the second, during the constant use of the first track, and in view of the pressing demand for both tracks which they believe will have arisen, simultaneously with the completion of their road, your Board have decided to adopt the estimate for a double track graduation, and have directed the road to be so prepared for construction.

On the 14th ultimo, after a careful comparison of the various proposals submitted by a number of responsible contractors, the contracts for grading, masonry and superstructure, except the iron, were awarded, unanimously, to Messrs. P. O'Reilly, of Reading, and George M. Lauman, of Harrisburg, both gentlemen of great experience, energy of character, ample means and large stockholders in your work from its commencement.

Mr. Lauman's contract extends from Harrisburg about 13 miles eastward; Mr. O'Reilly's thence to Reading. Both contractors are making vigorous preparations for the immediate and prompt prosecution of their work.

The financial condition of the company is thus referred to:

FINANCIAL CONDITION.

To the present date, the subscriptions to the capital stock amount to \$1,035,550, as follows:

Subscriptions of firms, companies and individuals	\$785,550
City of Reading, municipal subscription	200,000
Borough of Lebanon, municipal subscription	50,000
	\$1,035,550

To provide the additional means for the construction of the road, bonds will be issued, which from the amount of stock subscription already made, as well as from the certain prospects of a large and profitable business, to be hereafter alluded to, it is confidently believed will assure the most favorable consideration as an investment from capitalists at home and abroad.

The Directors make the following estimate of the probable business and receipts of the road upon its completion:

PASSENGER BUSINESS.

Local passengers, 80,000 in all, equal to 40,000 through, at \$1 50	\$60,000
Through passengers, estimated at \$1 50 each way daily, 93,000, at \$1 90	103,200
	163,200

FREIGHT BUSINESS.

Iron ore, estimated equal to 200,000 tons, carried 27 miles, at 80 cents	\$160,000
Coal, 75,000 tons, carried 27 miles, at 80 cents	60,000
Local freight, including lumber, grain, flour, pig iron, agricultural produce, and merchandise of every description, estimated equal to 35,000 tons, carried half the length of the road, at \$1 20 per ton	42,000
Through freight, from Baltimore, Cumberland Valley, Susquehanna, Sunbury and Erie Railroads, estimated at 500 tons per day eastward, and 100 tons per day westward, in all 93,000 tons, at \$1 25 per ton	116,250
	378,250

Receipts from mails, express and all other sources

556,540

Deduct 45 per cent. for working expenses

250,448

Net income

\$306,077

It is believed that this estimate will be realized on the completion of the road, two years hence, by which time several new furnaces and manufactories in the Schuylkill, Susquehanna, and Lebanon valleys, now being erected, with the increase of business throughout the country generally, will have largely added to its resources for both local and through transportation.

The line between Reading and Lebanon will be graded, and a single line of rails laid, by the summer 1855, with the exception of the bridge over the Schuylkill River at Reading; which structure, with that over the Swatara, near Hummelstown, it is expected will be completed in all of the same year, allowing the whole line to be opened for public travel by the spring of 1856.

We look upon the Lebanon Valley Road, (upon the ultimate consolidation of the business operations of several isolated roads in that direction) as occupying a link in a very direct and useful line of railroad from New York to Cincinnati. The connection of the New Jersey Central with the Lebanon Valley Road, and of the Cumberland Valley with the Baltimore and Ohio Road, with the necessary bridging of the Delaware, Potomac and Ohio rivers would complete a line of railroad from New York to the Ohio Valley of less length than by any other route. It would save very nearly 200 miles over the line by way of Cleveland.

Crawfordsville, Frankfort, Kokomo and Fort Wayne Railroad of Indiana.

In the West, a direct connection with the eastern markets is looked upon as essential to every local system of railroads. In the State of Indiana, a wide district of country intervenes between the Northern Indiana road on the North, and the Indianapolis and Bellefontaine road on the south.—This tract of country has stimulated a large share of railroad enterprise, the Toledo, Wabash, and St. Louis; Logansport and Northern Indiana, and the Cleveland and St. Louis Air Line, being among the foremost in their efforts for the occupation of this district. All of these roads look to an Eastern terminus. More recently a new road, with similar objects, and whose direction is indicated by its descriptive title above, has been located and let to contract.

A road is now constructing from Crawfordsville to Terre Haute, which, at the latter point, has a direct connection with Evansville. Terre Haute and Fort Wayne are destined each to become most important focal points for extensive systems of railroads, and the road under notice forms nearly an air line between them. Three most important eastern extensions will be secured at Fort Wayne. One running direct to Toledo will give the shortest outlet to the lake; one extending to Fremont on the Cleveland and Toledo road, and to be built by that company, and also the Tiffin and Fort Wayne Railroad will give very direct lines to Cleveland; while the Ohio and Indiana, and Ohio and Pennsylvania roads, extending to Pittsburg, will give a direct route to Philadelphia and Baltimore. At Terre Haute two lines will extend to St. Louis, and one to the Ohio river at Evansville, and by the New Albany and Salem Railroad to Lake Michigan and Louisville. The distance from Cleveland to St. Louis by this route will be 614 miles, via Cleveland, Toledo and Fort Wayne extension on the east, and the Atlantic and Mississippi road on the west. The counties on the line of the Crawfordsville and Fort Wayne road are equal in population, although smaller in size, to those immediately on the Wabash river.

The work under construction extends from Crawfordsville to Russiaville, a distance of 42 miles, being less than one third of a mile longer than an air line.

The distance by this line from Cleveland to Evansville will be 454 miles, and from Detroit to St. Louis 476 miles.

That portion of the road east of Russiaville, and extending to Fort Wayne will be placed under construction as soon as the stock subscriptions received upon that portion of the line will justify the responsibility. For the construction of the whole road there are reported subscriptions to the amount of \$490,000, while several stock books have failed to come in at the time of making the report.—Of this amount \$198,000 are applicable to the western portion of the road, and \$292,000 to the eastern division.

The officers of the road are A. M. Puett, of Rockville, President; A. Thompson, S. Kenworthy John Majors, J. Douglass, R. Frazier, N. Bell, M. Burton, J. McClure, J. D. Pulse, Hon. Samuel Hanna, and J. L. Williams.

Unusual Performance of a Locomotive.

We find in a recent number of the Cleveland Herald, an account of the trip of one of the engines of the Cuyahoga Locomotive Co., in which a remarkable extent of economy in running is exhibited. It is stated that the engine "Nashville," ran from Columbus to Erie and 40 miles back, or in all 295 miles, with but one tender-full of wood. This feat it was said was accomplished on one of the ordinary trips of the lightning train, with the usual train of cars, and subject to all the stops, checks and interruptions of every day running.

We should much like to know how large a tender was used, and to what degree it was packed, so that the number of cubic feet of wood used for the entire distance could be known. We know of cases in running, where the consumption of wood, with an ordinary train, was but one cubic foot of wood per mile, equal to one cord for 128 miles. At this rate the Cuyahoga engine would have used over $2\frac{1}{4}$ cords of wood, whence we are left to infer that the tender was of unusual size and filled to the utmost, or that this extraordinary rate of economy was exceeded.

North Carolina.

A convention of delegates from several of the northern counties of North Carolina is to be held at Yanceyville, Caswell Co. on the 8th of November; next, to take measures for extending the Roanoke Valley railroad through the counties of Granville, Person and Caswell to Leaksville.—The four counties intersected, contained, in 1850, 61,794 inhabitants. Such a road would give a direct outlet to Portsmouth and Norfolk for a large district of country now partially or wholly dependent on the Richmond and Danville road.

New York and Virginia Air Line.

The Commissioners of the Railroad Companies chartered by Virginia, Maryland, Delaware, New Jersey, and constituting the New York and Norfolk Air Line Railroad, are to hold a meeting at the Astor House in New York on the 6th September. The Norfolk Herald, heretofore opposed to the construction of this road, now comes out strongly in favor of it, and says the survey of the Virginia section shows that it is not intercepted by a single stream, being upon the ridge that rises gradually from the broad Atlantic on the one hand, and the bold waters of the Chesapeake on the

other. It is almost a level stretch of more than 70 miles.

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

To Engineers and Surveyors.

A YOUNG man, 18 years old, wants a situation (to learn the business) as chain carrier, in a railroad survey. No objections to go to any part of the country, or world. Good reference can be given if required. Address A. S., Office of this Journal. [32 1m]

RAILROAD STOCKS, BONDS & STATE SECURITIES.

The subscriber offers for sale—Ohio and Mississippi Railroad Company, 7 per cent. second mortgage, convertible Bonds. Interest payable semi-annually in New York.

Scioto and Hocking Valley Railroad Company, 7 per cent. first mortgage, convertible Bonds. Interest payable semi-annually in New York.

Cincinnati, Western Railroad Company, 8 per cent. Real Estate Bonds. Interest payable semi-annually in New York.

Hamilton County, Ohio, 6 per cent. Bonds. Interest payable semi-annually in New York.

Louisville and Portland R. R. Co. Bonds.

Maysville and Lexington R. R. Co., 6 per cent. second mortgage, convertible Bonds.

Louisville City Bonds.

Cincinnati, Logansport and Chicago R. R. Co., 10 per cent. Income Bonds.

RAILROAD STOCKS.

Covington and Lexington R. R. Stock.

Cincinnati, Hamilton and Dayton R. R. Stock.

Little Miami R. R. Stock.

Ohio and Mississippi R. R. Stock.

Southern Bank of Kentucky Stock.

Columbus and Xenia R. R. Stock.

Cincinnati and Chicago R. R. Stock.

Central Indiana R. R. Stock.

Cincinnati and Indianapolis R. R. Stock.

Indianapolis and Bellefontaine R. R. Stock.

Cincinnati, Wilmington and Zanesville R. R. Stock.

WANTED—\$100,000, for which the best securities will be given.

WANTED—\$40,000, on commercial paper.

ISAAC OSBORN DAVIS,

Stock Exchange and Financial Agency Office,

No. 38 Third street,

Cincinnati, Ohio.

32 1m]

ON THE APPLICATION OF IRON TO BUILDING PURPOSES.—JOHN WILEY, No. 167

Broadway, has just published—

FAIRBAIRN ON THE APPLICATION OF

CAST AND WROUGHT IRON TO BUILDING

PURPOSES. By William Fairbairn, C. E., F. R. S., F. G. S., etc. 1vol. 8vo., with numerous

Diagrams and Illustrations, and tables for calculating the strength of materials &c. Price \$2.

SELECTIONS FROM CONTENTS.—On Cast Iron

Beams for supporting the Floors of Buildings—

Cast Iron Beams with Flanches—Experiments

made at Leeds by the Author—Rules for the

Strength of Cast Iron Beams—Table of Result—

On Compound or Trussed Cast Iron Beams or

Girders—Rule for Calculating the Strength of do.

—Comparison of Cost—Process of Toughening Cast

Iron—Experiments—Cupola—Air Furnace—On

Wrought Iron Beams for supporting the Floors of

Buildings, and for other purposes—Experiments

on the strength &c., of do—On Wrought Iron Trel-

lis Girders—Formula for Calculating the Strength

of Trelis Beams, &c., &c.

"No engineer can do without this book."—

Scientific American. [34. 2t.

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,
RICHARD W. TYSON,
No. 25 South Charles st.

Baltimore, July 1st, 1854.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,
RICHARD W. TYSON.

Baltimore, July 1st, 1854.

500 TONS No. 1 Glengarnock Scotch Pig-Iron in lots to suit purchasers for sale by

NAYLOR & CO.

99 and 101 John st.

N. B.—The above Iron constantly imported. [32 ft.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to EDW. BECH & KUNHARDT, 62 Beaver St., A. TOWAR, Agent Pokessee Iron Works, 23tf Pokessee, N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to Railroad purpose, which will be sold at a reasonable price. For further information, apply to.

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO
64 Courtland st., New York,

To Contractors for Railroad Iron.

PROPOSALS will be received until the 26th September for nine thousand tons of railroad iron T pattern, sixty pounds to the yard. One-half to be delivered at Charleston, South Carolina, and one-half at Wilmington, North Carolina, delivery to commence in January and close in August, equal quantities to be delivered in each month at each place.

Payment will be made immediately on the delivery of each cargo, in North Carolina Funds. The contract will be given to the lowest responsible bidder provided the price be satisfactory. Bidders will endorse their bids—"Proposals for Railroad Iron"—and address them to Cyrus P. Meudenhall, Secretary, North Carolina Railroad Company, Greensboro, N. C.

WALTER GWINN,
Chief Eng. N. C. R. R. Co.

Raleigh, August 3d, 1854.

[31. 1d

Machinists' Tools.

SHRIVER & BROTHERS,

Cumberland, Maryland,

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines,

Drill Presses, Hand Lathes, and other Machinists' Tools.

These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others requiring first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address

SHRIVER & BROTHERS, Fulton Works,

Cumberland, Maryland.

August 19th, 1854.

[32. 6m

Rensselaer Polytechnic Institute.

DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS,—including Railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the Annual Register, giving full information respecting the Institute, apply to

R. FRANKLIN GREENE, Director, R. P. I.
Troy, New York.

32 3m]

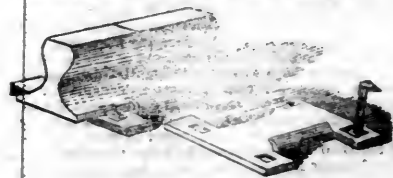
Lowmoor Iron.

W. BAILEY LANG & CO., 54 CLIFF STREET, have in stock and offer for sale an assortment of Round, Flat and Square Bars LOWMOOR IRON, which they will sell by the ton or single bar. The attention of manufacturers, Railway Managers and Mechanics is particularly directed to the quality of this Iron, as its great strength, uniformity, and freedom from flaws, render it the best Iron in the market, where first quality is required.

W. BAILEY LANG & CO., being Sole Agents in the United States and Canada for the LOWMOOR CO., will execute orders at manufacturer's prices.

6t. 3t

RAILROAD SPIKES.



WROUGHT IRON

Chairs and Fastenings.

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.

The best quality of Refined Iron is used and all orders filled with dispatch.

J. HOPKINSON SMITH,
No. 25 South Charles st.

Please direct the name in full.

Baltimore, July 1st, 1854.

[33. 1t

ZERAH COLBURN,

ENGINEER AND AGENT

FOR the Design, Construction, Valuation and Purchase of Locomotives and Railroad Machinery.

Offers his services to Railroad Companies in either of these departments, having long experience and the best facilities for all.

As CONSULTING ENGINEER he will advise as to the value or adaptation of any system of motive power, and furnish drawings, estimates and specifications for any arrangement of engine.

As ACTING ENGINEER he will superintend the construction, survey, or reconstruction of any railroad machinery, and guarantee satisfactory results.

As CONTRACTING ENGINEER, having connection with the most reliable and successful manufacturers, he will negotiate for the purchase of Locomotives of the very best construction and proportions. Also Wheels, Tires and Repair Shop Machinery.

Having much experience in Patent Business he will undertake the preparation of Drawings, Specifications, Applications for Patent or Caveat and other papers necessary for inventors. He is able to give material assistance in bringing inventions and improvements in Railroad Machinery into favorable notice.

CHILLED TIRES FOR LOCOMOTIVE DRIVING WHEELS.

Zerah Colburn retains the principal agency for the sale and right of use of this valuable improvement, and will furnish the most substantial guarantees of its Safety, Durability, Adhesion and great Economy.

Office, 3d floor American Railroad Journal Building,
No. 9 Spruce street,
New York.

REFERENCES.

The New Jersey Locomotive and Machine Co.
James Jackson, Pres't, Paterson, N. J.
Chas. W. Elliott, Vice Pres't, 59 Beaver str., N. Y.
Henry V. Poor, Esq., Editor Railroad Journal, New York.
Geo. D. Phelps, Pres't, Del., Lack and Western Railroad.
Geo. W. Whistler, Vice Pres't New York & New Haven R.R.
William Raymond Lee, Esq., Boston.
Bush & Lobdell, Wilmington, Del.
Oliver M. Hyde, Esq., Mayor City of Detroit.

NUGENT'S COLLEGE


OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

New York and Erie R. R.

 **PASSENGER TRAINS**
leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, over the N. Y. & E. R. R. and the B. & N. Y. O. R. R., without change of baggage or cars.

DUNKIRK EXPRESS, at 6 a. m. for Dunkirk.
MAIL, at 8 1/2 a. m. for Dunkirk and Buffalo, and intermediate stations. Passengers by this Train will remain over night at any Station between Binghamton and Corning, and proceed the next morning.

WAY EXPRESS, at 1 p. m. for Dunkirk.
ROCKLAND PASSENGER, at 4 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.
EMIGRANT, at 6 p. m., for Dunkirk and Buffalo and intermediate Stations.

On Sundays only one Express Train—at 6 p. m.
These Express Trains connect at Elmira with the Elmira and Niagara Falls Railroad for Niagara Falls; at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

OFFICE CINCINNATI, HAMILTON & DAYTON R. R. Co.
Cincinnati, August 8th, 1854.

THE Board of Directors of this Company have this day declared a Dividend of Five per cent. out of the net earnings of the Company for the Six months ending 31. July, payable in Scrip bearing Seven per cent. interest redeemable in three years. The Scrip will be delivered on and after Sept. 1st, to the Stockholders registered in Cincinnati on application at the office of the Company, and to those registered in New York at the office of the Ohio Life Insurance & Trust Company in that city. The Transfer Books will be closed for ten days from this date.

32 Im.] **FRANK S. BOND, Secretary.**

For Sale.

A **STATIONARY Engine**, having cylinders 13 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New York.

Jul. 14 29 tf.]

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF ERIE CANAL—WESTERN DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Buffalo, until the 1st day of September next, at 10 o'clock, A. M. for the following described work between Tonawanda and Black Rock:—

Section 360, with penalty in bond of..	\$14,000.
" 361, " " " " " "	20,000.
" 362, " " " " " "	17,200.
" 363, " " " " " "	10,000.
" 364, " " " " " "	9,800.
" 365, " " " " " "	10,600.
" 366, " " " " " "	15,800.
" 367, " " " " " "	12,000.
Guard Lock and Section at Black Rock...	14,000.
Waste Weir on Section 360.....	500.
Culvert on Section 362.....	600.
Bridge Abutments on Section 360 to Lock	
Section inclusive.....	2,000.

The above work to be completed by the first of April, 1857.

Sealed proposals will be received at the Engineer's Office in the city of Rochester until the 4th day of September next, at 10 o'clock A. M., for the following described work between Rochester and Spencerport:—

Section 266, with a penalty in bond of..	\$7,600.
" 267, " " " " " "	8,500.
" 268, " " " " " "	6,700.
" 269, " " " " " "	6,100.
" 270, " " " " " "	6,500.
" 271, " " " " " "	5,200.
" 272, " " " " " "	5,600.
" 273, " " " " " "	7,200.
" 274, " " " " " "	4,200.
" 275, " " " " " "	10,200.

Culverts on Sections 266 and 275, both inclusive do. do..... 3,500.

Bridge Abutments on Sections 266 to Section 270 both inclusive..... 3,000.

Bridge Abutments on Sections 271 to Section 275 both inclusive..... 2,000.

The above work to be completed by April 1st, 1856.

MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse until the 7th day of September next at 10 o'clock in the forenoon for the following described work:—

Section 135, with penalty in bond of....	\$5,400.
" 136, " " " " " "	6,200.
" 137, " " " " " "	5,100.
" 138, " " " " " "	4,100.
" 139, " " " " " "	4,700.
" 140, " " " " " "	4,000.
" 141, " " " " " "	5,200.
" 142, " " " " " "	6,700.
" 143, " " " " " "	6,100.
" 144, " " " " " "	4,800.
" 145, " " " " " "	4,700.
" 198, " " " " " "	3,200.
" 199, " " " " " "	4,000.

Culverts on Sections 135, 136, 137, 138 and 139..... 4,600.

Culverts on Sections 141, 144, 145, 146, 147, 148, 149..... 4,600.

Bridge Abutments on Sections 135, 136, 137, 140, 143 and 145..... 3,600.

Waste Weir at Cowassalon Creek..... 800.

Dam and Guard Gate do. do..... 600.

The above work to be completed April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus

defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner, until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, August 1st, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT, } Canal Comm'rs.
CORNELIUS GARDINIER,
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 36]

SATURDAY, SEPTEMBER 9, 1854.

[WHOLE No. 960, VOL. XXVII.

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

Erie Railroad.....	566,561
Improvement of the Locomotive.....	562
Revolution of Improvement.....	563
Concord Railroad.....	563
Lexington & Danville R. R.....	563
Production of Cotton.....	564
Vermont Central R. R.....	564
Northern Route to the Pacific.....	564
New Jersey Locomotive Works.....	566
Improvement of Mobile River.....	567
Working Descending Grades.....	567
Stock and Money Market.....	568
Motive Power of Vermont Central Railroad.....	570
Steam Power on Highways.....	571
Railroads in North Carolina.....	571
Railroads in the West.....	572
Rock Island Railroad Bridge.....	573
Railroads and the Times.....	573
Compound on Continuous Rails.....	575
Cincinnati and Chicago R. R. Consolidation.....	575
Syracuse and Binghampton Railroad.....	575

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, September 9, 1854.

Erie Railroad.

In our last issue we gave a brief history of the above road in which we accounted for the position it holds in public estimation, and showed, we think, that well managed, it may yet be made productive property upon its cost. We will now indicate the policy which we think the company must pursue to extricate itself from the financial difficulties in which it is now placed, and to secure credit and confidence for the future.

The great difficulty under which the Erie Company now labors, is a want of *credit*, or confidence in its management. There are some who have lost faith in it altogether, but for no better reason than that it has come to be *unpopular*. The more numerous class, who believe the road to be good property, properly managed, will not step forward to its aid unless some plan is proposed, which is adequate to the object they have in view—, *complete extrication of the company from its present position*. They believe the run-

ning department is well looked after, and that the road is sufficiently productive. Their objection is to its *financial* management; or perhaps we should say, they will not come to the aid of the company unless some plan be adopted, which shall place its credit on high ground, and prevent beyond possibility, the recurrence of the present crisis. We will state what this plan or policy, in our opinion, should be.

The great incubus upon the company's credit at the present time are the *Income Bonds*, which fall due in February, to the amount, say, of \$2,700,000. As the *public* believe that these bonds cannot be paid in *cash*, the absence of any plan for their liquidation is producing nearly the same results as if they had been actually *dishonored*. We assume that they will *not* be paid, that they must be met by the creation of a *new* indebtedness. The point to be determined is, what shall this new liability be.

The duty of the company, or the stockholders, in default of being able to pay the bonds at *maturity*, is to pay them as soon as possible *thereafter*. They owe such an obligation to their *creditors*.. They owe it to themselves to take a similar course, as means of restoring their own credit, and in this way of promoting their own interests; for this credit will depend entirely upon the *manner* in which its creditors are treated, and the future success of the road will be in proportion to the degree of this *credit*. The interest of the stock and bond holders in this instance therefore exactly harmonize.

If our estimates of the earnings of the company are correct, it can meet a portion of the *Income bonds* by the surplus earnings of the road for each year till the whole are paid. Let us see how soon this can be done.

The earnings of the road for the current year will equal probably \$5,500,000. The annual increase of earnings have been very nearly *thirty* per cent. Estimating the increase of earnings of the road for the next four years at only *ten* per cent., which is only one-half for the average for the whole country, while the earnings of this road thus far have been fifty per cent. *above* this average, and will probably continue to be, we have the following amount of gross earnings for four years ending— 859, viz,

Earnings for 1855.....	\$6,050,000
" " 1856.....	6,655,090
" " 1857.....	7,320,000
" " 1858.....	8,050,000

Total earnings.....\$28,075,000

We will estimate the net earnings of the road at only 40 per cent., which is about ten per cent. *less* than for similar roads, and the same rate below what the *net* earnings of this road may be made to be. This ratio would give \$11,230,000 as the net earnings for the period named.

We estimate the funded and floating debt of the company at \$25,000,000. The interest on this for 4 years would be \$7,000,000. Deducting this sum from the *net* income, would leave a balance of \$4,230,000, a sum greater by \$1,530,000 than the *Income bonds*, which would go far toward supplying all the wants of the company for construction, till 1859.

It is certain that the *Income bonds* cannot be paid in *cash*. They must be met by a new issue, either directly to the holders of the *old* bonds, or sold to other parties and the former paid by the proceeds. But can a *new* issue on long time be sold? We think not; at any rate only at rates ruinous to the company. The *third*, soon to be the *second* mortgage bonds, are selling at a trifle over 80. At that rate, a *fourth* mortgage would not sell for more than 60 cents on the dollar. But simply borrowing without any suitable provision for payment will not help the matter at all. It is owing to the previous improvidence of the company in borrowing without any such provision, that it finds itself in its present dilemma. To repeat the mistake is only to aggravate the present distress.

But suppose the company, by postponing the day of payment by new loans, gain a short respite. What is to be done in 1859, when the second mortgage of \$4,000,000 falls due? A similar crisis will then impend as that which now threatens; and similar results will follow. The present distrust of the management of the road will continue. The fear that the company may not be able to sell the balance of the *third* mortgage will keep down the price to a ruinously low rate, or what is more probable, will prevent the possibility of their sale, and the company may then find itself threatened with a *foreclosure* of a mortgage, instead of a suit and judgment on a simple debt, as is the case now; a

position infinitely worse for the credit of the company, and the interest of the stock, and unsecured bond holders.

The adoption of a correct policy at the present time will accomplish a double service. It will not only extricate the company from present embarrassment, but give it credit for the future. Such a course is entirely within its power. By omitting *dividends*, the surplus earnings will, as we have shown, discharge the *Income* bonds in four years, and leave a large sum for *extraordinary* expenses. Let a sinking fund be established, to which shall be carried \$800,000, *semi-annually*. This fund will, in four years, reach a sum equal to the *Income* bonds. To pay these let there be issued to the holders, at *par*, new bonds, due in four years, based upon the *sinking* fund created as above. The holders of the *Income* bonds, seeing certain provisions made for their payment, would, we have no doubt, be glad to take the new for the old bonds; and thus immediately relieve the company from its present embarrassment.

The beneficial effect of such a course would be instantaneous upon the other securities of the company and its stock. If the stockholders have lost largely by the recent decline, the bond holders are suffering in an almost equal degree. The *unsecured* funded debt of the company to the amount of \$11,000,000 is selling at a discount of from 30 to 40 p.ct. The *third* mortgage bonds of \$10,000,000 are selling at about 20 per cent. below *par*. The depreciation of these is nearly, if not quite equal to \$5,000,000!—An enormous loss for which no sufficient reason exists, and which might be made good again by the adoption of a proper policy for the future.

If, by an unwise or impolitic course on the part of the company, the *bond*-holders find the value of their property impaired, is there not the most direct *moral* obligation resting on the former, by the adoption of a new and different course, to correct the wrong of which they have been the (unintentioned) cause? Is it not their duty to restore to the bondholders the five millions which they have nominally lost? It is not for the duty of the stockholders to restore their own credit? They have not only the *Income* bonds to provide for, but they have \$4,000,000 *third* mortgage bonds still unsold, and which have fallen since first brought out, from 115 to about 80! These bonds can be restored to their former figure, effecting a saving to the company of nearly a million and a-half. If it be attempted to meet the *Income* bonds by a new issue, without any provision for its payment, another million must be sacrificed here. Can the company financier its means away in this manner, without inevitable ruin? Will shrewd, sagacious men, who control public opinion in monetary affairs, come to its aid under such circumstances? Certainly not. The company cannot afford to make a misstep, nor adopt any course that is not in exact harmony with the interest of its creditors, as honest men.

The stockholders are bound to adopt the course which shall secure the best results in the shortest time. In the present case, a moral obligation overrules all other considerations. There is no place left for questions of *expediency*. If there were, expediency and duty exactly harmonize. As before stated the salvation of the company depends, as it has always depended, upon the degree

of credit in which it is held. Unless it secure popular confidence and support, it *must* fail, with it, success is certain. To secure this confidence the company must meet the present crisis as it demands. We repeat the *road* has the confidence of that class of men who wield the monetary influence of the city. They see that the *road* is *successful*. They will come to the support of the company as soon as competent policy is proposed for the management of its finances. But it must be a policy which places the action of the company right before the public in a *moral* point of view. It must be one far more comprehensive than that which postpones, from month to month, a pressing necessity, or discharges one obligation by creating another of similar kind only greater in amount. The policy must be adapted to, and be adequate to the result to be accomplished, the *payment* of such indebtedness as cannot be well postponed, and such provision for the future indebtedness as shall, by the peaceful operation of a *law*, discharge it without reducing the company to the distress now suffered.

The company hold their destiny in their own hands. It may be fortunate or disastrous, just as it chooses. The success of the road has rendered the management of the finances of the company an easy task. A right course will instantly restore its credit and place it on strong ground. A wrong one will sink it irretrievably. Will the company hesitate which to follow?

Improvement of the Locomotive.

BY ZERAH COLBURN.

The Boiler.

Very few "feed heaters" have been successfully used upon American engines; generally because the heat absorbed was abstracted from the exhaust, or that the construction of the heater involved difficulty in the arrangement and fastenings of some portions of the work. For my own part, I never knew of a "feed heater" being applied so as to use what would otherwise have been strictly "waste heat," or else, if arranged with reference to this object, having any useful area or disposition of heating surface. I have known heaters to be proposed in the bottom of the ashpan or of the smoke-box, as if any useful heat would be caught descending upon a top plate of such a water bottom. I have known other heaters to be arranged within the sides of the smoke-box, removed from the active current of heat; or in the chimney where there was but little heating surface and that of the most unfavorable kind; or heaters depending upon the exhaust steam, much of the heat of which is absorbed in the pipes through which it escapes, while any exhaust steam abstracted reduced the available power for draught. It is so delicate a matter to employ "waste heat" to advantage, so difficult to heat the feed without involving the heat desirable for evaporation, or else without obstructing the draught, that some who have tried long to secure such an object have declared "heaters" were impracticable in locomotives. Yet careful experiments have shown, as stated in my last, that water heated from 62° to 212° could be evaporated with five-sixths of the fuel otherwise necessary. The problem is to heat the feed without any addition of fuel above what would be required to evaporate water already heated to 212°.

There must be waste heat in locomotive boilers as usually built. Heat cannot be all absorbed

when in rapid motion in a boiler tube. The heat within the smoke-boxes of wood burning engines is full 400°; in coke burning engines 400° to 800° and in McConnell's patent boiler, which attracted so much attention in England, the waste heat in the smoke-box was 1,100°. Again, the absorption of heat must be as the difference of temperature between the heating current and the object heated. A heat of 3,000° would not add heat to a furnace already heated to 3,000°, and a heat of 3,100° would only have the useful efficacy of 100°.

A heated current of 500°, passing rapidly within a tube, might not be able to impart any heat to surrounding water already heated to 375°; but if it should enter within water at 55° it might suddenly become useful.

I propose then to extend the tubes beyond the ordinary smoke-box tube sheet, and to make a water chamber by inserting an additional tube sheet across the boiler at the extreme front ends of the tubes so lengthened. By pumping the feed water into this chamber it would come in contact with from 100 to 200 square feet of useful heating surface, and would pass thence under a check valve into the boiler. I believe that two feet of tubes in such a heater would be more effective than the forward five feet of the tubes of ordinary boilers, and with less injury to the draught and a great saving of wood.

Now let me answer the objections which will arise to this plan, for every thing new must encounter objections.

First, that it would extend the tubes, and thereby produce leaking. It need not, as I am confident that it would effect an important saving to separate two feet of tubes, of the usual length, for such a heater.

Second, that if the tubes be extended as they possibly might, the draught will be obstructed. I proportion the diameter of a tube by its length, thereby greatly increasing its internal opening. For an addition of two feet to the length of a tube I should add $\frac{3}{8}$ inch to its diameter, by which the draught would be left free.

Third, that the tubes would burn if the feed water gets low. With iron tubes, and at the extreme end of the boiler, there would be little danger. But the tubes would not need to be fitted tightly in the middle sheet, as the only object of that sheet is merely to intercept the circulation of the water, the pressure being equal in the boiler and heater. Besides, if the tubes were fitted tight in the middle sheet they could not be withdrawn. The heater would always be full of water.

Fourth, that the tubes would be cut through at the middle sheet. With iron tubes I doubt if such a result would occur, but if found possible of occurrence the tubes could be sheathed by a thimble of hard iron at the point of contact, and the forward section of the tube be expanded so as to have an opening 1-32d inch larger at the front than in the middle sheet, for inserting the tubes.

"What if steam should form in the heater?" The heater would hold it, or if steam so formed could possibly exceed in pressure that in the boiler it would quickly escape thereto through the check valve.

Now here is a rational plan for saving fuel, at a trifling expense for a heater, without obstructing the draught, and without using anything else but

what is strictly waste heat. It involves no possibility of leaking or burning, and it could easily be "blown off" as well as the body of the boiler.

A Revolution of Improvement.

We have thus before characterized, after the manner of a forcible simile by Lamartine, the great national impulse towards improvement and development now in force. Talk as we may, there was never before, in the same length of time, such an absolute growth of our country, such an addition of men and means, as within the last five years. Never before have we acquired such a start upon the old world in population, wealth, valuable thought and social culture. We have carried on every scheme of material improvement, we have maintained a geometrical rate of increase in the "construction account" of the country, and we have sustained ourselves upon an amount of national capital, which, if merely measured in money would appear small enough. But we had other available means. A fertile soil, temperate climate, vast natural wealth only requiring to be coined, equal laws, popular energy, and all the most improved means of applying, directing and preserving popular effort, have together realized the most of our advancement. They have also been, in themselves, the bases of the soundest foreign and domestic credit, upon which we have often relied, thus anticipating our resources for the acquisition of more. The elements to whose operation we have assigned our success have not given a fictitious standard to our wealth, for they are in no danger of speculation. Our wealth is in no danger if we have not involved our credits too deeply.

But it is due to caution to say that such unexampled progress, such extended development of cities, towns, farms, mines, mills, roads and railroads, and consequently of trade and commerce, are sufficient, at the rate we have gone, to exhaust the money capital of the country within a few years. The present pressure is only the note of approach of such a crisis. The high prices, consequent upon an extended credit system, are already warning us to limit our improvements. The high price of money itself is the surest indication of the drain that has been made upon it. It is the inflation of credit which, giving a higher relative value to money, depreciates the value of stocks and bonds of fixed per-cent. interests and profits. It is the same inflation of credit which depresses stocks and which elevates the prices of food, fuel and clothing.

The truth is, money is scarce, and railroad as well as other debts feel the consequences. A little vigorous working of our farms, mines, and our manufactories of staple products, will press a little more actual wealth upon the markets and lower prices considerably. A brief postponement of new improvements, whether in city, town or hamlet, will help the recovery.

But while we admit the pressure of the times, and thus account for it, we cannot admit that railroads have done much to produce it, by the absorption of capital in their construction. Their construction has seldom been beyond the immediate commercial wants of the country. But the very commercial wants, and the general activity of expenditures which they have induced and promoted would, in time, have involved our na-

tional solvency. If railroads had only doubled their own value upon property, all would be well enough, but they have added to our wealth five-fold their own cost, and thereby conferred a prosperity to which our circumstances are not yet adapted. Railroads have elevated a standard of values under which their own is depressed, giving the community a benefit derived from the stockholders' loss.

To those whose sight is so restricted as not to be able to discover any applications of capital, except as reported in large amounts to railroad companies, we commend a survey of the progress of our country since the development of our system of railroads has commenced. If, in the vast property improvements, the concentration of people in city limits, the extended range of popular wants, the great popular efforts for social and national elevation, they can discover no cause for absorption of capital and the present stringency we can only advise them to purchase lots, erect and furnish houses, hotels and stores, grade streets and put up gas works; making their purchases at present prices of labor and materials, and then to sell their property when finished. They will be forced to admit that revolutions swallow the fortunes of multitudes, although their participation was in a revolution of improvement.

Concord Railroad of New Hampshire.

The thirteenth annual report of this Company shows the receipts of the road for the year ending March 31st 1854 to have been..... \$329,744 76
Expenses of working road..... 171,111 94

Net earnings..... \$158,632 82

Out of the latter amount have been paid two four per cent. dividends on the capital stock of the Company; besides paying a state tax on the capital stock, balances to connecting roads, the purchase of two new locomotives in place of one old engine sold, and the addition of nearly \$12,000 to the permanent deterioration and contingent fund of the road. This account is now \$29,454 65.

The construction account at the date of the last report was..... \$1,409,097 79
Increase during last year..... 24,411 12

Present construction account..... \$1,433,508 91
Leaving of unexpended capital..... 51,491 09
Deducting loan of \$50,000 to Portsmouth and Concord Railroad leaves..... \$1,491 09

The Concord Railroad affords one of the most successful examples of railroad enterprise in the country. Its success lies in the advantages of its route, and in the economy and fidelity with which it has been constructed and operated. It occupies an easy and direct route, wholly within the Valley of the Merrimac, and is skirted by thriving manufacturing Villages and cities. Constructed with a heavy double track and equipped in the best manner, it has cost less than \$40,000 per mile, after being in operation for nearly twelve years. The Company has created no debt, and its stockholders have thus had room for intelligent action, with an undivided interest in the result. We have seen it stated that no passenger has ever been injured upon the road.

It must be remembered however that the Concord is a "trunk" road, more than three fourths of all its freight tonnage being received from road extending north of Concord. Add to this the great manufacturing activity on its own line, and

it is seen how numerous and abundant resources are required for the full success of even an economically constructed and managed road.

Lexington and Danville Railroad.

The third annual report of this Company shows that, while their enterprise has been subjected to much embarrassment to avoid financial sacrifice their work has nevertheless progressed with commendable diligence. The road, which by improvements in location effected within the past year, is reduced to 34 miles in length, is graded for 16 miles south of Lexington; a tunnel through solid rock, and 512 feet length, is completed, while nearly all the buildings necessary for the operations of the road at Lexington are under construction. It is believed that the rails will be laid to the Kentucky river this fall, while the completion of the entire line is anticipated during 1855.

The Lexington and Danville road is of the same gauge as the Southern roads, and will centralize the lines approaching from the South-east, south and south-west,—from Knoxville, Nashville and Memphis, and throw them upon the Covington and Lexington road, terminating at Cincinnati. Although but a short link, it is a most important member of the railway system of Kentucky, and of the system of roads with which she will be approached from adjoining states.

The great difficulty met at every step of the Company's operations, and one which has delayed and still delays the completion of their works, is the want of proper financial aid. The exhibit of the affairs of the Company, as contained in their report, shows them to be over \$26,000 in debt after the expenditure of all their available cash means, and the use of all the county bonds which could be disposed of at any tolerable sacrifice.

Of an issue of \$350,000 of county bonds, the Company have sold \$235,000 at a discount of over 11 per cent., the net proceeds being \$235,473 89.

This amount with \$50,000 from Jessamine County, with under \$103,000 of cash subscriptions and the means borrowed by the directors, have been the whole basis of the Company's expenditures. The payments of the Company have been thus far \$414,410 42.

It was under such a pressure of circumstances that the Company have been forced to let two thirds of their road, at high rates, to reliable contractors, who have agreed to take in payment the balance of the issue of County bonds and the remainder in mortgage bonds of the Company, bearing seven per cent. interest. The Company have already provided for the issue of these bonds to the amount of \$700,000. The bonds created last year, being \$300,000 of six per cent., have not been disposed of, and are now cancelled to be replaced by the new issue. When the money to be raised on these bonds shall have been expended, they will possess a security of the most desirable character; a conviction inevitable upon the inspection of the route, objects and connections of the Company's road.

The crossing of the Kentucky river will be by a suspension bridge of the boldest and most substantial plan. The Company report nearly \$68,000 as already expended upon this work.

Greenville and Miami Railroad.

This road has been fully completed for business through trains having been run from Dayton to Indianapolis on Tuesday August 22d.

Cotton.

Among the leading agricultural products of the United States are Cotton, Indian Corn and Tobacco. They may be said to exercise a vast influence over the fortunes of mankind. The cotton trade amounts to millions of dollars in the aggregate per annum, and gives employment to thousands and tens of thousands of human beings, not only in the Old World but the New. It at present, perhaps, constitutes the greatest bond of peace between Great Britain and the United States. The Southern States of the American Union produce by far the largest portion of the cotton that is grown throughout the world, while England is the leading purchaser and manufacturer. At every symptom of discord between the two countries, the cotton spinners as well as the cotton growers become alarmed. Hence too, the extraordinary efforts that have been made of late years to discover some substitute for the American product. The Board of Trade of Manchester have expended large sums of money in efforts of this kind, but thus far with little success comparatively speaking.

A few years since they engaged a highly accomplished gentleman, Alexander Mackay, Esq., to visit the East Indies, and ascertain, if possible, if any portion of the British possessions in that section of the world could be made more available for the cotton culture than at present—so as to compete with the United States. Mr. Mackay was eminently qualified for the task, having for some time before visited the United States, and resided for a considerable period south of the Potomac. He immediately set forward on his mission, and succeeded in collecting much valuable information, but unfortunately he died on his way home. His papers were subsequently collected and given to the world but they were in a condition so imperfect that the results were far from satisfactory. The relations between the United States and Great Britain have, of late years, been so friendly that the apprehensions of English manufacturers have measurably subsided, and although the hope of discovering a substitute for American cotton has not been wholly abandoned, the prosecution of the enterprise has, in some sense, been postponed.

Meanwhile the cotton culture of the U. States goes on as extensively as ever. The earliest record of an export of cotton from this country, is dated 1747, when seven bags were shipped from Charleston. Thus then, in less than one hundred years the trade has increased to millions of bales per annum. A curious feature in the history of this fabric is, that in 1784, or little more than a half a century ago, a shipment of 71 bags of cotton was made from this country to England, and on its arrival it was seized by the authorities, on the ground that America could not produce a quantity so great.—The average annual yield for the last five years ending 1835, was estimated at 1,000,055 bales. The average yield for the same period ending in 1840, was 1,440,000 bales; and the average annual yield for the like period, which terminated in 1850, was 2,270,000 bales. The total product for 1853, was 3,262,382 bales. In this connection the following comparative statement of the growth will be regarded with interest:—

1824,.....	569,249 bales.
1834,.....	1,254,328 "
1844,.....	2,391,603 "
1853,.....	3,262,382 "

The consumption for the last year named may be thus divided:

Export to Great Britain,.....	1,736,860 bales.
" France,.....	426,728 "
" North of Europe,.....	171,176 "
" Other foreign ports,....	193,636 "
Retained for home use,.....	671,009 "

These facts exhibit results of a truly extraordinary character. They possess the more interest, from the circumstance that cotton is not indigenous to this country, and that the first seed was brought over little more than a century ago. The seed of the Sea Island cotton was originally obtained from the Bahama Islands, in the year 1785. It was first cultivated on Skidaway Island, near Sa-

vannah. The great impulse, however, that was given to the culture, was by the discovery of Whitney's cotton gin. After that period, its growth increased at a most extraordinary rate.—At this moment as already observed, the cotton culture and manufacture give employment to thousands and tens of thousands of human beings, not only in the New World but the Old. There is scarcely an individual in civilized society who is not partly clothed with cotton. It is one of the many products of nature, and has evidently been given by Providence for the especial advantage of man.—*Philadelphia Enquirer.*

Vermont Central Railroad.

The Boston Courier has the following with reference to the present affairs and future prospects of this road. We unite in the belief that the road may be benefitted by good management and by the accession of business likely to be soon received from the Canadas.

The nominating committee appointed by the Stockholders of the Vermont Central railroad at the last meeting in Cochituate Hall, after great and due deliberation, obtained the consent of seven "good men and true" selected to stand as candidates for directors of the corporation, to be voted for at the annual meeting to be held on the 12th September at Montpelier. The names have not yet transpired, but the character of the committee is a sufficient guaranty that the list must be a proper one, and such as will be acceptable to the true friends of the railroad.

The unfortunate Crane matter is in a course of adjustment, and will doubtless be settled within a few days, so far as restitution is concerned; but the injury sustained by the corporation and stockholders, in consequence of the over issued, shares, cannot be immediately repaired, as it will require time and future good management to restore lost confidence. A good board of directors, increased business, higher tariffs, and economical expenditures, reciprocity with the Canadas, and the opening of the Prescott and Bytown Railroad, are all favorable features.

There has been recently a reduction of thirty per cent. in the expenses of the Rutland and Burlington Railroad, under the watchful administration of Thomas Thatcher, the new President of the corporation. Systems of retrenchment have also been adopted by the Ogdensburg, Northern, Cheshire, Vermont and Massachusetts and Fitchburg Railroads, which will show well in the annual result, and prove the truth of the adage that a penny saved is equal to a penny earned. Extravagant expenditures on some of the new railroad, and the low tariffs, have been more in fault than any other honest causes in bringing about a depreciation in market value. The many millions of dollars expended in building these important lines should not be allowed to remain any longer unproductive for lack of proper management.

Northern Railroad Route to the Pacific.

Below we give a copy of a letter from Mr. James Doty who was left by George Stephens at Fort Benton, for the purpose of making meteorological observations during the past winter, ascertaining the fall and depth of snow, etc., etc. The letter possesses great interest in connection with the proposed Railroad to the Pacific over the northern route.

NORTHERN RAILROAD ROUTE TO THE PACIFIC.

Fort Benton, May 2, 1854.

Your letter of October 3, 1853, has at length reached me, via Olympia, Wallah Wallah, and Cantonment Stevens, and the St. Mary's Valley.

Since I last wrote, several important discoveries have been made, and questions determined in regard to the N. P. R. R., route, all tending to establish the facts that it is eminently practicable for a railroad, and is a good, if not the best, emigrant road from the Mississippi or Missouri to Oregon and Washington Territories. By the survey

of Lieutenant Grover, the Missouri has been found navigable to this point for steamboats.

Captain McLelland has found two practicable railroad passes through the cascade range; and parties are now engaged in opening a road from the Sound to Wallah Wallah, thence to the Couer d'Alene Mission, and thence to St. Mary's Valley, to which point a good wagon-road from the head of navigation on the Missouri has been found by Lieutenant Mullen, who left here on the 18th March, with an ordinary emigrant wagon drawn by four mules, and, crossing the Rocky Mountains, reached Cantonment Stevens on the 30th, having travelled 206 miles, by the odometer, in 12 days.

The winter has been very mild, and but little snow in the mountains on the route. Lieutenant Grover, who left here on the 15th of January, with a dog-train, for Puget Sound, found no snow to the entrance of the pass of the Rocky Mountains, and through the mountains to St. Mary's, the snow averaged but one foot in depth. Thence to Puget Sound, he was compelled to take horses, and pass through in good time and without obstruction from snow. Two men whom I sent with Lieutenant G., returned in February, having walked from St. Mary's in fourteen days. My meteorological records show that the whole amount of snow that fell at this place since November was 30½ inches, and the greatest depth of snow at any one time was 4½ inches.

This is an excellent grazing country. There were large numbers of broken-down horses and mules, and several yokes of oxen, which had come through from Sauk rapids, 1,100 miles to this point left in my charge during the months of October and November. These were pastured on the river bottoms near here; not an animal died during the winter; and on the 15th March the horses and mules were in efficient working condition, and at the present time the cattle are fat, fine beef. The Fur Company's horses and oxen are worked all winter upon such food as they can pick up; in fact, stock in this country needs neither shelter nor food from the hand of man.

The soil in the St. Mary's valley is known to be fertile; and any examinations in this region show that on all the mountain streams their valleys, within sixty miles of the mountains afford soil of good quality and an abundance of wood. As to a profusion of excellent water, any one who glances at the numerous and never failing spring brooks and streams in the country will be convinced that man nor beast ever need perish from thirst. Of nutritious grass there is everywhere an abundance in the river bottoms, where its growth is rank, and the plains, hills, and mountain slopes, which are covered with a luxuriant growth of Buffalo grass.

Timber—white pine, pitch pine, and fir—is abundant and easily procurable. Stone—granite, limestone, and sandstone,—is found in the river bluffs and mountains; and what more is needed to render this country "eminently fit" for a railroad or emigrant route, or to be settled by farmers I beg to enquire of those who harp upon "sterile deserts" and "railroad routes through New Caledonia?"

If, as is assumed in a communication to the National Intelligencer of September 5, 1853, the occupancy of a country by the Buffalo is a guarantee of its fertility, then does the Northern railroad route bear the palm of all other routes. From the Shayenne to the Assiniboin camp near Fort Union, from the mouth of Milk river to near this point, we were always "in Buffalo." Indian tradition says they were always here. It is here they remain summer and winter; and their old and deep-worn trails, twelve or fifteen of which may often be seen side by side, traverse this country in all directions through mountain and valley.

The various detached parties of the expedition, and those stationed in the country have crossed and recrossed the mountains from November to May, with trains of pack-mules, and then with wagons, and without hindrance from the snow; and Lieutenant Grover who started with a dog-train and snow-shoes, had to abandon them for want of snow, says the accounts of this country

heretofore given are "a complete humbug," it being in no respect what it was represented, and by almost every one believed to be.

The meteorological register shows that in mildness of winter this country corresponds with the climate of Oregon, or of Europe in the same latitude, rather than with northern Canada or Nova Scotia. At the present time the new grass on the plains affords good feed; in the bottoms the feed was excellent the 15th April and is now luxuriant.

The spring, like the fall and winter, has been dry and warm, the first shower of rain since September 17, 1853, fell on the 21st April, since which we have had several showers—a thunder storm is now passing.

On Monday next I start for our northern boundary and the head waters of the Saskatchewan; and shall examine the passes of the mountain—with little expectations, however, of finding a better route than our wagon road to St. Mary's.—This latter part is not on the extreme sources of the Missouri, but is some distance below the "Three Forks," and is precisely at the point where its mighty river rushes through the "Gate of the Mountains" and starts on its long journey to the ocean. Could Lewis and Clark, in ascending, have left the Missouri at the point where the mountains first touch the river, they would have found an excellent pass to the St. Mary's river, and thence to the Columbia.

To give an idea of our spring weather in latitude 48°, I enclose the readings of the thermometer for April. The mean of the barometer for six months gives, for the altitude of this station, 2,638 feet above the Gulf of Mexico.

FORT BENTON, Great Falls of the Missouri.

Thermometer in the shade, in the open air, uninfluenced by reflected heat.

Date.	7, a. m.	2, p. m.	9, p. m.
1854.			
April 1.....	42°	52°	45°
2.....	48	70	51
3.....	50	66	49
4.....	59	73	62
5.....	55	62	46
6.....	46	58	34
7.....	54	51	38
8.....	53	61	42
9.....	55	68	51
10.....	63	69	56
11.....	41	67	47
12.....	38	61	40
13.....	47	66	50
14.....	47	70	50
15.....	42	81	58
16.....	64	76	68
17.....	51	73	53
18.....	54	82	65
19.....	52	69	57
20.....	45	66	53
21.....	40	66	46
22.....	50	53	44
23.....	54	51	46
24.....	42	62	51
25.....	50	57	56
26.....	52	64	52
27.....	48	52	48
28.....	48	63	55
29.....	51	69	61
30.....	57	68	58
Sums.....	1,498	1,946	1,527
Means.....	49° 9	64° 9	50° 9
Height of station above the sea, 2,638 feet.			
Latitude 47 de. 9 min. 33 sec.			
Longitude west of Greenwich, 109 deg. 33 min. 00 sec.			

JAMES DOTY, Observer.

The Resources of New Jersey.

The iron ore of this State has attained a world-wide celebrity, and is acknowledged to be the best, in many respects, that has been discovered. The geological survey, which has recently been com-

menced, will undoubtedly reveal many resources of equal excellence. A very valuable deposit, as we announced a few days since, has already been found in Sussex county, and rich marls probably exist throughout the State. In the iron and zinc regions new minerals will perhaps be developed, and possibly other metals discovered, which will be the means of employment and wealth to many.

About a year and a half since, some persons in searching at West Milford, Passaic county, for iron, came across a bed of clay, with the nature of which they were unacquainted. Until recently it has not been improved, on account of ignorance of its value; but a scientific investigation has revealed the fact that it is kaolin, an exceedingly valuable porcelain clay, which is quite scarce. It can be used in the manufacture of porcelain ware, tiles, fire brick, the glazing of cards, soap, paint, &c. The deposit at West Milford is of the purest kind; it is of various colors, white, red, chocolate, and others.

The porcelain manufactured from it will be equal, it is thought, to the best French. The deposit is large, and a company of capitalists is about to be formed, under the name of "Mackapin Kaolin Company" to work it. Similar deposits exist in Japan, China, Saxony, France, England, one at Amboy, discovered by the former geological survey, and one of an inferior kind near Philadelphia. The composition of the clay is alumina and silica, and it is generally formed from disintegrated granite. Many gratifying results, similar to this, will certainly be accomplished by a thorough explanation of the resources of our State.—*Newark Advertiser.*

The Business of the Canals.

The business and revenues of the State canals for the present year show a great falling off as compared with the results of a similar period of operation in 1853. We have no doubt that the opponents of our noble state system of improvements will take proper encouragement in view of so gratifying a condition of things, and will duly impress themselves with the belief that the canals will bankrupt our state at a no distant period. So long as their convictions cannot affect the enlargement we wish them every enjoyment of their refreshing faith. Seriously what are the reasons of such a decline in business?

First, there was less surplus for export in the west, comparing the present with former years. The crops are below an average, while the tide of emigration in that direction has increased the domestic consumption.

Second, the foreign demand for some of the chief western products has arisen in the midst of local scarcity; thus giving the producer a participation in the speculative activity of eastern markets. Hence to secure immediate participation in high prices at the east larger quantities than usual of grain have been sent forward by railroad. In great speculations in grain the canal retains the article too long in transitu. By both of the reasons assigned the canals are deprived of their accustomed movement.

Again, while high prices have diverted some shipments of grain from the canals to the railroads, they have in their cases held back large quantities of grain, the holders relying on a still further advance in prices.

Lastly it is proper to admit that until the canal is enlarged, and thereby enabled to move at lower charges for tolls and freights, the railroads are forcing a competition upon it from which they may derive some benefit.

Now let us ask how these causes will develop

themselves in future. The high prices of this year will induce increased culture in the next; after a season of such general drought we may reasonably look for a genial summer in 1855; the tide of emigration to the west, except by those seeking farms there, will be diminished, as in no other occupation but farming, can the west offer such inducements for immigration as for a year or two past: many of those who have lately emigrated west will become producers; and what is the effect? It is probable that the foreign demand will decline, a greater surplus will be offered from the west, the relative domestic consumption being also diminished; prices will fall; holders will press their grain forward to realize something in season, and thereby will such a quantity of wheat be sent forward as to compel shipments by canal on the score of economy. The Railroad freight charges are increasing, the canal will reduce its tolls and the boatmen their freights. Under such a view what will be the burden of the canals in 1855 and thence forward?

Railway Traffic Returns.

Great Western of Canada 229 miles.

Earnings for week ending August 25th.

From Passengers.....	\$11,765
" Freight.....	3,163
" Sundries.....	1,061

\$15,989

Number of Passengers..... 7,548

Total since 1st Jan. 1854.....\$679,180

" Passengers "..... 222,922

Grand Trunk Line of Canada 292 miles.

Earnings for week ending August 12th.

From 4,696 1st class passengers.....	5,689
" 491 2d ".....	861
" 8,717 tons mdze.....	6,981
" 747 M. feet lumber.....	2,693
" 691 cords firewood.....	1,381
" Mails &c.....	779

Total.....\$17,885

Total from July 1st 1854.....\$104,706

Ruttan's Ventilating Car.

We find in the Jersey City Sentinel an account by the editor of a trip in one of these cars upon the Erie road. It appears that this car surpasses, in perfection of ventilation, anything heretofore known upon that road. The editor says:

From the hour we left Jersey City until we reached our destination at Owego, we were never more delighted with a railroad trip during this season of the year. The practical advantages of this system of ventilation were demonstrated almost to perfection—the whole apparatus working like a charm in every department, to the no little delight of all the passengers who were so fortunate as to obtain a seat or standing-place in the car where it was used. There was no dust—no confined air—no undue pressure upon the lungs—no complaints of lassitude and uneasiness among the travellers—all felt as comfortable as if they were seated in a Summer arbor or some rural retreat. While the other cars attached to the same train, without this ventilator, presented a most striking contrast, the seats and passengers covered with dust, smoke and cinders, and the passengers almost suffocated.

On returning East the contrast was so great, that we can find no language to convey the counter effects of the unventilated car. A literal cloud of dust and smoke, with an unwholesome atmospheric pressure, indescribable in its effects, accompanied us back to Jersey City—it was like being transformed from the Elysian Fields to the deserts of Arabia.

* The same principle as applied to railroad cars, has for several years past been extensively applied

to public and private dwellings, not only in Canada, but in various parts of the United States, and has met with unexampled success, as we infer from numerous testimonials from parties who have these ventilators now in constant use, and speak of them in terms of the highest commendation.

We are informed that the expense of this improvement will not exceed \$100 to each car, excepting the stoves, if put in while the car is building.

At the request of the passengers in the ventilated car, an expression of their approval was drawn up, and unanimously signed, as follows:

A CARD.

We, the undersigned, now riding in one of the cars of the New York and Erie Railroad, ventilated by Henry Ruttan, Esq., of Cobourg, Canada, are highly delighted with the results of the experiment, and have never before travelled so comfortably and pleasantly, at this season of the year, upon this, or any other Railroad. This day, August 24th, is excessively hot and dusty, the entire train being enveloped in one continuous cloud of dust; and yet, in this car, so admirably does the ventilator perform its work, that the atmosphere about us is entirely free from dust and oppression, while we are continually breathing a pure and invigorating air. We unite, most heartily in urging upon Railroad Companies every where to adopt in their cars this method of ventilation, which is superior in every respect to any other mode which we ever experienced or heard of.

Loring Andrews, New York City.

Luther A. Pratt, Jersey City.

W. Thompson, New York.

J. Thompson, do.

William H. Akins, Ithaca, New York.

Charles G. Miller, Buffalo, New York.

Thomas Hoynes, Chicago, Illinois.

V. W. Baldwin, New York.

James H. Haynes, New York.

Charles T. Candee, New Haven, Connecticut.

F. H. Brown, do. do.

Charles E. Nicholl, do. do.

John A. Bender, Philadelphia, Pa.

E. W. Whitney, New York.

W. P. Ely, Gainsville.

W. H. Northrup, Cincinnati, Ohio.

W. L. Andrews, New York City.

H. N. Squier, do.

Mrs. M. T. Squier, do.

Henry Ketchum, New York.

J. P. Simson, C. Dith,

W. W. Ketchum, J. Dith,

Henry B. Beauner, H. W. Taylor,

John M. Robbins, Joseph C. Wells,

J. F. Merriam, F. V. Hough,

Thos. H. Dith, N. Maston,

E. Wilcox.

The following is a description of the ventilating arrangement.

The receiving cap is placed upon the top of the car in front, through which the air is forced into two conductors, termed "ducts," located at the right and left of the receiving cap on the corners of the car, through flues leading into the water tank, which presents a surface of water of two hundred square feet, beneath the floor of the car. The tank is about twelve inches deep, containing three inches of water, so divided as to cause the air to circulate in a serpentine course, before it reaches the pedestals through which it is propelled into the car, through four apertures on each side of the two pedestals, just above the heads of the passengers, and distributed in four directions, from the centre to each end of the rows of seats. The air is then exhausted by raising the two rear windows. This is the process for the Summer and Fall months.

In the winter, both pedestals are taken up—the aperture of one being covered with a seat, and the other with a ventilating stove, which forms a prominent feature in this invention. The air is then exhausted through the windows or ventilators on the top of the car, and is drawn into a flue on

each side of the car, which runs the entire length, under the passengers feet, and is drawn out at the rear end of the top of the car, through two "ducts" connected with the exhausting cap on top of the car. Thus is the circulation of air equalized during all seasons of the year, which, working as it does upon the principles of propulsion and exhaustion, renders the atmosphere constantly pure, pleasant, and invigorating.

New Jersey Locomotive and Machine Co.

On a recent visit to the large and active works of this company we were shown an engine, under construction, which we believe will have the greatest power of any yet built in this country.—It is an engine for the Lackawanna coal road of the six-foot gauge; has six coupled driving wheels supporting a weight of about 33 tons; 18 inch cylinders, 24 inch stroke and 4 feet drivers. The tube surface exceeds 1200 square feet. This unusually large engine it is expected will be finished within a week, when we shall be able to give our readers a full description of its construction and performance.

The New Jersey Locomotive works are also engaged in completing a large order of the heaviest class of engines for the New York and Erie road. While the engines previously built were inside connections, the remaining engines of this order are to be of the New Jersey Works' well known and highly successful pattern of outside connection, giving a better arrangement of the work, and destined in our opinion to make the most effective engines in use on the Erie road.

A large order of freight engines for the Central Military Tract road of Illinois, is also being completed. These engines are inside connected at the request of the parties ordering them, but have received several ingenious modifications of their machinery at the hands of the engineers of the works. Having details of these improvements we shall also be prepared to lay them before our readers as soon as the completion and successful operation of these engines shall furnish the proper occasion.

The New Jersey Locomotive and Machine Co. have earned and ever maintain a high reputation for the excellent character of their work. From no works have we seen more thoroughly built engines delivered, in which every part bore evidence of a liberal expenditure of labor and material.—The model of these engines is well known and approved of by engineers for its strength and durability and it is already copied in greater or less detail by other builders. In actual practice, the durability of these engines is remarkable. The retention of prime working condition by some of them on new roads has elicited the strongest praise.

It is gratifying to know that the ambition of this company to maintain an establishment for the production of uniformly first class work is so well appreciated and so liberally sustained by our oldest and best railroad companies. The great lines of roads in New York, Pennsylvania, New Jersey and in several other States are largely supplied from these works, and in each case with marked satisfaction by reason of the efficiency, durability and economy of their engines.

Within a short time the company have found it for the convenience of their patrons to establish an office in New York. They have accordingly located the business department of their Vice

President's office at No. 59 Beaver street, quite convenient to Wall street. C. W. Elliott, Esq., the Vice President of the company, remains at this office to attend to the company's interests in this city.

From the variety, novelty and excellence of the engines now constructing at this Company's works in Paterson, we shall have occasion to refer to them again.

Erie Railroad.

The following is a copy of the statement put forth by the Erie Railroad company, under date of Sept. 4th.

OFFICE NEW YORK & ERIE RAILROAD CO. }
New York, Sept. 4, 1854. }

The Directors observe with deep regret the great depression in the market value of the stock and bonds of the Company, and the almost total loss of its credit, so much so that the Board have been compelled to resort to very extraordinary measures to fulfil the obligations of the Company.

The Directors have not lost confidence themselves in the ultimate success of this Great Enterprise, and are confident that the plans they will adopt for relieving the Company from its present embarrassments, and providing for the Income Bonds due in February next, will meet with the approval of those interested.

At an early day their plans will be presented to the public, with a report of the business and condition of the Company, which the Board confidently believe will be satisfactory.

The operations of the road during the nine months of the present fiscal year, commencing October 1st, 1853, and ending June the 30, 1854, down to which time full accounts are made up, have been as follows:

Transportation Earnings,.....	\$3,958,298 42
Transportation Expenses, including	
Interest on the Funded and Floating	
Debt,.....	3,336,776 78
Surplus.....	\$616,521 64

Which shows a profit of \$616,521 64, equal to 8 per cent. per annum upon the capital of the Company, over and above all expenses of every kind, and the interest and commission which have been chargeable upon its entire funded and floating debt.

Notwithstanding the sickly season through which we have just passed, and the depressed state of the business of the country, and the consequent effects upon the business of the Road, the Board entertains the opinion that the returns when rendered for the last quarter of the year will present a net gain equal to the average of three previous quarters.

The brief statement is now made, in advance of a more full report, in answer to numerous anxious inquiries concerning the business of the road, and in the belief that something of the kind is necessary to prevent timid holders of the stock and the bonds from unnecessarily sacrificing their property.

Published by order of the Board,
HOMER RAMSDALL President.

The above is very well as far as it goes; but, unfortunately it fails to meet the emergency, and had better been withheld, we think, than published. Any person who has by him a statement of the earnings of the company for the present year, would have no difficulty in figuring out a similar result. It is not what the road is earning that the public want to know, so much as what it owes—the objects for which the floating debt has been created—the plans proposed for its liquidation—the present and prospective necessities of the company. What is wanted is, a thorough insight into its whole interior organization, so that

the public may feel that they have at last touched bottom. Until the company are prepared to do this, all partial and fragmentary statements only create suspicion and distrust, instead of allaying them. Such will be the effect of the above statement. Let us have the whole story, or nothing.

Improvements in Mobile River.

The concentration of Railroad enterprise upon Mobile is likely to elevate it to a new rank among the cities of the South. Occupying a central position on the Gulf of Mexico, and being at the extremity of three magnificent systems of northern and north-eastern railroads, and at the outlet of the natural drainage of over 40,000 miles of productive territory, it is destined so soon as these advantages are completed, improved and fully developed, to assume a commercial importance corresponding with our cities of first rank. The Mobile and Ohio road, connecting with Cairo, St. Louis, and Chicago, and by eastern branches to Nashville, Cincinnati and Lake Erie; the Alabama and Tennessee road, ultimately terminating at Mobile, and extending on the north to the roads forming the great interior lines from the north to the south; the roads leading to Charleston and Savannah; and the Mobile river, with its great commercial tributaries, are together the elements of greatness by which Mobile will advance.

Uncompleted as are all of these railroads and with an unimproved river navigation, Mobile is increasing faster in wealth and numbers than any other southern city.

It is known that active efforts and liberal outlays are being made for the improvement of Mobile river and Bay. These improvements which must benefit the whole interests of Alabama, are, strange to say, opposed by citizens of Baldwin county, directly opposite Mobile. The occasion of this opposition which, it is not supposed, will affect the progress of the improvements, forms an opportunity for stating the condition of the river, and the means by which it is expected to increase its capacity. The *Alabama Planter* in a recent number gives the following interesting account of the habits and condition of the river.

IMPROVEMENTS OF MOBILE RIVER.

An attempt has been made by the citizens of Baldwin to restrain the citizens of Mobile from completing the works now on foot for improving Mobile river, and consequently the Bay. Let us look a moment into the merits of the case.

The causes of the division of the river into two branches at its mouth are plain: 1st, the slight inclination of the surface of the river; 2d, the resistance of the waters at the bay; 3d, the too great width of the river towards the mouth. The waters becoming less deep by the expansion, and the resistance to the motion increasing with this expansion, the velocity will be diminished and permit the sediment to be deposited at the bottom, which leads to the formation of a bar. This accumulation of deposit in the mouth of the channel steadily increasing causes the water of the river to turn towards the sides, and thus two channels are formed with a sand bank between them, which finally becomes an island. The channels are indebted for their formation and depth, to the momentum of the water that passes through each. This deposit is called Delta, from its resemblance in shape to that letter of the Greek Alphabet.—Pinto's Island, in the mouth of the Mobile river, has been made in this way. And even in the eastern channel on the other side of Pinto's Island, a similar process has been going on, and a sand bank has been formed near the middle of that channel. It is this eastern channel that has been

contracted, or is now partially closed, for the purpose of throwing some of its water into the main channel of the Mobile river, which has lost its requisite scouring power by the withdrawal of its water through the several outlets.

The depth of the eastern channel was very irregular, principally along the eastern branch, therefore vessels taking the ground must, if heavily loaded, be liable to strain, consequently occasioning much additional wear and tear; besides under these circumstances the consequences become more serious to property. The narrowing of this eastern channel and giving it a proper form and direction, a matter of primary importance to all those who are in the habit of navigating the channel, is tantamount to deepening it, from the circumstance that at those parts where the width is least the water is deepest.

The natural result of the formation of the island being the raising of the bed of the river above and below the island, a decrease of depth takes place at both these points. It must, therefore, appear evident to any reflecting mind, that, to secure and preserve the navigable depth of the river, it is necessary to close the channel that is not in the line of the course of the river.

The depth of water above and below an island or sand bank, or, in other words, the least depth of water in the channel, constitutes the navigable depth of the channel. Of what use is it for the purpose of navigation to have a channel possessing great breadth in several branches, if the main desideratum, a sufficient navigable depth be wanting?

There is a very important distinction, which ought not to be overlooked, between the available and the non-available channel of a river, and any improvement undertaken with the view of benefiting the available or main channel, though it may be at the expense of the non-available channel, must certainly be justifiable.

The Mobile River is public property and no portion of the water should be allowed to be diverted from it by either nature or art, the effect of which would in any way be prejudicial to its navigation. The river is formed by a union of the waters of the Alabama and Tombigbee rivers, and all the water below that junction, which leaves the main channel and passes off through the outlets, is, in fact, and should be considered, a legitimate portion of that property which the public has in the river, and over which it ought to retain undisputed control, so that it may at all times exercise the power to regulate and dispose of it in any way that may be deemed most advantageous in securing a permanent and increased navigable depth to the Gulf.

Suppose that by any accident of flood or weather, or by the sinking of vessels or the deposit of logs, sediments &c., the main channel of the river were so blocked up, or obstructed, that most of its water would be diverted into the Spanish river; would the city of Mobile be prohibited by the principle of non-interference with nature, from using all the means in its power to recover the water that had been diverted from the main channel and to restore the previously existing depth, or to improve that channel so as to secure a still greater depth, if possible? Cannot the city of Mobile unite in a single channel the water of the Mobile river, which has been divided by Pinto's Island, in order to restore the former depth above and below the island, and preserve a greater scouring power down the bay?

Fuel for Locomotives.

Under the present high prices of wood, already \$3 per cord for Southern pine, our Northern roads are looking with increased interest to the employment of Cumberland, or other description of bituminous coal. The New Haven road has for several weeks been running its freight trains with this description of coal, burned in one of Winans' large engines. Another engine from the same builder is expected upon the road at an early day.

Working Descending Grades.

"Sentinel," of the *Courier and Enquirer*, is writing some thrilling sketches of Railway incidents, seasoned to the popular taste. In a recent life-picture, he describes the descent of a heavy freight train on the seven miles of the Erie road between "Gulf Summit" and Deposit. So far as he shows how powerless are the means relied on, under such circumstances for governing the descent of the train, we can endorse the truth of his description. He has furnished us with an occasion, therefore, (which, had we waited until winter, we should only have found in some bad accident) for saying a few words on the adaptation of locomotive power for working steepgrades.

The grade of the Erie road at the point named, is 58 feet per mile, for seven miles. The Baltimore and Ohio road, has a grade of twice the pitch for twice the length, viz: 116 feet per mile for 15 miles. In winter, "Sentinel," however, would find meagre materials for a wild picture of a descent upon the Baltimore and Ohio grade. Yet every one would suppose that it would be absolutely dangerous at all times. We will state wherein the security in working the latter grade consists.

The Erie freight engines are adapted to exert a moderate power at a high speed. The machinery is so proportioned as to give a natural velocity, with usual trains, of from 20 to 30 miles an hour, while most of those engines are able to run much faster. Having but moderate adhesion, with such quick susceptibility of motion, these engines, upon a bad down grade, are not able to act as a sufficient check to the train. Going up a grade, they are nearly stopped by a comparatively moderate load; going down, they are in danger of being crushed by the gravity of the train.

The Baltimore and Ohio trains on the contrary are proportioned for enormous power at slow speed. Their ordinary load up 45 feet grades is from twice to three times that drawn upon similar grades on Northern and especially on New England roads.—

The usual speed of these engines is but about 12 miles an hour. While they have the power to control their speed under any pressure likely to be exerted by their train, it would also be difficult to drive them up to any such speed as 80 miles an hour without developing a friction, from all parts of their machinery, of great retarding power.—The moving machinery of the Baltimore engines must work nearly twice as fast, for a given speed of train, as that of the Erie Engines. With all this, and the 28 to 30 tons of adhesion and large sand boxes of the Baltimore stock engines, they would be very unlikely to be urged at an unsafe speed, down any grade, by the pressure of any train which they could draw up the same grade. Our readers of technical tastes can compare for themselves.

Erie engines Balt. & Ohio

Diam. of cylinder...	18 ins.	19 to 20 ins.
Stroke of Piston....	20 "	22 "
Diam. of Driver....	62 "	48 "
Adhesive weight....	21 tons.	29 tons.

While a person having no particular knowledge of the nature of chilled iron, would suppose that a tire of such material would have less adhesion upon an iron rail than would a wrought iron tire, it deserves to be said that the Baltimore engines are provided entirely with chilled cast iron tires; these by ample comparisons being found to have equal adhesion with wrought iron tires, while they

have a most decided merit of economy in their superior hardness and ease of application.

American Railroad Journal.

Saturday, September 9, 1854.

Stock and Money Market.

The past has been an exciting week in the share market. The great fluctuation has been in *Erie*. The following table will show the extent of the fluctuations, for the week, of some of the leading stocks.

	Aug. 30.	Aug. 31.	Sept. 1.	Sept. 2.	Sept. 4.	Sept. 5.
<i>Erie</i>	87	35½	32	29	32	34
<i>N. York Central</i> ..	89	88	86	85¾	88	88¾
<i>Michig'n South-ern</i>	89	90	89		90	
<i>Michigan Centr.</i>			83	84	84	
<i>Harlem</i>	32½	32			31	
<i>Reading</i>	68½	68½	67	66½	68	68
<i>Cleveland and Toledo</i>	68½	69	68	68½		68
<i>Hudson River</i> ..	41½	40	35	36	38	37

The principal interest in the street attaches to *Erie*, the condition of which exerts a powerful influence over the whole market. It is stated that the company have made arrangements for their liabilities immediately pressing, through the assistance of Messrs. Drew & Vanderbilt. We do not, however, expect to see any great improvement in this stock till the company shall put forth some well digested and feasible plan for the payment of its Income bonds, and the restoration of its credit. We repeat what we have already said, that the financial success of the road depends upon such a step. The road can be made to pay seven per cent. on its cost, and can be placed in a position that will carry its securities to their former figures, and enable the company to raise all the money it needs without the aid of individual names. We state this as the opinion of the most careful and cautious of our monied men, and who have all along agreed with us in opinion. Nothing is wanting but good management to make this road all that it has been supposed to be.

The railway earnings for August as far as have been received are favorable. Those for the Hudson River and Cleveland and Columbus show a small increase over 1853. We presume such will be the case with most if not all our companies. When the universal prevalence of the cholera, the almost entire cessation of pleasure travel, consequent upon the "hard times," and the general stagnation of business compared with the greater activity which prevailed last year, are considered, the result, showing that railroads not only hold their own, but are going ahead, while everything else presents only half the bulk of last year, is highly favorable. However our people may have been disappointed in other matters, certainly they cannot charge their disappointment to our railroads, which are proving all that was claimed for them.

There is some foreign demand for railroad bonds; mostly of roads in operation; none for new works. So long as unquestioned seven per cent. bonds of old roads are selling at 80, there is not much chance for new projects. The market must first be cleared of the stock on hand. Money is in active

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Total cost of road and equip't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,748	113,520	none	86
Androscoggin and Kennebec.. "	55	824,863	1,043,540	2,036,140	177,003	80,053	none	32
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	42
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	94½
York and Cumberland..... "	20	285,747	841,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	17
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	105½
Cheshire	64	2,078,625	720,900	3,002,094	287,768	55,266	5	85
Northern	82	3,016,634	.....	.....	323,782	163,075	5	42
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	70
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	104½
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	20
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	4½
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	.....	.....	Leased to the Vt. Cent.	78
Western Vermont..... "	51	392,000	700,000	.....	.....	.....	Recently opened.	none
Vermont Valley	24	.....	.....	.....	.....	.....	.....	none
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	81½
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100½
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6½	77
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	95½
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern..... "	68	2,850,000	1,192,975	3,120,391	620,810	310,875	6	61½
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	93
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	87½
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central "	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,897	122,866	none	99
Taunton Branch..... "	11	250,000	none.	807,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	11½
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	52½
Western	155	5,150,000	5,319,520	9,345,258	1,525,224	746,736	7	93½
Stonington..... R. I.	60	.....	487,700	.....	240,572	110,892	.....	65
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	80
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	119
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	.....	.....	Recently opened.	none
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	45
Buffalo and New York City... N. Y.	91	900,000	1,550,000	2,550,500	.....	.....	Recently opened.	none
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	.....	.....
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	.....	.....	Recently opened.	130
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna..... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	36
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	388,783	none	42
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	31
Long Island..... "	95	1,875,148	518,246	2,446,391	205,068	44,070	none	22½
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	89½
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	11
Oswego and Syracuse..... "	85	350,000	206,000	633,598	92,353	46,072	.....	.....
Plattsburg and Montreal.... "	23	174,042	131,000	349,775	.....	.....	Recently opened.	none
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	.....	.....	Recently opened.	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	.....	.....	Recently opened.	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	.....	.....	Recently opened.	none
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,412	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	136,259	10	131½
New Jersey Central..... "	63	1,679,935	1,500,000	3,195,222	365,833	179,210	7	95
Cumberland Valley..... Penn.	56	1,184,500	18,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	.....	.....	Recently opened.	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	68
Philad., Wilmington and Balt. "	98	5,000,000	2,399,168	8,067,285	868,038	541,769	5	69

Railway Share List,

Compiled from the latest returns—corrected every Wednesday on a par valuation of \$100.

NAME OF COMPANY.		Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	85
Philadelphia and Trenton....	"	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co.....	"	47	.....	.....	.....	.....	.....	.....	97
Baltimore and Ohio.....	Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	49½
Washington branch.....	"	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..	"	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange.....	Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap.....	"	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh.....	"	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	"	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..	"	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac....	"	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	"	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central.....	"	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	"	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.....	"	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh....	N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina.	S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia....	"	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina.....	"	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester.	"	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central.....	Ga.	191	3,500,000	418,187	3,465,879	956,074	535,608	8	116
Georgia.....	"	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western.....	"	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee.....	"	71	.....	.....	In prog.	59,590	21,781	.....	.....
South Western.....	"	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River	Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston....	"	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio.....	"	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point.	"	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern.....	Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia.	Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..	"	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington....	Ky.	73	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington....	"	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort....	"	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington....	"	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh....	Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	59
Cleveland and Toledo.....	"	147	2,000,000	1,600,000	.....	.....	.....	.....	71½
Cleveland, and Erie.....	"	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus....	"	135	3,027,000	408,200	3,655,000	777,793	483,454	12	100
Columbus, Piqua and Indiana.	"	46	.....	.....	2,000,000	.....	.....	.....	.....
Columbus and Lake Erie.....	"	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton	"	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	.....
Cincinnati and Marietta....	"	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western.....	"	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan.....	"	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton.....	"	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami.....	"	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro.....	"	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami.....	"	84	2,668,402	482,000	3,169,733	667,559	352,133	10	.....
Mansfield and Sandusky....	"	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie....	"	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central.....	"	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi.....	"	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania.....	"	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana.....	"	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..	"	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia.....	"	54	1,291,700	26,000	1,310,062	314,434	168,612	10	.....
Evansville and Illinois.....	Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central.....	"	.....	.....	.....	.....	.....	.....	.....	.....
Indiana Northern.....	"	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine	"	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati.	"	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	.....
Lafayette and Indianapolis..	"	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru	"	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	.....
Terre Haute and Indianapolis	"	72	632,387	663,100	1,353,019	105,944	71,446	4	.....
Rock Island and Chicago....	Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.....	"	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central.....	"	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago.....	"	92	.....	500,000	In prog.	473,548	236,152	.....	.....
Michigan Southern and Ind. N. Mich.	N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	90
Michigan Central.....	"	232	.....	3,977,563	8,618,505	1,145,598	582,816	8	85
Pacific.....	Mo.	88	.....	non	In progres	Recently opened.	.....	.....	.....

request, but is sufficiently abundant for the purposes of a healthy trade.

Our Imports.

We published recently a statement of the revenues of the national government for 1853 and 1854. From these revenues the amount of our imports has been estimated. The means of estimation is the assumption that the duties paid are 25 per cent. of the dutiable imports. A cotemporary, by estimating the imports as four times the revenues of 1854, has given popular currency to the opinion that our imports for this year exceed those of 1853 by \$47,000,000. But as a large part of our revenues are derived from land sales, and as these are several millions more in 1854 than in 1853, it is found, as we last week exhibited by an extract from the *Economist*, that the increase of duties received during the last official year, over those of the previous year, corresponded with an increase of importation of but \$21,000,000. The figures quoted by us are admitted as correct, whence we infer that the balance of our national Exchanges are more favorable than is generally supposed.

Virginia and Tennessee Railroad.

The business of this road is increasing. The Abingdon *Democrat* states that the first six months of this year the receipts are about \$70,000 against \$40,000 during the same month last year. It will pay 6 per cent. on the finished portion of the road this year.

Northern Cross Railroad of Illinois.

The Quincy *Whig* announces that an additional force of laborers has been put upon this road between Quincy and Clayton, and the work is rapidly progressing. Track-laying will be commenced very shortly, and the contractors for that portion of the work design keeping pace with the progress of the grading and superstructure.

The Northern Cross road, it will be remembered, is the continuation of the Aurora extension and Central Military Tract roads and will give to Chicago an additional continuous line of railroad to Quincy on the Mississippi, opposite the Hannibal and St. Joseph road of Missouri. It is one of five great roads, to connect Chicago with the Mississippi river at as many different points distributed along the whole western boundary of Illinois.

Railroad from Peoria, Illinois, to St. Louis.

W. G. Wheaton, Esq. the engineer of the Peoria and Bureau Valley road has completed a survey of a road from Peoria, to Jacksonville, there to connect with the Jacksonville and Alton road to St. Louis. The distance between Peoria and Jacksonville is 75¾ miles. This line, with its extensions to Galena is expected to give to St. Louis the shortest route to the Upper Mississippi. It will also offer an additional route to Chicago, 35 miles longer from St. Louis than by the Chicago and Mississippi road. Passing through Jacksonville, Peoria and Peru, this line would command a large local support.

Ogdensburg Railroad.

It is stated that W. T. Enstis, Esq., the Treasurer of the Ogdensburg, has resigned, and H. M. Holbrook, Esq., has been chosen to fill the vacancy. It is also stated that George M. Dexter, Esq., has resigned the Treasurership of the Vermont Central, to take the office of Superintendent of the Boston and Lowell Railroad.

Engines on Vermont Central Railroad.

In speaking, recently, of the condition of this company, we alluded to its unfortunate and expensive system of motive power. We this week take occasion to illustrate the character and extent of this department by a special statement of the dimensions and construction of all the engines on the road. The chief points in this list indicating an inferior adaptation of power are as follows.

The engines are of too great variety of patterns.

The larger part of the engines are inside connected, and have involved, thereby, extraordinary expenses for renewing their cranks which can never be made certainly sound. During the last winter twelve cranks were broken and renewed.

The tires and driving wheels of the engines have suffered severely. 76 tires were burst and 43 driving wheel centers broken during the winter. The use of wrought iron tires, shrunk so as to strain the wheels very much, was persisted in, while a proposition was before the agents of motive power department, in which the agent of the chilled tire offered to apply it and pay any damages incurred by its failure. This offer was not accepted, although the chilled tires were running upon connecting roads without failure. It is believed the road has saved nothing by this refusal on the part of its agents, as its trains have been

subjected to innumerable accidents and delays and the expense of repairs of locomotives has been enhanced to an extraordinary amount, equal to nearly \$2,500 for the year for every engine in use on the road.

Again, the road has too large a number of high-wheeled engines having very high boilers and a very short stroke of piston, by which they rack and strain the track and themselves, at the same time. For an interior road with long grades of 50 feet, to run heavy engines with six feet drivers and but 18 inch stroke is opposed to all economy.

Lastly, with the exception of the Baldwin eight-driver engines, none of the freight engines are of sufficient power to conduct a heavy freight business with economy over 50 feet grades.

This circumstance last named, combined with the variety of patterns of the engines in use, has loaded the Vermont Central road with an equipment 50 per cent. greater than necessary for its past amount of business. It will be seen that the present number of engines is forty-two.

Leaving out the large Baldwin engines, none of the others take, as an average load, over 15 freight cars upon the 45 feet grades. On the Baltimore and Ohio road 30 cars are a regular and 45 cars a maximum load of a single engine over similar grades. The Vermont Central Road derives little

advantage from the powerful Baldwin engines as one or two are used as "pushers" and three or four of the remainder have been for a long time disabled by being burnt at the Northfield fire.

To show the employment of these engines it should be said that the Vermont Central and Canada roads, both operated as one, are 156 miles long; Northfield, the central station for engines, being 67 miles from the lower end of the road and 89 miles from the upper end.

The business of the road requires two through passenger, and two through freight trains each way daily, besides one freight train from Northfield to Windsor. In summer, an express passenger train in addition is run once each way over the road daily.

The road ought to be worked in the busiest seasons, with 12 freight and 10 passenger engines, with an allowance of 8 or 10 engines for repairs, spare engines, assistants, &c. With engines of proper power, this number would accomplish a greater movement than has ever been effected over the Vermont Central Road.

It is not expected to benefit the road under notice by these remarks, but its unfortunate and extravagant equipment, properly understood, may become a useful illustration to other companies, showing them what, under given conditions of grades and business, they ought not to adopt.

**SURVEY OF MOTIVE POWER.
Vermont Central R. R.**

Names.	Builder.	Date rec'd.	Diameter of Cylinder.	Stroke.	Length of Ports.	Width of Ports.	Width of Exhaust.	Diam. of Drivers.	No. Drivers.	No. Trucks.	Length of Tubes.	Diam. of Tubes.	No. Tubes.	Diam. of Boiler.	Diam. of Blast.	Length of Grates.	Width of Grates.	Depth of Furnace.	W't in tons.
			in.	in.	in.	in.	in.	feet.			ft.in.	in.		in.	in.	in.	in.	in.	
Gov. Paine.....	M. W. Baldwin.....	Aug. 1849.....	17	20	10	1 1-2	2 1-2	6 1-2	2	4	12.6	2	154	40	2 1-2	38	47	54	26
Vermont.....	"	May 1851.....	17	22	10	1 1-2	2 1-2	3 1-2	8	0	13.6	2	112	..	2	37	42	50	25
Huron.....	"	"	17	22	10	1 1-2	2 1-2	3 1-2	8	0	13.6	2	112	..	2	37	42	50	25
Oregon.....	"	"	17	22	10	1 1-2	2 1-2	3 1-2	8	0	13.6	2	112	..	2	37	42	50	..
Superior.....	"	"	17	22	10	1 1-2	2 1-2	3 1-2	8	0	13.6	2	112	..	2	37	42	50	..
St. Lawrence.....	"	June	17	22	10	1 1-2	2 1-2	3 1-2	8	0	13.6	2	112	..	2	37	42	50	..
Michigan.....	"	"	17	22	10	1 1-2	2 1-2	3 1-2	8	0	13.6	2	112	..	2	37	42	50	..
Key Stone.....	"	Aug. 1849.....	17	22	10	1 1-2	2 1-2	3 1-2	8	0	13.6	2	112	..	2	37	42	50	..
Burlington.....	"	Feb'y 1851.....	15	20	10	1 1-2	2 1-2	4 1-2	4	4	11.6	2	126	38	1 7-8	35	42	44	20
Erie.....	"	"	15	20	10	1 1-2	2 1-2	4 1-2	4	4	11.6	2	126	..	1 7-8	35	42	44	20
Saguenay.....	"	"	15	20	10	1 1-2	2 1-2	4 1-2	4	4	11.6	2	126	..	1 7-8	35	42	44	20
St. Albans.....	"	Jan'y 1851.....	13	24	9	1 1-4	2 1-2	5	4	4	11.6	2	126	..	1 7-8	35	42	44	18
Dutchman.....	"	1848.....	10 1/2	16	7	1	2	4 1-2	2	4	8	2	116	36	1 3-8	30	36	33	9
Adams.....	"	1848.....	5 1/2	14	3 1/2	3-4	3-4	4	4	4	6	1 1/8	45	22	1	18	18	24	5
John Smith.....	Hinkley.....	Oct. 1850.....	16	20	10	1 1-8	2 1-2	5 1-2	4	4	10.6	2	136	40	2	38	48	45	22
Winoski.....	"	June 1848.....	16	20	10	1 1-8	2 1-2	4 1-2	4	4	10	1 3/4	125	..	2	38	48	45	23
Iroquois.....	"	Nov. 1850.....	16	20	10	1 1-8	2 1-2	4 1-2	4	4	10	1 3/4	125	..	2	38	48	46	21
Cascadnac.....	"	June 1849.....	15	18	9	1	2 1-2	5 1-2	4	4	9.6	1 3/4	125	88	1 7-8	28	48	46	21
Nulhegan.....	"	Nov. 1850.....	16	20	10	1 1-8	2 1-2	5	4	4	10	1 3/4	125	40	2	28	43	46	22
Montreal.....	"	Oct. 1850.....	16	20	10	1 1-2	2 1-2	4 1-2	4	4	10	2	125	..	2	38	43	45	23
Montpelier.....	"	April 1852.....	15	24	10	1 1-2	2 1-2	5	4	4	10.6	2	135	..	2 3-16	37	42	50	24
Champlain.....	"	Oct. 1850.....	16	20	10	1 1-2	2 1-2	4 1-2	4	4	10.6	2	125	..	2	38	48	50	23
Missisco.....	"	Aug. 1848.....	15	18	9	1	2 1-2	5	4	4	9.6	1 3/4	125	88	1 7-8	28	48	46	21
Sorell.....	"	April 1848.....	15	20	7	1 1-8	2 1-2	4 1-2	4	4	9.6	1 3/4	125	..	1 7-8	28	48	46	..
Otta Queechee.....	"	Aug. 1848.....	15	20	7	1 1-8	2 1-2	4 1-2	4	4	9.6	1 3/4	125	38	1 7-8	28	48	46	..
Old Zack.....	"	May 1849.....	16	24	13	1 1-2	3	5	4	4	12.4	1 3/4	125	42	2 1-2	48	55	55	25
Lamoille.....	"	July 1848.....	15	18	9	1	2 1-2	5	4	4	9.6	1 3/4	125	88	1 7-8	28	48	46	21
Ethan Allen.....	"	June 1849.....	14	24	14	1	3	5 1-2	4	4	12	1 3/4	125	..	2 8-8	48	52	48	21
Swanton.....	"	Oct. 1852.....	15	24	10	1 1-8	2 1-2	5	4	4	10.6	2	135	40	2 3-16	37	42	50	24
Canada.....	Amoskeag Man'g. Co.	Sept 1850.....	16	20	10	1	2	5.10	4	4	11	1 3/4	182	40	1 7-8	37	42	50	21
Ontario.....	"	Feb'y 1851.....	16	20	10	1	2	5.10	4	4	11	1 3/4	182	40	1 7-8	37	42	50	21
Express.....	"	"	15	20	14	1	3 1-2	5.10	4	4	11	1 3/4	182	40	2 1-4	37	42	50	21
Ottawa.....	"	Jan'y	16	20	10	1	2	5.10	4	4	11	1 3/4	182	40	1 7-8	37	42	50	21
El Dorado.....	"	Aug. 1852.....	16	20	13	1	2 1-2	5.10	4	4	11	1 3/4	182	42	2 1-4	38	42	50	22
Windsor.....	Essex Co.	May 1852.....	15	18	12	1 1-8	2 1-2	5	4	4	11	1 3/4	154	40	2 1-8	38	40	52	23
Northfield.....	"	"	16	20	12	1 1-8	2 1-2	4 1-2	4	4	11	1 3/4	154	40	2 1-8	38	40	52	23
Richmond.....	"	Aug.	16	20	12	1 1-8	2 1-2	4 1-2	4	4	11	1 3/4	154	40	2 1-8	38	40	52	23
Essex.....	"	"	16	20	12	1 1-8	2 1-2	4 1-2	4	4	11	1 3/4	154	40	2 1-8	38	40	52	..
Waterbury.....	Souther.....	March	15	20	11	1	2	5 1-2	4	4	10	1 3/4	135	42	2	38	38	45	22
Stranger.....	Taunton Co.	Oct.	15	20	12	1	2 1-2	5 1-2	4	4	11	1 3/4	152	40	2 1-4	38	42	57	22
Royalton.....	"	Dec.	15	20	12	1	2	5 1-2	4	4	11	1 3/4	152	40	2 1-4	38	42	57	22
Iron Horse.....	Souther.....	June 1853.....	15	20	13	1	2	5 1-2	4	4	10	1 3/4	135	42	2	38	38	45	23

Steam Power on Highways.

We never advocate any mechanical arrangement of whose value we do not feel certain. We are not the advocates therefore of the use of steam carriages, however successful they may be as mechanical arrangements; as we have not the evidence necessary to determine our opinion fully in favor of their immediate adoption. But yet, neglected or matured, the idea of using steam on common roads is one of intrinsic value. It is only upon this point that we make any controversy with the *Scientific American*, a journal ostensibly devoted to scientific improvements, but which is opposing the idea of steam as a motive power on highways, without exhibiting any arguments whatever, and apparently actuated by no motives but those of hostile prejudice or selfish interest.

The *Scientific* opposes the idea in question as already obsolete, the reason being that it was tested years ago and was found unsuccessful. Is that a reason? Cannot steam be used on any plank or gravel road because a carriage built twenty years ago could not do it, setting aside the true fact that steam carriages were eminently successful, and were only neglected on account of the cotemporary introduction of railroads. It is just as much an argument against Railroads that Hackworth's engine was not "successful" at the trial of engines at Rainhill on the Liverpool and Manchester line. If the principles contained in Stephenson's engine had not then been tested, what would have been the general success of railroads, which our cotemporary calls the "great sensible idea of the present age."

Another "sensible idea of the present age," as the *American* calls it, is to convert common roads into railroads. We are most happy, for the sake of our national resources, that such an idea is not entertained, in its implied sense, by any body who deserves standing room in the "present age."

Steam carriages are proposed now to supply a different want from what existed in 1830. If generally adopted then they would have been used to carry passengers from London to Liverpool: if again introduced it would be to take the place of omnibuses in cities, and for a large variety of movement for whose accommodation it would be unreasonable to build an expensive railroad.

The position which steam carriages should hold is an intermediate one; being far in advance of the horse-power system, and far below the railroad system.

It is this position which the advocates of steam carriages would wish to assign to them.

The railroad system is the union of two valuable ideas, the reduction of the resistance to motion, and the application of steam power to overcome the resistance thus reduced.

The system of "city railroads" involves but one of these ideas, the reduction of resistance, the power being that of horses.

The steam carriage system involves the other of these ideas.

So long then as highways are kept open for travel, so long therefore is there a proper field for the exertions of those who seek to apply steam carriages. So long as the question involved is not one of road, but of power, the advocates of steam carriages have the best of their scientific opponent. And it must be said that if, as the *American* admits, "the idea of using steam on common roads was plausible before the era of railroads," it is

more plausible now than ever, for the supremacy of horse-power in our large cities has become a nuisance. Railroads have given employment to more horse power than could have ever been supported without them.

We have nothing to say as to when steam carriages may be introduced in our own city; the steam fire engine of Cincinnati has not yet been introduced here. Not one half of the inventions patented at the Scientific American agency have yet been successfully introduced, nor are they likely to be. Steam carriages can never be introduced merely by making them, let them be ever so safe, economical and capacious. The introduction of this system of locomotion must depend only upon a great popular movement, such as marked the introduction of railroads. We will find mechanics enough who will build steam carriages which shall be "fully successful" as mechanical arrangements, but to elevate them to a popular system is not so easy.

The harsh notice by the *American* of a recently improved steam carriage by an ingenious and most persevering inventor, J. K. Fisher, Esq., betrays an opposition founded on prejudice alone. The blundering criticism of one of the best features of Mr. Fisher's improvement, shows that the *American* is sadly deficient in knowledge of one of the best arrangements adopted along with the "sensible idea of the age." The *American* should be taken to task particularly for the following portion of its notice.

The steam carriage was asserted to be an improvement on all others; and one of these improvements was placing the cylinders outside of the wheels, an arrangement which gained for "Bury's locomotives the title of "Boxers." The arrangement is a bad one in every sense of the term; for at high velocities, the carriage would acquire a sinuous dangerous motion, like that of a drunken man ready to tumble into the first ditch.

The cockney allusion to a crude specimen of the locomotive, made many years ago, (Bury having for years made no other than inside-connected engine) would not be appreciated in a ride at 60 miles an hour upon any of the first-class and beautiful outside-connected engines of the Hudson River road. It is perhaps a sufficient answer to the following communication which the absurd statement of the *American* has called out from Mr. Fisher, to say that outside-connected engines are beginning to take the place of those upon any other plan, even in England; while here for many years, they have been recognized as the best and, properly counterbalanced, the *steepest* engines in use.

OUTSIDE CONNECTIONS IN DANGER.

Mr. Editor: The *Scientific American* is down upon outside connections: says "they cause a sinuous dangerous motion, like a drunken man ready to tumble into the first ditch," and are "bad in every sense of the term." All this and more besides, he says to show that my steam carriage is worse than all those with legs, and without legs which could not go as fast as two-horse stages, between Glasgow and Paisley, in 1833 or '34, built by "Gordon" or Napier, or Russell, it does not know which.

As you advocate this mode of connection, I presume you can tell me whether, at 60 miles an hour outside connected locomotives have any sinuous motion when duly counterweighted, and whether,

if they ran only a quarter as fast and had but half their length of stroke, they would have a "sinuous, dangerous motion," if not counterweighted at all. If there is such terrible trouble as this, and if there is no way of getting rid of it, and outside-connections are "bad in every sense of the term," I want to know it, so that I may put my engines inside. I do not perceive any "sinuous dangerous" motion in my carriage, when running down the slopes of Broadway as fast as it will go.

I want to know your opinion. Will such locomotives run off the track? Will such steam carriages run into the first ditch? Can they take milk to market without making butter of it? How shall we avoid these evils? Can they be avoided.

Do you know anything of Bury's locomotives, which the *Scientific* says got the title of "Boxers," by the right-and-left-handedness of their outside connections? Do they still continue in use? Does Stephenson or Crampton, or anybody in England, build outside-connected engines? Are they given up there, and universally admitted to be "bad in every sense of the term?" Are the American builders finding out their error, and giving them up? Did any Scotchman ever build one?

Please answer some of these questions and oblige

Yours truly,
J. K. FISHER.

North Carolina.

With the exception of the Wilmington and Weldon and Raleigh and Gaston roads, the railway enterprise of this State is quite recent. The Eastern portion of the State, long accustomed to enjoy the advantages of the through travel over the Wilmington road, is extremely sensitive to any new connections likely to be made between roads in the Western part of the State, whereby a new through Southern route may be formed.

Opposed, very naturally, to any diversion of its accustomed business, Wilmington, the only considerable marine port of the State, seeks to strengthen its position by making itself the converging point of the railroad system of North Carolina. With the Weldon road, into which the North Carolina Central enters at Goldsboro; with the Wilmington and Manchester road, and with a road to be built to Charlotte, Wilmington is quite well established in this position. It is probable also that an intermediate road will be required, running along the Cape Fear river to Fayetteville, one of the largest interior towns of the State.

With the present position of Wilmington it is not probable that that city is expected to become the terminal point for trade and travel going South, but that it seeks principally to reap the incidental advantages of traffic in transitu through its limits.

On examining the direction of several important interior lines, now built or completing, it is seen that a line of road extending from Richmond to Danville, Va., coincides with the general direction of a portion of the North Carolina Central, and with the Charlotte and South Carolina, proposed Columbia and Hamburg; and roads extending through Georgia. By the construction of 50 miles of road between Danville and Greensboro, this line, with the links now under construction, would

complete a continuous interior railroad line from Richmond, Va., to Augusta, Ga.

At the present time the Danville and Greensboro connection appears to be the bugbear of Eastern Carolina. But if Wilmington is to suffer from the construction of interior lines, (and we very much doubt it) there is more imminent danger, and some of it a little nearer home. The extension of the Orange and Alexandria road, in Virginia, connecting with the roads running through East Tennessee, will make the most direct route for all the long through travel going beyond Charleston and Savannah; and for such as seeks these two cities Wilmington is already in the right spot. Again, the road proposed to be run from Cheraw to Raleigh will complete an intermediate interior line, leaving Wilmington off the route.—What is she to do? The Wilmington *Herald* represents the sentiment of the Eastern part of the State as follows:

The project of connecting Danville with the N. C. Road at Greensboro', we see, is still entertained. We believe that this project was popular at Charlotte, until the proposed Road from this place to that thriving town, was agitated. It may be that there is a feeling still in favor of this connection; but we would intimate to our friends of Mecklenburg, that of all the projects of Railroad improvement heretofore suggested, or likely to be presented, this Danville connection scheme is the most distasteful to our people; and we concur entirely with the Charlotte Whig, that the agitation there of this Danville Road, will excite the feelings of the people of this section, and very materially cool their ardor towards the proposed new work from Wilmington to Mecklenburg. Let us hear no more of this Danville connection scheme. We are tired of its very name, and of the influence it would have, if completed, upon the State generally, and upon this section in particular.

If the Danville connection will have so fatal an influence "upon the State generally," what is the State to do when assailed by still better connections, against which opposition would be useless?

Now we are anxious to see the Danville connection formed, for the advantages it will confer upon a long and important line of roads, and with the full belief that it will benefit North Carolina "generally." Railroads are like rivers, while they drain they fructify, and we do not therefore believe that the vital strength of North Carolina is to be exhausted by any road running within its territory. The connection so much dreaded would only fertilize the business bases of its route, and make Charlotte, particularly, a more desirable point than ever before for the Western terminus of a road from Wilmington. The important town of Charlotte, lying nearly on an air line from Wilmington to Ashville and Knoxville would ultimately become the necessary point of intersection between the great East and West and North and South lines of the State, and would be one of the most desirable points with which Wilmington could be connected. The people of Wilmington are aware that the people of Charlotte could connect themselves more directly with Charleston than with any other marine port. A cheap road within the Catawba valley, using 30 miles of the "Camden Branch" and a nearly equal length of the South Carolina road, would be a "cut off" which might be necessary if Wilmington did not advance with her proposed road. A road to Charleston could be built and run

cheaper and quicker than the road to Wilmington. Charlotte is already connected with Charleston by a tortuous line of roads. Columbia alone will build a direct line from Camden Junction to Charleston, and there would be little difficulty in obtaining a direct route from Camden to Charlotte.

The South Carolina lines and Richmond and Danville road will properly look upon the right to the Danville connection as honorably due to the enterprise which is to do so much to develop and enrich the State of North Carolina, and will justly attribute its refusal to a want of courtesy on the part of the State. The report of the engineer of the Columbia and Hamburg road intimates that the right of way will be secured by a direct purchase of the lands to be occupied as a route. He says of the connection, "there is certainly no place in the United States where a road is more needed than here, or where the effects of the construction of a short line would be more distinctly felt. If North Carolina persists in refusing a charter to this road it will be built *without one*; on a road of its length there would be no difficulty in doing so."

But it is not necessary for any part of North Carolina to act on the defensive. While it is absurd and nearly impossible to force commerce from its convenient channels, and especially a "through travel" which, at any moment after the completion of new lines, might abandon the State entirely, it is only necessary for the State to encourage the construction of railroads wherever capital will incur the risk; and she is sure to attract and retain an aggregate of industry, enterprise and wealth far surpassing the forced gains from any obstructive policy.

Louisville and Nashville Railroad.

The following reply of Mr. Shreve, Prest. of the L. & N. R. R. Co., to some inquiries addressed to him with reference to the means and resources of his company, gives a brief exhibit of its financial condition.

OFFICE LOUISVILLE AND NASHVILLE R. R. Co., }
LOUISVILLE, Aug. 20, 1854. }

WILL, WATKINS, Esq.—*Dear Sir*; I received your favor, postmarked of this date, containing four interrogatories, to which you request prompt answers for reasons given. If this company could have been advised specifically as to the "various rumors" alluded to in your letter before me, I doubt not more ample information could have been given, but in the absence of such specifications the reply must be confined to the inquiries as made.

To your first inquiry, "Have any of the bonds of the company been sold, and if so, how many?" My reply is: All of the city bonds have been disposed of; thirty-eight county bonds have been disposed of. No first mortgage bonds have been sold.

Second Interrogatory.—"Have any of the bonds of the counties subscribed to the road been sold, and, if so, how many?"

Answer.—Eighteen bonds of Davidson county have been paid to the contractors, twenty to the locomotive builders, and ten sent to Frankfort-on-the-Maine for sale. The residue are in the possession of the company.

Third Interrogatory.—"Are the bonds of the company or the county bonds in any way pledged or hypothecated so that the company cannot demand and obtain possession of them without cost and detriment to the character and credit of the road and its securities?"

Answer.—No bond of this company, nor the county bonds, are pledged, hypothecated, or other-

wise disposed of, other than stated in answer to second interrogatory.

Fourth Interrogatory.—"In view of all the circumstances by which you are surrounded, will you be able to successfully carry out the pledges made the stockholders at their meeting, to build the road, during this year, to the junction of the contemplated branch road to Lebanon, with the aid of the city taxes levied this year for the Louisville road?"

Answer.—If the contractors will execute their contract, this company have every confidence in redeeming every pledge given—unless from low water preventing the delivery of the iron. No reason is now known why the road to the divergence of the Lebanon branch may not be completed in all the present year. Referring you to the annual statements contained in the report of the Board of Stockholder's meeting, June 19th, 1854, I hope with what is here reported, will be satisfactory in reply to your questions proposed, with assurance that it will at all times afford this company much pleasure to furnish any information in relation to all matters connected with their management of this road.

Very respectfully,
L. L. SHREVE, President.

Railroads in the West.

We wonder at the growth of the west. We wonder at its progress in the construction of Railroads. What are the causes upon which our conjectures may be satisfied? Simply its natural wealth and the energy which is seeking its development: its materials and its men.

The western country, having little impracticable ground and inviting settlement in every direction, offers the surest and most liberal reward for effort. Those who have gone there have carried with them strong personal ambition and energy; they have gone to reclaim an empire that they may become rich in its possession. They have, as a class of settlers, carried but comparatively little *moneyed capital* with them, but they have applied their own strength to breaking up the prairies and felling the forests; and thus have they developed the fruits of a rich soil,—products which if carried to the great markets will command wealth sufficient to enrich large communities. The present exportation of wheat from the State of Ohio is nearly equal to the whole foreign export of the country. This one product of Ohio will be sufficient this year for an exportation worth probably \$25,000,000 in the New York market. If, in usual seasons, the wool, pork, wine, tobacco and other products be similarly estimated, we may be able to form a just idea of the elements of wealth abounding in such a country as the west. It is this view which discloses the real value of *natural wealth*;—Ohio, with its valuation of eight hundred millions of dollars, of which but a small part has been carried into it by capitalists, most of it being actually developed from the soil and mines.

But slow would have been the development of Ohio if her natural products had depended only upon her rivers for avenues to market; and if to reach those rivers the surplus of the interior had eat up its own value in waggon carriage. Slower yet for States further west and north west, still further from the great markets, having fewer natural channels, a soft yielding soil—slower would be the development of those vast productive areas without the aid of railroads. The railroad is a necessary attendant upon, and often the pioneer of settlement. In many localities it is the only medium of exchange. It gives to wheat, to pro-

visions and to fruits the only value they can have above their support of the producer. Giving a reward to industry the railroad also confers value upon minerals, lumber and upon many other natural products which serve as the bases of manufactures; none of which without the means of, and the consequent inducements for, carriage, would have a greater value than air or water. It is industry and exchange *only* which give them value.

What an adaptation of country to railroads and of railroads to the country! A vast interior continent, bearing the treasures of future millions of beings, open in every direction to development; inviting communication between all points where population may seek to concentrate!

Is it not indeed in the great center of future empire, where the adaptation and the need of railroads are alike greater than elsewhere, that they should be most encouraged? If solvency is the basis of credit what confidence should we not have in the west. Material assistance needs only protection from abuse. Money advanced requires only to be confined to productive enterprises, as mere speculation is not so. Railroad investments, if based upon substantial resources of route, such as confirmed experience can approve, possess the soundest guarantees of support and redemption. The only leading obligation which should be imposed upon railroad enterprises is that they should be originated and one half paid for by the people immediately upon the route of the road. We doubt if sound financiering should accept a less guarantee. If otherwise there is no real evidence that the improvement is wanted, or that the people will be able to sustain it.

Journal of Railroad Law.

FRAUDULENT TRANSFERS OF STOCK.

Inasmuch as stock like all other property is occasionally transferred for fraudulent purposes, the purchasers of stock should not compromise their rights by any equivocal conduct of that character which is usually regarded as indicative of fraud. It is not always prudent to suffer the seller of stock to receive the dividends thereupon, although he may be able to show that they were received in behalf of and by the authority of the buyer. In regard to this the case of *Sabin vs. the Bank of Woodstock* 21. *Vermont Rep.* 358 will be found instructive. By a provision in the charter of that institution, no transfer of its stock was to be valid unless recorded in a book to be kept by the Bank for that purpose, and unless the person making the same should have previously discharged all debts due to the Bank. In October 1835 one Sabin who was the owner of nearly 200 shares of the capital stock of the Bank transferred his stock in due form on the books of the Bank to 45 different persons without consideration and simply for the purpose of influencing the result of an approaching election for Bank officers. Nearly all the shares, but not those conveyed to plaintiff, were reconveyed to Sabin by the persons to whom they had been transferred, and on the 9th of October 1837 he made a similar distribution of his stock for a similar purpose and at the same time transferred to the plaintiff two shares. Sabin was at this time indebted to the Bank to an amount exceeding the value of all the stock owned by him. The plaintiffs had no interest in the six shares which stood in his name until 25th October 1837, when

he purchased them of defendant in payment of pre-existing debts. On 16th of November 1839, the Bank attached these six shares as the property of Sabin on a debt which accrued Jan'y 6th, 1837, previous to the plaintiff's purchase and caused the shares to be sold on execution satisfy such debt. From the time the transfers were made in the Bank to the plaintiff until the time of the attachment, Sabin controlled the six shares as well as the others which he had transferred, as his own property and received the dividends upon them which were paid previous to the attachment, and the plaintiff made no claim on the Bank until 1841, when he demanded the dividends, and one dividend which became due previous to the sale on execution was paid to him, and the payment of those which accrued afterwards, refused. It was held by the Court, that plaintiff having so long suffered Sabin to treat the shares as his own was bound to inquire of the Bank as to the state of the title to the shares before purchasing them, and to give notice to the Bank of his having become the beneficial owner; that as between him and the Bank his title would only be considered as accruing from the time that such notice was given; and that the Bank having attached the stock previous to notice, could as against the plaintiffs, proceed to have the same sold. Nor did the Court consider that it made any difference that a majority of those who were Directors had advised Sabin to transfer his stock in the way above described. They had no right so to advise, although *bona fide* purchasers of stock who have had no notice of anything which might invalidate the title, are at liberty to rely upon the books of the Bank, as affording all requisite information as to the title of stock.

In fine, the Court was of opinion that although the formal title to the stock was in the plaintiffs, yet as he had for years suffered the real owner to act as if the shares were his own, he was bound to make inquiry concerning the stock before purchasing and after he had purchased he should have given notice of the fact to the Bank.

The Rock Island Bridge.

The War Department has interposed its authority to prevent the occupation of Rock Island for a valuable connection between the Chicago and Rock Island, and the Mississippi and Missouri Railroads. Rock Island, in the Mississippi river, between Rock Island City, Ill., and Davenport, Iowa, is held by the national government as a military reservation, and was occupied as a military station some years ago, but since the surrounding country has become independent of military protection it has of course been abandoned. The government has now no more use for the island, for military purposes, than for Mount Washington in New Hampshire. And if it had, the presence of a railroad would not impair its value for such purposes. The island is subject, however, to the disposition of the War Department, and it is probable that some diplomacy, if not a direct appeal to Congress, will be required, before the obstinacy of the administration can be overcome. The recent administration purchase, on national account, of a worthless strip of Mexican Territory for a Southern route to the Pacific, may have created a private interest adverse to any bridging of the Mississippi, unless coincident with the "Gadsden" route.

Railroads and the Times.

In our opinion, one of the narrowest views which can be taken of the circumstances of the times is that which charges railroads with being the chief absorbents of our capital. The relative cost of our railroads to our available means does not warrant the popular belief. If, in a year of activity and success, we open 2000 miles of railroads, our cautious advisers tell us we have drained the country of at least \$75,000,000. Now it is probable that \$15,000,000 only, paid for iron, is all that has gone out of the country, a sum scarce one twentieth of our ordinary foreign purchases. The balance of \$60,000,000 has been put in circulation at home, giving employment to our constructive industry, and developing domestic materials. Such an appropriation of energy and material is not less productive than that devoted to numberless property improvements. If the annual industry of our nation be averaged upon its 25,000,000 people, as being worth \$50 per head it amounts to \$1,250,000,000; our railroads getting less than one twentieth part in the periods of their greatest progress.

Now we think we can discover a better solution of the problem than by saying we are "short" through our patronage extended to railroads.—The natural impulse which railroads give to general industry, and particularly the fixed improvements to which they lead, consume a great portion of our capital. Well do our people know that the approach of a railroad gives to small towns the wants, the necessities, of moderate sized cities. Young villages become active competitors for labor, and assume the support of large bodies of workers, in carrying out local improvements.—And how is it with our cities. Let the wonderful concentration of our people within city limits tell the story for the last fifteen years. The streets, warehouses, handsome dwellings, piers, ships, shops and shows of metropolitan towns have consumed an aggregate of capital to which the cost of all of our railroads bears no comparison. If railroads incidentally open the door to new wants, and our people choose to gratify them, Railroads are not chargeable with the consequences.

Our Railroads, too, have attracted to our country an amount of foreign capital of at least \$150,000,000; a sum which, while it represents more than one third of their cost, has been the means of adding to our actual wealth more than the *whole* cost of all of our railroads.

We have thus a solution of the problem of financial stringency. We think it the most rational of any. While it relieves our roads of the imputation of consuming our principal surplus wealth, we do not attach the importance given by some to the extravagance of the times. Notwithstanding our government is throwing away annual millions, or useless treaties, on lumbering diplomacy, and needless efforts to sustain abroad a national dignity, already able to sustain itself—notwithstanding the annual excess of our imports, and the occasional abuse of the spirit of improvement, leading to luxury and extravagance,—still, it is clear as noonday that the vast development of our country, its revolution of improvement, undeniably promoted by the influence of railroads, is absorbing and is likely to absorb all of our available means.

Let not those then who anticipate the approach of railroads, and who put all of their capital in re-

quisition in improvements of property, grumble if railroads themselves, the necessary agents of progress, become competitors for their money.

We feel forced into this vindication of our railroads by the current but temporary distrust of their value, and by the imputations of those who charge them with all of our financial difficulties.

We are especially sorry to see this sentiment echoed in Kentucky. While we are convinced that the whole doctrine is unsound, we must say that if Kentucky be taken as an individual illustration, she has been drained to but a comparatively small amount by her assistance to railroad enterprises. The only two short roads in operation in that State have been embarrassed for the want of money, and one in construction has already failed to meet the interest on its bonds. We do not wish to reflect upon the enterprise of the State, but in vindication of an important interest, we must say that at this time, in view of the resources of Kentucky, and of the influence which railroads are destined to exert upon her, no paper occupying the position of the *Louisville Journal* should seek to chill enterprise in the bud, and array the fears or prejudices of the people of a great state against their surest means of advancement.

Security from Fraud.

The occurrence of one or two great frauds has been the greatest test of the condition and of the fidelity of the management of our railroads which they could have. The corruption of a leader often stigmatizes a cause, and so the individual soundness of every railroad company was in a measure involved in the popular opinion of Schuyler. The most searching investigations have followed in nearly all quarters, and for the credit of our railway enterprises it should be at once said that where frauds have not been already disclosed, everything is found secure. Where our roads are built by the people, by those who contribute from their own means and retain the management among their own number, there is little fear. But wherever the public become dazzled by the abilities or successes of an individual, and incautiously yield him the entire control of their interests in large investments, recklessly according the title of Steamship, Factory, Banking or Railway "King," as his employment may happen to be, there is no real security from fraud and loss. The result is sure to realize the ancient fable of Jupiter and the frogs; wherein it was shown that the first act of a king, created by a multitude, was to devour his own subjects.

We know as much as any one, that no single material interest of the country requires more extended and more purely sustained personal confidence for its existence, than the railway interest. Hence, we are anxious, to a corresponding degree, that this confidence be not abused, either by those who extend or those who sustain it. It is this conviction that compels us to hesitate when we see a "strong name" lent to the support of an unworthy project. And we are, at the least, oppressed with anxiety to see such a name in demand, indiscriminately, for all projects. There is no tyranny like that of the individual; no slavery like man-worship.

Our people are very apt to confound success with ability. As the world goes, success oftener follows power than talents. Schuyler himself

is a public illustration. As an engineer and as a railroad manager his talents were of a very common order. Nothing that he has done in either of these professions deserves especial commendation. Yet he watched his chances and became apparently "successful." The power to divert public opinion and to maintain the supremacy of the individual will, is the chief element of popular success. Many a poor fellow would be "successful" could he have done as he pleased, putting "ability" out of the question. Sing Sing is but an infirmary for those who have failed in the effort.

As popular deities burst and vanish in thin air our people learn that within themselves is their own strength; that although confidence is essential it sustains an accountability in proportion to the interests it involves, and that none who refuse the test deserve the trust. In public enterprises, individual tendencies must be restrained, and speculation of every kind must be checked except every one interested chooses to incur the risk.—It is speculations, conducted by individuals in the name of corporations, that have brought many of the losses and embarrassments lately heaped upon the railroad interest.

We need to feel an evil to correct its cause, we are all safer that we have found our danger. Our roads are using additional means to prevent its recurrence.

The *Cleveland Herald* in announcing the appointment of a Register of Stocks in this City for the Cleveland, Columbus and Cincinnati Railroad, says:

We learn that immediately after the disclosures of the Schuyler frauds, and on the request of Messrs. Winslow, Lanier & Co., the transfer Agents in New York, the Board directed an investigation of the books of the agency, and the faithful and accurate Secretary of the Company, Mr. Williamson, was charged with that duty. Mr. W. devoted three weeks to the examination—during which time he traced each certificate of Stock that had been issued from the office in New York to its surrender, or to its present holder, and found that there had been no over or erroneous issue, but that in all respects the books had been properly kept and the business of the agency satisfactorily conducted. But the Board have provided an additional guard against fraudulent issues for the future, in requiring certificates to be countersigned by a Register, in addition to the signature of the Transfer Agents as heretofore.

As we understand it, the book of certificates signed in blank by the President is entrusted to the keeping of the Register, who is a distinct officer from the transfer agents. A person desiring to obtain a new certificate surrenders the old one to Winslow, Lanier & Co., the transfer agents, by whom, if the transfer is found genuine and in due form, it is canceled—they subscribing their name thereto, with the date—and directing the name in which the new certificate is to be made out.—This certificate is then presented to the Register, who personally examines the transfers, and if found right, also cancels the same, endorsing the date and his signature. He then fills up and countersigns a new certificate and returns it to the transfer agents, who countersign and deliver it to the proper party.

Each office makes a record of its transactions and reports monthly to the principal office—to which also the canceled certificates are returned at stated periods.

It appears to us that this system of checks is perfect, and from the high character of the gentlemen filling the responsible positions of transfer agents and register, as improper issue of stock is rendered impossible.

(Erie Railroad Equipment.)

The engines of this road now number above 200, the majority being of a very heavy class.—Very few roads have a more effective or more actively employed rolling stock. Additions are still making to this branch of the equipment, and although not necessary at present, 450 locomotives will doubtless be ultimately required for the business of the road.

The engines of the road are of considerable variety of pattern. Nearly 60 however, the largest number from any one builder, are from the works of the New Jersey Locomotive and Machine Company. This company may be said to be the leading builders of broad-gauge engines in the United States. Among those from their works are nearly all the heavy ten-wheel engines of the Erie road. The superintendents and engineers of these works were long connected with this road, and have brought out several arrangements in their engines of much value. The use of two steam domes, of the center-bearing truck, and application of flanges to all of the driving wheels, were made by the superintendent of the New Jersey Works during his former administration of the machinery department of the Erie road. Mr. Jackson, the President of the works, expects to deliver this week a broad gauge-engine to the Lackawanna and Western road, of greater power than any that has hitherto been built in this country.

Southern Line of Travel.

{ OFFICE OF R. & P. R. R. CO.
{ Richmond, Aug. 29th, 1854.

To the Editor of the R. R. Journal.

Dear Sir,—I notice in your last an article in which it is stated that travellers going south by way of Richmond, Petersburg, &c. are six hours in being conveyed by steamboat from Washington to Acquia Creek, a distance of 54 miles. This is a mistake (no doubt unintentional) the usual time taken by the boats now on this line, to run the distance, is from two hours and three quarters to three hours and a quarter according to the weather. The whole time from Washington to Richmond 180 miles, viz 54 by steamboat and 76 miles by railroad varies from 7½ to 8 hours, the usual time from Washington to Petersburg including time for dinner and the transportation of the mail and passengers through Richmond is 9½ hours. The distance 154 miles. The passengers and mails that leave Washington at 6½ A.M. arrive in Petersburg at 4 P.M. the same day.

Very respectfully

Yours
THOS. DODAMEAD,
Supt R. & P. R. R.

The time, as by the advertised schedule, between reaching Washington and leaving Acquia Creek, going south, is 4¼ hours by the day, and 5½ hours by the night line. Returning North, the time from leaving Acquia Creek to the departure of the cars from Washington is 4¼ hours by the day and 5¾ hours by the night line.

In our statement we did not intend to speak especially of the speed of the boats on the Potomac, but of the detentions as well as time consumed in motion, all of which are suffered from the want of continuous railroad connections from Baltimore to Petersburg. We said six hours from our own re-

collection of one or two trips, and without consulting the advertised schedule.

It is 10¼ hours between the times of reaching Washington in the morning and Petersburg in the afternoon. It is 13 hours also by the night line. Distance 154 miles. We submit that the "important connection in the southern line of travel", alluded to by us, is very much needed.

ED.

Compound, or Continuous Rails.

The experience of each successive year makes more apparent the fact that the operation of Railways in this country, is "still in its infancy." And in no other characteristic is this fact more readily perceived, than in the great advances that have been made in the manufacture, and laying down of rails, and the increased speed which has resulted therefrom. From fifteen miles the hour on the old flat bar, we now move forty on the heavy T rail; and it is a pretty well attested fact that with a good pattern of continuous or compound rail, we may journey as safely sixty miles the hour, as we do now forty.

The advantages of a continuous track are obvious to every practical mind. It relieves the car from the constant bounding motion which it now acquires in passing, or jumping, over the rail. The passage of heavy trains over the joints at high speeds settles the chair slightly into the tie and the consequence is the slight depression of each end of the rail which results in the succession of "jumps" before mentioned. The danger occasioned by them to trains whirling along at lightning speed is alarming and restrains the express trains several miles per hour in their progress. Besides this, however is an economical advantage resulting from the use of the compound rail. It is the reduction of the depreciation in value, of the Rolling Stock. It is estimated that the saving on this head alone would, in three or four years, pay the difference in the cost of the rail, even though the old rails were sold at a heavy discount. The compound rail, it is also contended, will wear much longer than the patterns at present in use. This is a reasonable conclusion, for, owing to the steadiness of the train in passing, there is much less friction and the conclusions are much less forcible.

Of those patterns of Compound Rails which have been before the public in the *Journal* we have said but little, deeming it best that experience should apply the test and decide upon their merits. The "WINSLOW" pattern has had a fair trial on several different roads in this State in all of which the result has been highly satisfactory to all parties. The "LATROBE" pattern has been tried on the Baltimore and Ohio road and has proved eminently successful. The WELLS & SERRELL pattern is about to be laid down upon an Eastern road and we look for even more favorable results, from this pattern than have yet been demonstrated. It will be observed that this rail is in two parts and requires no fastenings but spikes or chairs. No rivets are used, no severe strain or friction can come upon the "base" rail, and if one side of the "Cap" wears out more rapidly than the other it can be changed with facility; and it seems to us that the rail is so modeled as to secure the best possible service and the full strength of the iron.

We believe true economy and a proper regard for the safety of life, require the adoption by rail-

way companies, as rapidly as practicable, of the continuous rail. The best pattern will be discovered by use. That all, thus far, are economical and safe in a great degree is one strong point in their favor.

Railroad Consolidation between Cincinnati and Chicago.

According to previous notice, a meeting of the stockholders of the Cincinnati and Chicago, and the Cincinnati, Logansport, and Chicago Railroad Companies, was held at New Castle, Indiana, on Thursday last, to consider the propriety of consolidating the two companies, and after a free and full discussion, in regard to the beneficial results of such an act, a vote was taken upon the question and upward of thirty thousand four hundred votes were cast in favor of consolidation, and none against it. After which the consolidated company assumed the name of the Cincinnati and Chicago Railroad Company. The following gentlemen were then elected Directors to serve till the first day of January 1855.

C. B. Smith, R. M. Corwine, James Pullan, Jos. A. Jamea, D. A. Powell, of Cin.; Williamson Wright of Logansport, Ia.; Col. S. Meredith, William Butler, Jesse Hiat, of Wayne Co, Ia.; Judge M. L. Bundy, of Henry Co., Ia.; Judge T. J. Sample, of Delaware Co., Ia.; Sam'l Jay, of Grant Co., Ia.; and Col. H. Hannah, of Wabash Co., Ia; after which the Hon. C. B. Smith was unanimously elected President of the new board, Col. S. Meredith, Vice President, and Stanhope S. Rowe, Secretary. The office of this Company is established at No. 33 Ohio street, Cincinnati.

This road is a continuation of the Cincinnati Western R. R., and one in interest, and is now the direct line between Cincinnati and Chicago. A large force, we understand, is now at work upon the road.

Syracuse and Binghamton Railroad.

A correspondent of the *Albany Register* says of this road, and of the country which it is to develop as follows:

At the south of the Syracuse and the New York Central Railroad, north of Binghamton and the New York and Erie Railroad, there lies a broad extent of fertile country, comprising the southern portion of Onondaga County, the eastern portion of Cayuga, the whole of Cortland, the western part of Chenango, the eastern part of Tioga, and the northern section of Broome, which has been heretofore entirely shut out from the world.

The Syracuse and Binghamton Railroad is now nearly completed, running through the centre of the section of country named. It is eighty miles in length, upon forty miles of which, twenty from Syracuse southward, and twenty from Binghamton northward, the track is laid and cars are now running. It is intended that the remainder shall be finished and the cars run through by the twelfth of September.

Kennebec and Portland Railroad.

A meeting of the stockholders of the K. & P. R. R., was held at Augusta on Monday, to consider the question of leasing the Somerset and Kennebec Railroad.

The directors were authorized to take such lease if a satisfactory arrangement therefor could be made, and it was further voted to raise \$10,000, by an issue of 6 per cent preferred stock to purchase new equipment for the line.

The road is to be finished to Kendall's mills, during which time it is expected also that the Bangor will be completed.—*State of Maine.*

Portland Locomotive Works.

The Portland Company are just turning out two splendid locomotives for the Panama R. R. of 5 feet gauge. This company are full of work, and now employ 320 men.

Charles Jones, Esq., has been appointed Treasurer of the company, in room of J. O. Churchill, Esq., resigned. Mr. Churchill has held the office for some six years past, and now retires at his own request.—*State of Maine.*

Railroad Effects.

No man can long continue a skeptic as to the effect of railroads on the general development and prosperity of the country through which they pass who will take the trouble to keep his eyes open while passing along the Baltimore and Ohio Railroad. At every station almost a neat and thriving village is springing up, in many places towns, while the entire country wears a new countenance under the vigorous efforts of the husbandman, who now finds a market for his products, a place of purchase for his wants, and in every way calculated to reward his honest toil. Heretofore he could barely live by consuming what he made and making what he consumed; and now the market is at his door, and he can sell all that he makes and more than buy with his receipts all that he wants. The price has increased cent. per cent, in many places, while the general tendency of everything is to go ahead. Counties can observe, profit, and learn hence, that their corporate subscriptions are repaid them with interest the moment such works are completed, even should the stock not pay one per cent. or sell twenty per cent, on first cost.—*Wheeling Intelligencer.*

Survey of the St. Lawrence Rapids.

The survey of the rapids of the St. Lawrence is being pushed forward with vigor by Messrs. MAILLEFERT & RAASLOFF. The survey of the Coteau Rapids is now finished; and the surveying party has commenced descending the river towards the "Cedar" Rapids. Some accidents have occurred, but hitherto no lives have been lost. Mr. MAILLEFERT will make experiments in blasting rocks to clear the channel, in the mode so successfully pursued by him at Hell Gate.

Railroad Employees.

The following testimonial of the temperance character of the engineers upon the New York and Erie Railroad, is from the Rev. A. S. Lakin Missionary of the Ladies' Home Mission at the Five Points, who has long resided in the region traversed by that road, and is acquainted with many of the individuals. He says.

"The engineers, though they felt aggrieved until the new regulations were fully explained, are now perfectly satisfied, and are carrying out the order with credit to themselves and safety to the passengers of the road. One of the assistant Superintendents informed me that, during the strike, not one of the engineers were under the influence of spirituous liquors.

There is nothing insures the safety of passengers more than a sober engineer. This and the picturesque scenery, vast mountains and glens, small rills and majestic rivers, highly cultivated fields and extended forest, with some of the finest works of art in the State, and the polite conduct of the conductors, makes the Erie road one of the most safe roads in the country; whilst the wide gauge, commodious, strong and well ventilated cars, make it the most comfortable.

Discharge of Oswego River.

The Oswego Times and Journal says: We learn from the engineer of the canal that there was on Saturday but 54,350 cubic feet per minute of water passing down. That the lowest water found at any other time as far back as 1848, was 129,600 cubic feet per minute—and that the amount passing in ordinary high water is 692,080 cubic feet per minute.

This river drains more than 7000 square miles of territory.

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per linear yard. For sale by

THEODORE DEHON,
20½ Broadway,
New York.

Contracts made as above for Rails deliverable at English or American ports at lowest rates.

500 TONS No.1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.
99 and 101 John st.
[S2 31]

N. B.—The above Iron constantly imported.

ZERAH COLBURN,

ENGINEER AND AGENT

FOR the Design, Construction, Valuation and Purchase of Locomotives and Railroad Machinery.

Offers his services to Railroad Companies in either of these departments, having long experience and the best facilities for all.

As CONSULTING ENGINEER he will advise as to the value or adaptation of any system of motive power, and furnish drawings, estimates and specifications for any arrangement of engine.

As ACTING ENGINEER he will superintend the construction, survey, or reconstruction of any railroad machinery, and guarantee satisfactory results.

As CONTRACTING ENGINEER, having connection with the most reliable and successful manufacturers, he will negotiate for the purchase of Locomotives of the very best construction and proportions. Also Wheels, Tires and Repair Shop Machinery.

Having much experience in Patent Business he will undertake the preparation of Drawings, Specifications, Applications for Patent or Caveat and other papers necessary for inventors. He is able to give material assistance in bringing inventions and improvements in Railroad Machinery into favorable notice.

CHILLED TIRES FOR LOCOMOTIVE DRIVING WHEELS.

Zerah Colburn retains the principal agency for the sale and right of use of this valuable improvement, and will furnish the most substantial guarantees of its Safety, Durability, Adhesion and great Economy.

Office, 3d floor American Railroad Journal Building,
No. 9 Spruce street,
New York.

REFERENCES.

The New Jersey Locomotive and Machine Co.
James Jackson, Pres't., Paterson, N. J.
Chas. W. Elliott, Vice Pres't., 69 Beaver str., N. Y.
Henry V. Poor, Esq., Editor Railroad Journal, New York.
Geo. D. Phelps, Pres't. Del. Lack and Western Railroad.
Geo. W. Whistler, Vice Pres't. New York & New Haven R. R.
William Raymond Lee, Esq., Boston.
Bush & Lobdell, Wilmington, Del.
Oliver M. Hyde, Esq., Mayor City of Detroit.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

New York and Erie R. R.

PASSENGER TRAINS
leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, over the N. Y. & E. R. R. and the B. & N. Y. C. R. R., without change of baggage or cars.

DUNKIRK EXPRESS, at 6 a. m. for Dunkirk.
Mail, at 8 1/2 a. m. for Dunkirk and Buffalo, and intermediate stations. Passengers by this Train will remain over night at any Station between Binghamton and Corning, and proceed the next morning.

WAT EXPRESS, at 1 p. m. for Dunkirk.
ROCKLAND PASSENGER, at 4 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAT PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.
EMIGRANT, at 6 p. m., for Dunkirk and Buffalo and intermediate Stations.

On Sundays only one Express Train—at 6 p. m.
These Express Trains connect at Elmira with the Elmira and Niagara Falls Railroad for Niagara Falls; at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

OFFICE CINCINNATI, HAMILTON & DAYTON R. R. Co.
Cincinnati, August 8th, 1854.

THE Board of Directors of this Company have this day declared a Dividend of Five per cent. out of the net earnings of the Company for the Six months ending 31. July, payable in Scrip bearing Seven per cent. interest redeemable in three years. The Scrip will be delivered on and after Sept. 1st, to the Stockholders registered in Cincinnati on application at the office of the Company, and to those registered in New York at the office of the Ohio Life Insurance & Trust Company in that city. The Transfer Books will be closed for ten days from this date.

FRANK S. BOND, Secretary.

For Sale.

A STATIONARY Engine, having cylinders 13 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New York.

Jul. 14 29 tf.]

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

To Engineers and Surveyors.

A YOUNG man, 18 years old, wants a situation (to learn the business) as chain carrier, in a railroad survey. No objections to go to any part of the country, or world. Good reference can be given if required. Address A. S., Office of this Journal.

[32 1m]

RAILROAD STOCKS, BONDS & STATE SECURITIES.

The subscriber offers for sale—
Ohio and Mississippi Railroad Company, 7 per cent. second mortgage, convertible Bonds. Interest payable semi-annually in New York.

Scioto and Hocking Valley Railroad Company, 7 per cent. first mortgage, convertible Bonds. Interest payable semi-annually in New York.

Cincinnati, Western Railroad Company, 8 per cent. Real Estate Bonds. Interest payable semi-annually in New York.

Hamilton County, Ohio, 6 per cent. Bonds. Interest payable semi-annually in New York.

Louisville and Portland R. R. Co. Bonds.

Maysville and Lexington R. R. Co., 6 per cent. second mortgage, convertible Bonds.

Louisville City Bonds.

Cincinnati, Logansport and Chicago R. R. Co., 10 per cent. Income Bonds.

RAILROAD STOCKS.

Covington and Lexington R. R. Stock.
Cincinnati, Hamilton and Dayton R. R. Stock.
Little Miami R. R. Stock.
Ohio and Mississippi R. R. Stock.
Southern Bank of Kentucky Stock.
Columbus and Xenia R. R. Stock.
Cincinnati and Chicago R. R. Stock.
Central Indiana R. R. Stock.
Cincinnati and Indianapolis R. R. Stock.
Indianapolis and Bellefontaine R. R. Stock.
Cincinnati, Wilmington and Zanesville R. R. Stock.

WANTED—\$100,000, for which the best securities will be given.

WANTED—\$40,000, on commercial paper.
ISAAC OSBORN DAVIS,
Stock Exchange and Financial Agency Office,
No. 38 Third street,
Cincinnati, Ohio.

[32 1m]

ON THE APPLICATION OF IRON TO BUILDING PURPOSES.—JOHN WILEY, No. 167 Broadway, has just published—

FAIRBAIRN ON THE APPLICATION OF CAST AND WROUGHT IRON TO BUILDING PURPOSES. By William Fairbairn, C. E., F. R. S., F. G. S., etc. 1vol. 8vo., with numerous Diagrams and Illustrations, and tables for calculating the strength of materials &c. Price \$2.

SELECTIONS FROM CONTENTS.—On Cast Iron Beams for supporting the Floors of Buildings—Cast Iron Beams with Flanches—Experiments made at Leeds by the Author—Rules for the Strength of Cast Iron Beams—Table of Result—On Compound or Trussed Cast Iron Beams or Girders—Rule for Calculating the Strength of do.—Comparison of Cost—Process of Toughening Cast Iron—Experiments—Cupola—Air Furnace—On Wrought Iron Beams for supporting the Floors of Buildings, and for other purposes—Experiments on the strength &c., of do.—On Wrought Iron Trellis Girders—Formula for Calculating the Strength of Trellis Beams, &c., &c.

"No engineer can do without this book."—*Scientific American.*

[34. 2t.

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,
RICHARD W. TYSON,
No. 26 South Charles st.

Baltimore, July 1st, 1854.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,
RICHARD W. TYSON.

Baltimore, July 1st, 1854.

[33 3m]

Notice of Copartnership.

MR. PETER MARIE, heretofore of the firm of DECOPPET & CO., has this day formed a copartnership with Mr. RUDOLPH KANZ, (for many years with the banking house of Messrs. L. Von Hoffman & Co.), under the firm of MARIE & KANZ, at No. 27 William street.

Their attention will be devoted to the purchase and sale on Commission of Stocks, Bonds and Foreign Exchange, and to the negotiation of Business Paper.

New York, 1st September, 1854.

36 3t.

Rensselaer Polytechnic Institute.

DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS,—including Railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the *Annual Register*, giving full information respecting the Institute, apply to

R. FRANKLIN GREENE, Director, R. P. I.

32 3m]

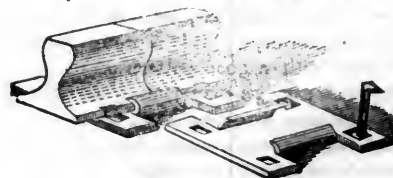
Troy, New York.

Lowmoor iron.

W. BAILEY LANG & CO., 54 CLIFF STREET, have in stock and offer for sale an assortment of Round, Flat and Square Bars LOWMOOR IRON, which they will sell by the ton or single bar. The attention of manufacturers, Railway Managers and Mechanics is particularly directed to the quality of this Iron, as its great strength, uniformity, and freedom from flaws, render it the best Iron in the market, where first quality is required.

W. BAILEY LANG & CO., being Sole Agents in the United States and Canada for the LOWMOOR CO., will execute orders at manufacturer's prices.

6t. 31

RAILROAD SPIKES.**WROUGHT IRON****Chairs and Fastenings.**

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.

The best quality of Refined Iron is used and all orders filled with despatch.

J. HOPKINSON SMITH,
No. 26 South Charles st.

Please direct the name in full.
Baltimore, July 1st, 1854.

[33 tf

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to
EDW. BECH & KUNHARDT, 62 Beaver St.,
Or, A. TOWAR, Agent Pokepsie Iron Works,
231f
Pokepsie, N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate care adapted to Railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO,
64 Courtland st., New York,

19 tf

To Contractors for Railroad Iron.

PROPOSALS will be received until the 20th September for nine thousand tons of railroad iron T pattern, sixty pounds to the yard, One-half to be delivered at Charleston, South Carolina, and one-half at Wilmington, North Carolina, delivery to commence in January and close in August, equal quantities to be delivered in each month at each place.

Payment will be made immediately on the delivery of each cargo, in North Carolina Funds. The contract will be given to the lowest responsible bidder provided the price be satisfactory. Bidders will endorse their bids—"Proposals for Railroad Iron"—and address them to Cyrus P. Meendenhall, Secretary, North Carolina Railroad Company, Greensboro, N. C.

WALTER GWYN,
Chief Eng. N. C. R. R. Co.

Raleigh, August 3d, 1854.

[31td

Machinists' Tools.**SHRIVER & BROTHERS,**
Cumberland, Maryland,

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools. These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others requiring first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address

SHRIVER & BROTHERS, Fulton Works,
Cumberland, Maryland.

August 19th, 1854.

[32 6m]

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 37]

SATURDAY, SEPTEMBER 16, 1854.

[WHOLE NO. 961, VOL. XXVII.

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

Sinking Funds for Railroad Loans	577
Improvement of the Locomotive.....	579
Journal of Railroad Law.....	580
Mississippi and Tennessee R. R.....	580
Railways in Great Britain.....	581
Large Load for a Freight Engine.....	582
Blue Ridge R. R. of South Carolina.....	582
Institutions for Engineering Instruction.....	582
Central Ohio R. R.....	583
Union of the Old Colony and Fall River Railroads.....	583
Leonard Scott and Co.'s Reprint of the Foreign Reviews.....	583
Railroads in Iowa.....	589, 583
Cleveland and Toledo R. R.....	583
Stock and Money Market.....	584
Erie Railroad.—How Should the Income Bonds be Paid?.....	586
Erie Railroad.—Its Engineering History.....	587
Mobile Harbor.....	588
North Alabama and Grand Junction R. R.....	588

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, September 16, 1854.

Sinking Funds for Railroad Loans.

The dilemma in which the Erie Railroad Company recently found itself in view of the speedy maturity of its *Income* bonds, (amounting only to about \$2,600,000), at once shows the faultiness of our system of raising money for railroads, and earnestly calls for radical reform. It may be said in fact that we have, thus far, proceeded in the construction of our works without system, or thought for the future. A company commences operations with such means as can be raised on the line of its road, whether they bear any proportion to its ultimate cost or not. These exhausted, *borrowing* is next resorted to upon terms most likely to raise the money, irrespective of the company's abilities to repay it at the time stipulated. So long as companies were able to discharge their *old*, by the creation of *new* liabilities, the inherent vice in the course they were pursuing was neither seen nor felt. But money can no longer

be raised in the old way. Railroads are not the *fashion*, as formerly, and the company whose liabilities are maturing, suddenly finds itself cut off from popular support, and without the means of meeting the demands upon it, although apparently entitled, by its *income* to whatever aid it needs.

The present condition of Erie is a good illustration in point. Were we to judge from the price at which the stock and securities of the Company at one time are selling, we should have supposed the Company to have been on the very verge of bankruptcy. Yet it had a much stronger claim to credit, than when the *Income* bonds were issued. They were purchased, say at 85, on the faith of certain *assumed* results of the construction of the road. These results have been more than realized. The road is more productive than its most sanguine friends ever claimed, yet the holders of these very bonds are selling them at a discount of 30 per cent., though they have less than 6 months to run. The *convertible* bonds of 1871 are selling at a trifle over 60 cents on the dollar; bonds which only recently commanded *par*.

The *market* price of any security does not depend so much upon the amount of property apparently available for its redemption, as upon the probability of its *prompt* payment, for the reasons that business men cannot have the payment of what is due them depend upon any *contingency*, and because the failure to pay at maturity, a debt well secured, implies a lack of business capacity, and a degree of improvidence on the part of the debtor, as to render it probable that he will not pay, whatever may be the extent of his means.

The general success of our railroads, as far as their earnings are concerned, is fully proved. Nothing is more certain than that they will earn a fair income on their cost; consequently that no investment can be better secured than *mortgage* bonds, equalling in amount *one-half* such cost. It is equally true, that a *six* per cent. loan, with ample provision for its payment, is worth *par*, and in the long run, a *premium*. United States', and the best State Stocks, are at a price that does not yield much over 4½ per cent. A seven per cent. railroad bond, perfectly secured, by the admission of the purchaser, will not frequently in the outset, sell for more than 80 cents on the dollar, and will

sometimes remain for a long time at that figure, though the value of the property on which it is based may have been doubled by the subsequent additions to the *construction* account.

The cause of the anomaly is in the fact that no provision is made for the *payment* of loans made for railroads, when contracted. "*How are all these loans to be paid?*" is the question universally asked, and the absence of any satisfactory answer weighs like an incubus upon their value. Money may be easy when they are offered, and if such be the case when they fall due, there may be no difficulty in their *renewal*. But suppose the opposite should be the fact, that they should happen to mature during a *monetary* panic such as we are just passing through; at a time when it may be impossible to borrow. What would then be the result? Default, perhaps, and with it disgrace, and great loss in the (market) value of the security. Such is a *possible* contingency, and such *possibility* exerts a constant influence in depressing the value of our railroad securities, and keeps them far below that of other investments less favorably circumstanced in every other respect.

The first step toward securing an adequate price for railroad bonds is to recognize the fact that they are eventually to *fall due*, and to make *some* provision for their payment; both of which seem mainly to have been ignored. All have heard the story of the miser "who did not want his money if the debtor *had* it, but who wanted it instantly, if he did *not*." It was only the "grand confidence" that was wanted. So with the creditors of railroad companies. There is hardly one that will not look with regret to the maturity of his loans, *provided* he is satisfied they are well secured. Could he feel that they were so, when offered for sale, he would give their *value*, as measured by the values of other loans of the safety of which there is no doubt. He does not deny a *seven* per cent. to be worth a premium, but he asks, "if I get *seven* per cent., shall I ever receive back my loan?" and unless this question be answered to his satisfaction, he demands a premium for the risk he runs.

The losses sustained by our railroads in such *premiums* is enormous. What is worse, it is a loss, every penny of which might be saved, simply by making some provisions for the *payment* of the loans when negotiated. Our companies ex-

pect to make such provisions, some day. Why not when they are contracted, for the purpose of receiving the benefit of such provision.

For a number of years past Europeans have invested largely in our railroads. That they will continue to, so long as our people can offer them a safe security there is not a doubt. They have the sense to see that property must be safer, in the long run, in a country where the citizens of every State, from the highest to the lowest, feel that they would be the *losers* by any change in the social fabric. There can be no conspiracy against the existing *status*, so long as no one is *dissatisfied*; nor no necessity for *force* where every member of society acts as a conservator of the existing order, from inclination. The foreigner fully appreciates the resources of our country, the adaptation of railroads to its wants, and the increasing value of these works with our progress in population and wealth. He admits that they are *productive*, and may be made *profitable*. He purchases, of course, at the best rate he can, and as before stated he demands in each case a premium in proportion to the *apparent* risk he runs. If he gets a *seven* per cent. security for 80, which turns out to be perfectly safe, he likes his bargain none the worse, but he would just as readily have paid par for a *six* per cent. against which no quibble, or objection should be urged. An unquestioned six per cent. is worth a premium in any market and will readily command it. If we pay more it is through improvidence or mismanagement, or because we offer securities that have some taint in them, or undertake works, far beyond the means of the country to construct or sustain.

An ordinary loan brought out in this market, is a *seven* per cent., on *ten* years. Such loans not unfrequently sell at 80 cents on the dollar. Supposing the amount to be \$1,000,000, the company receives \$800,000, for which it repays in ten years the *principal*, and \$700,000 in *interest*, equal to 1,700,000 in the whole, or \$900,000 more than the amount received, which is equal to *eleven* per cent. per annum. Certainly, 85 cents on the dollar is an average price at which such loans sell. This is equal to an interest of *ten* per cent. Now suppose that the loan bore *six* per cent., with a sinking fund sufficient to extinguish the principal in ten years. For this purpose a sinking fund of *seven* per cent. semi-annually will be required. *Thirteen* p. ct. annually would pay the interest and the principal at maturity, only *three* per cent. more than which is now usually paid on what are considered *well* negotiated loans! We have no doubt that in ordinary times a six per cent. with a sinking fund provided in the manner stated would sell at par from first hands. For the want of such provisions, therefore, our companies lose on a \$1,000,000 loan for ten years *four-sevenths* of \$1,000,000, or \$570,000, equal to nearly 6 per cent. annually on the whole loan, or a passable dividend on an equal amount of stock, and which declared by English companies, would carry their stocks to a handsome premium.

If the loan have a longer time to run the percentage set apart for dividends may be proportionally less. A loan of *three* millions on 25 years will be liquidated by a sinking fund of $1\frac{1}{2}$ per cent., or \$45,000, half-yearly, as will be seen by the following statement, the amount for each year being placed against the appropriate figures.

Years.		Years.	
1.....	\$45,787 50	13.....	\$922,189 68
2.....	94,789 12	14.....	1,032,530 45
3.....	147,202 23	15.....	1,150,595 08
4.....	203,293 89	16.....	1,276,924 24
5.....	263,311 96	17.....	1,412,096 44
6.....	327,531 30	18.....	1,556,730 69
7.....	396,245 99	19.....	1,711,489 34
8.....	469,779 71	20.....	1,877,081 09
9.....	548,442 16	21.....	2,054,264 27
10.....	632,620 61	22.....	2,243,850 27
11.....	722,691 55	23.....	2,446,707 29
12.....	819,067 46	24.....	2,663,764 30
25 years.....	2,896,015 30		

If an amount equal to the discount at what the Erie Convertibles sold, which was about \$1,050,000 on \$7,000,000, had been set apart as a sinking fund, it would have produced at their maturity, \$4,000,000. Had this amount been so set apart, and had it been shown what it would have produced, there is no doubt these loans would have commanded a *premium* instead of selling at a large *loss*. The company loses in this instance the sum of *four million of dollars* just for the want of a little precaution, or thought for the future. It is easy to see mistakes after we are past their remedy. We ask whether the Erie or any other company can afford to make such sacrifices to a *mistaken* policy.

The loss consequent upon our present improvident mode of doing things is enormous. If the roads of other countries could earn as much *net*, as we sacrifice yearly, the result would be considered satisfactory. If the amount of loans negotiated in the manner we have stated equal \$100,000,000, the loss is nearly \$6,000,000 annually.—If \$200,000,000, which is much below the amount we are losing nearly \$12,000,000; a sum certainly worth looking after, and upon the saving of which the success of our roads may in the end depend.

But the advantage of a sinking fund does not end in the amount *saved* in the manner stated.—The very act of creating one gives a *moral* nature to a company, which a corporation is not generally supposed to possess. It is the fullest acknowledgement of the obligations *incurred*. It would probably effect more than any other measure toward raising the standard of management of our companies. Where a sinking fund is created, the presumption will be that the project is a good one, and will be regarded by its managers as something worth looking after. We measure the value of anything by its *cost*. A company cannot continue to pay for a long series of years a large sum to relieve their property from incumbrance, without believing it to be very valuable, and without becoming possessed with a conviction that it is deserving the most careful management. No body of men will pay \$50,000 a year out of their own pockets, and neglect the management of that, on account of which it was paid. The annual payment of so much money will beget habits of the most scrupulous economy and watchfulness, which will probably result in saving the amount paid by any company to a sinking fund. It is our firm conviction, that from the higher tone of management which would unquestionably be secured, such funds would not in the majority of cases cost our companies a penny. Where, no measure of the kind is adopted, there is danger that a sense of the obligation created by a loan will gradually wear out. What has cost nothing is never valued. Where directors of a road have never contributed

a dollar of their own means toward it, nor have ever taken a step by which the rights of those who have furnished the money are fully recognized, there is great probability they will become listless and indifferent to their charge, that the road will be neglected, the means of the company will be squandered, and that the sentiment of all concerned become so thoroughly demoralized that any attempt to recover the ground lost, or too meet any crisis that may happen, will be in vain. The only way to avoid such a conclusion is to awaken a *personal* interest on the part of directors of roads, or to subject them to such a policy as cannot fail, from the necessities it imposes, to work out a salutary result. The *difference* in the two cases is that which consists in doing business upon a *sound* principle, or upon none at all. In one case, the man is saved simply by his adherence to such principle; in the other, he is ruined for the want of it; his *intentions* in both cases remaining substantially the same.

We entertain no doubt as to the integrity of the great majority of our railroad companies, nor question the disposition of the mass of the stockholders in our roads to do exact justice to their creditors. But it must be remembered that their obligations were created under a conviction that the enterprises in which they had embarked would prove profitable, while it is inevitable that some should be disappointed. Roads that were believed would be productive, have failed to be so. In some cases, the creditors will resort to their rights under the mortgage, and the fact that the stockholders are threatened with the loss of a large amount of property, will create a strong temptation to seek to avoid in some way or other the threatened catastrophe. All such occasions for collisions between stock and bond holders will be rendered impossible by a contract in the outset, by which a certain amount of the earnings, and sufficient in the end to redeem the road from all incumbrance, are to go direct to trustees, without ever becoming the property of the company.—Certainly, when it is so easy to remove all occasion of difference between the creditors and debtors in our railroads, it is most important to do so.

Were it common practice for railroad companies to establish *sinking* funds, the effect would be to advance the price of all securities, not only from their greater safety, but from the greater abundance of money which would necessarily result. One great cause of the frequent scarcity of money in this country is, in the fact that everything is *invested in works*, as fast as realized. Were there every year a few millions invested at *interest* in securities, or on *bond* and *mortgage*, the amount would in a comparatively short time bear a respectable proportion to the whole indebtedness of our railroad companies. A certain portion of the capital of the country would be in *money*, applicable to all the ordinary operations of business. The fact of large sums being constantly liberated from the custody in which they were held, and thrown upon the market, would not only increase the relative value of other kinds of property, but would render the supply of money uniform, and prevent those excesses of ease or stringency, between which we are constantly oscillating. Had the railroad companies throughout the country \$50,000,000 invested in sinking funds, it would

keep the rates for money very far below the prevailing figures, while it would carry up in a much greater ratio the price of all kinds of securities. The seller and purchaser in such case would then change places, and the former would dictate terms instead of the purchaser, as at the present time. Were the loans of our railroad companies to be paid off as they become due, the rates of interest in this country would rule nearly as low as in Europe.

We commend the above suggestions to the consideration of railroad companies. If they have, in their haste to complete their works, made sacrifices to meet what appeared to be necessary exigencies, an opportunity is still left open to them to retrieve the errors that have been committed. Fortunately, most of the loans of our railroad companies are on long time, and may be provided for by sinking funds, which will only require a small amount to be carried to them annually.—The policy recommended is one in which our companies have a vastly greater interest than capitalists. The latter will make more money by having matters remain as they are. It is the railway public which is being sacrificed, and which should be aroused to a proper sense of the extent of its losses from an unwise and improvident policy.

Improvement of the Locomotive. BY ZERAH COLBURN.

The Connection of the Cylinders.

Regarding the "outside connection" as an essential feature of the best system of locomotive power, I shall devote the present article to a discussion of its relative merits as compared with the "inside connection."

The two systems of attaching the working connecting rod of the engine,—in one case to the crank pin on the outside of the driving wheel, and in the other to a bell-crank, formed in the driving axle,—termed respectively the outside and inside connection, have each peculiar merits and demerits. I have so often advocated the first named of these arrangements, in detached editorials in this *Journal*, that it appears consistent to briefly review the grounds for my preference in this series of articles.

Probably the fairest mode of treating the subject is to first say all that can be said in favor of the inside connection, and all that can be said against the outside connection. If, on subsequent examination, the "outside" can claim a balance in its favor, my preference is confirmed.

The advantages claimed for the inside connection are, greater steadiness of motion than can be had by any other plan in use, and the protection of the cylinders from the cooling effects of the atmosphere. The last claim is however a nullity with American-built engines, as their steam cylinders are never protected on their under sides. The only advantage for which the inside system can contend is therefore that of greater relative steadiness of motion.

The objection urged against the outside connection is that, compared with respect to the particulars stated as in favor of the opposite plan, it is relatively inferior. The relative disadvantage sustained by the outside connection, by reason of the exposure of the cylinders, will be readily admitted to be but little, so long as the cylinders of

inside-connected engines are nearly as much exposed.

The discussion of the two systems is therefore at once reduced upon a single point, viz. that the inside connection runs more steadily than the outside connection. It is believed that this embraces all the advantages claimed for inside connections; all the superior economy claimed in repairs and in the action upon the track, being contingent upon this distinction.

The outside connection being thus subject to the imputation of *unsteadiness*, the causes which produce this condition must be analysed.

There is a palpable cause of unsteadiness in all reciprocating motions, and the effect is proportional to the weight and velocity of the disturbing parts. In respect to *weight*, the outside connection has the least, and has a corresponding advantage; besides having the disturbing action confined to the plane of motion of the wheel, a condition the best possible for perfect counterbalancing.

The disturbance, whatever it is, due to applying the power of the two cylinders at distances of from six to eight feet apart are next to be considered. The disturbing action is not exhibited at the driving wheels, and for two reasons: first, the adhesion of the drivers is almost always in excess of the steam pressure exerted at the rim of the wheel; hence the drivers could not exhibit any impulse imparted to them, tending to disturb their ordinary motion, as the resistance exceeds the disturbance; and, second, the action and reaction of the steam in the cylinder are equal, and hence a strain upon the driving axle in one direction is balanced by a corresponding strain in the other direction.

The disturbing action, such as it is, is therefore exhibited at the front end of the engine. During the times when the pistons are both moving in the same direction no disturbance occurs, as the pressures are equal on each side of the engine. While the pistons are moving in opposite directions a tendency to sinuous motion is developed. This tendency is opposed by the inertia of several tons of the weight of the engine, and by the friction of the bearings of the engine upon its truck and of the latter upon the rails. While the tendency to sinuous motion is admitted, it is sufficient to say that in practice, it is not manifested to an extent sufficient to condemn the arrangement to which it is due. The worst cause of unsteadiness has been, until lately, the unbalanced momentum of the reciprocating machinery.

This consideration affects to a great degree the comparison of the two arrangements. The fact that the tendency, attributed to the outside connection, is restrained, without injury, by the inertia and rigidity of the heavy portions of the engine, so as not to be sensibly manifested, is one which rests upon no hypothesis but is confirmed in practice.

It is seen that the stability of an outside connected engine must depend upon the inertia of a considerable portion of the weight of the machine. It is then of consequence that the fastenings of the cylinders be such as to bring the strains exerted within them directly upon the stiffest part of the front end of the engine. The Paterson plan of bolting the cylinders by wide flanges directly to a stiff smoke box is therefore the best, as making the most direct and most secure me-

dium for transmitting and absorbing the strains. The strength and permanence of this connection in the engines of the New Jersey Locomotive and Machine Company contrasts strongly with the New England style of bolting the cylinders only to a light frame, but imperfectly braced to the boiler.

Another circumstance which promotes the steadiness of the outside connection is the modern plan of lengthening the entire wheel base of the engine as well as the spread of the truck wheels. By adding flanges also to the forward drivers the engine runs steadier, besides having more adhesion, and wearing the tires more equally. These modifications would not promote the steadiness of the inside connection to an equal extent, as they would not affect the same causes of unsteadiness.

It is true also that the inclination of the cylinders of the old style of outside connection contributed to make them unsteady. At one time it seemed a settled feature of outside connections that they should have inclined cylinders, but in the majority of cases it is now found that the cylinders can be placed level, or so little out of level as not to disturb the steadiness of the engine.

The practical result of the matter is that outside connected engines, with properly counterbalanced drivers, level cylinders, strong cylinder fastenings, well spread trucks and with flanges on all the wheels run as steadily as any inside connections. Without some of these conditions, the result is less satisfactory. But the general result stated, where the conditions given are all observed is not one of opinion merely, but of fact.

So far, the outside connection has been heard in its defence. Now let us reverse the line of argument and state the demerits of the inside and the peculiar merits of the outside connection.

First: the crank of the inside connection weighs twice as much and costs \$300 more than the straight driving axle of the outside connection. It has also much greater friction, and is far more liable to breakage. The cost of renewing broken cranks has alone changed the preference of the managers of the Western road of Massachusetts, as well as of other roads, from the inside to the outside connection.

Second: the weight of crank, and necessarily greater relative weight of the connecting rods, requires additional weight for counterbalancing. The least balancing an engine requires, the steadier it will run; as balancing, upon the ordinary plan, does not remove the common cause of unsteadiness without creating a new cause, which although not felt on the "footboard", is injurious to the tires.

Third: the inside connection requires a relatively greater amount of room, horizontally, laterally and vertically. It limits the length of the furnace, it elevates the boiler from 9 to 12 inches, and it crowds the machinery, laterally, to a very inconvenient degree. In the last named particular especially, a narrow gauge engine intended to have 18 inch cylinders, if arranged upon any ordinary plan, could not have its working machinery of proper strength.

The room required vertically for the clearance of the crank, places the boiler from 9 to 12 inches higher, not only giving greater tendency to roll, and making longer braces and steam pipes neces-

sary, but it cuts off just so much from the length otherwise attainable with a given height of bridges and station doors, for the smoke pipe. Many of the New England roads have chimnies too short for good draught, simply because that, with their inside connected engine, they can get no more room under their bridges.

The limits imposed by the inside connection to the size and arrangement of heavy engines prevents the realization of the benefits which could often be attained by the use of heavy engines. There are many minor advantages which are contingent upon these considerations, and which are in favor of the outside connection. While, leaving out the consideration of the relative steadiness, first discussed, the inside arrangement has no merits not possessed in an equal degree by the outside.

Journal of Railroad Law.

CAUTION CONSIDERED RELATIVELY.

With regard to accidents occurring upon Railroads a far greater degree of caution is demanded from those who are responsibly employed on such roads than from travellers or mere laborers. The strictest care and the most untiring vigilance are required from the former. The latter are not bound to be "wise above that which is written" in the code of common sense and in the placards of Railroad Companies.

Hence the Supreme Court of our State has sustained a party's claim for damages from a Railroad injury, although when injured, he was, with the Conductors' assent, in the baggage car, and would probably have escaped injury had he been in his appropriate place: a passengers car.

In the case of *Ting vs. Lancaster* and other lately tried at *Nisi Prius* before Justice Crowder, in England, the plaintiff was one of the subordinate employees of the Lancashire & Y. R. W. Co., the defendants were managers of a mining Company having a privilege on the Railroad, the plaintiff was employed in uncoupling a van at a station distant 10 miles from Manchester, when defendants coal train came up without giving the usual sign, and so injured plaintiff that an amputation of his hand became necessary. It was urged for defendants on the trial there were not enough pointsmen on the road to indicate to the defendants the necessity of slackening their speed. But to this it was replied that inasmuch as no signals of safety were displayed at the station, the defendants were not authorized to approach towards it. It was further objected by defendants that the plaintiff got off the van on the wrong side, and uncoupled it with his foot instead of his hand, and thereby contributed to producing the injury complained of.—But the Judge was of opinion that all things considered, the plaintiff had exercised a reasonable degree of caution and was entitled to recover.—Verdict was rendered in his favor for £100.

DOES A RIGHT OF WAY AUTHORIZE THE DEPOSIT OF GOODS AND THE CONSTRUCTION OF A PRIVATE RAILROAD?

Such were the questions lately discussed in the case of *Appleton vs. Fullerton* decided in the Supreme Judicial Court of Massachusetts. The plaintiffs alleged that defendants have entered upon the premises of the former, broken up the soil used the same as a place of deposit for merchandize and constructed a Railway thereon.—The place on which the alleged trespass occurred was a passageway, *cul de sac*, in the rear of certain

ware houses of which defendant has a lease for ten years, and as such, in common with other abutments entitled to right of way over the same by virtue of the following clause in their lease.

"It is mutually agreed between the same parties that the said passageway shall continue open for the free use of the abutments on said passageway, and to be used and enjoyed by them in as full a manner as they now are, and heretofore have been used and enjoyed." The plaintiff was the owner in fee of the soil of the passageway. The defendants had used the same as a place of deposit for merchandize, have laid a flooring of planks across the passageway, the warehouses occupied by them being at the rear of the passage, from the back door of one warehouse to that of the other, and laid iron tracks or rail thereon, to facilitate the transfer of the heavy articles in which they dealt, being iron merchants, from one warehouse to the other. These planks and rails were at first laid above the ground, but the passageway was subsequently repaired and raised by plaintiffs so that they were when the action was brought a little and but a little above the surface. In laying them it was not necessary to subvert the soil, but they were laid on the surface and remained there permanently. There was no evidence that such use had been made of the place either for transit or deposit, until so made by the defendants, nor did it appear that the plaintiffs had actually been damaged thereby. The action was brought to recover damages for a violation of the plaintiff's right in laying down said planks and rails and using the passage way as a place of deposit for their goods.

The Supreme Court held that the above cited words of the lease did not prevent the defendants from having a full right of way for all purposes, with all improvements, not only in the manner before used, but in any other manner of using the same right; that the words quoted, if they had any operation, were intended to enlarge not to restrict the right reserved by the general terms, for example, if it had been a mere surface of the earth it might be improved by macadamizing, paving or planking, being limited to the use of the same right in a manner more beneficial to those having the common right; and that this was the proper construction of the reservation.

It was properly a question for the jury to determine, whether from the evidence the laying down by defendant a Railway for his own benefit and at his own cost, although not detrimental to others, was a use of the said, for a distinct purpose beyond that of the right of way. If so, it would be adverse to plaintiff's rights. Keeping the railway there 20 years would have given defendants a right to continue it, hence plaintiff should, if likely to be prejudiced, be allowed to vindicate his right by action.

But if laying down the railway was no new use of the said, but only an improvement for the purpose of convenience not injurious to any one, it was within the right of way reserved to the abutments and perfectly consistent with plaintiffs rights.

And it was further held that a right of way to a warehouse would authorize the tenant to place goods brought to a warehouse on the ground and keep them a reasonable time for the purpose of putting them in the store; and to do likewise in respect to goods to be carried from the warehouse.

Mississippi and Tennessee Railroad.

This important road, uniting Memphis with Grenada, Miss., and thence by direct extensions to New Orleans and Mobile, is about to be let to contract. The located line between Memphis and Grenada is 97 miles in length, or but $3\frac{1}{2}$ miles greater than a right line. The axis of this road, if prolonged, would bisect a straight railroad line from Mobile to New Orleans, and it may therefore be regarded as the trunk line for trade and travel going south of Memphis. To the extent therefore to which direct and favorably graded railroads can compete with rivers, this road will compete, for its business, with the Mississippi.

The direct connections of this road now constructing are the Mississippi Central from Grenada to Canton, Miss., and thence by the Great Northern road to New Orleans; and also from Grenada to the Mobile and Ohio road, and thence to Mobile.

So much for the terminal relations of the road. Locally, eight counties, De Sota, Panola, Tallahatchie, La Fayette Yalobusha, Choctaw, Carroll and Chickasaw, will be directly tributary to the road in Mississippi. These counties, twenty-five years ago in the possession of the Choctaw and Chickasaw Indians, have now an aggregate population of more than 120,000 inhabitants, producing 100,000 bales of cotton, and five million bushels of corn annually. The road runs for but $9\frac{3}{4}$ miles in Tennessee, from the State line to Memphis. It crosses the Tallahatchie river below the head of steamboat navigation, and reaches Grenada, which is at the head of the steamboat navigation of the Yazoo, and is consequently the focal point for the products of a considerable territory.

The line of the road is favorable as to curves, having not less than 1,910 feet radius, and having an average of but 14 degrees of curvature per mile. The grades are not severe, the maximum being of $47\frac{1}{2}$ feet per mile, while two-thirds of the located line are literally level.

The engineer, Minor Merriwether, Esq., in an able report just received, estimates the entire cost of the road, equipped for a permanent business at \$2,000,000, or \$20,460 per mile. By commencing however with a partial equipment, and by the use of wooden structures instead of brick work, at several stations, the cost need not exceed \$1,700,000.

The resources of the company up to the date of the report are as follows.

Individual subscription.....	\$534,700
Memphis City subscription.....	250,000
State bonds of Tennessee \$10,000 per miles for $9\frac{3}{4}$ miles.....	97,500

Total present means.....\$882,200

9 per cent. only of the stock had been called in at the date of the report,—June 20, 1864.

The amount now available it is expected will grade and iron nearly 60 miles of road, doing all the grading and finishing very nearly all of the rails. The Memphis city subscription and State Bonds are pledged to be expended for iron. In the mean time additional subscriptions are relied on. A few words will state the basis of the company's faith in this prospect. Large majorities in Panola and De Sota counties voted \$400,000 of county subscriptions, payable by tax; and notwithstanding the validity of such a tax was sustained by the courts, the company had the confidence in the popularity of their enterprise to re-

linquish this subscription, only as having caused opposition to the payment of the tax by those who were otherwise friendly to the road. Since returning this subscription the company have received nearly the whole amount from individuals composing the counties upon which it was assessed.

The contracts for the grading of 17 miles have been closed, and the contractors are making preparations for commencing the work, which is to be completed by the 1st of July, 1855; and a verbal contract has been entered into for 18 miles more, which will be closed as soon as the notes of location are prepared. Contracts have been closed for the trestle work on the first 37 miles out of Memphis, and for the masonry of the first 5 miles. All of these contracts, with the exception of bridging, have been taken by planters.

It is probable that this company may find it expedient to issue an amount of bonds, equal to one-third of the cost of their road; in which event we should anticipate a ready sale, when the money market shall become easier. The substantial resources of the enterprise, and the economy which promises to characterize its operations, will, if not abused or relaxed, form an ample security for any indebtedness the company will be likely to incur.

The offices of the Mississippi and Tennessee railroad are at Memphis, Tenn.

Easton, Pa.

The Philadelphia *News* gives an interesting description of Easton, and of the important railroad improvements centering there. This town, now containing nearly 10,000 inhabitants, sustaining extensive business relations with New York, is not known in proportion to its importance, by many of those interested in a very extensive system of roads in which Easton will be a first-class point. The fact is that Easton has laid too long off of the main routes of travel. There is a probability that it may yet become a large wayside city on the direct route from New York to Cincinnati. The *News* says of Easton that it is in the immediate vicinity of the Delaware Water Gap in one direction, and the beautiful town of Bethlehem in another, and is surrounded by a country not only rich and rare in its deposits of mineral wealth, but abounding in scenery of the most beautiful and picturesque description. As a business place, it is not only of great importance, but seems recently to have received an impetus which is likely to secure for it a destiny equal to any of the inland localities of the State. Located within sixty-five miles of our own city, it is, however, most surprising that its business relations and trade have been mostly with our rival city of New York. At Easton the Lehigh Company's canal has its terminus, where the trade from it enters upon the Delaware Division of the Pennsylvania Canal. Connected with this work, is the feeder of the Delaware and Raritan Canal, which is entered by an outlet lock at Wellsville, from whence a portion of the trade of the Delaware division is diverted through the Delaware and Raritan Canal to New York. At Easton also commences the Morris Canal, running through the State of New Jersey, and having its terminus at Newark, from whence its trade is transported through Newark Bay to New York also.

In addition to these works leading to New York, there is the New Jersey Central Railroad, now in operation, and extending to Elizabethtown, a distance of 75 miles, where it connects with the New Jersey Railroad to Jersey City. There is also, now in operation, the Belvidere Delaware Road, extending from Easton to Trenton, fifty miles, where passengers and freight are taken either to

New York or Philadelphia. The Lehigh Valley Railroad, now in the course of construction, is rapidly progressing to completion, and is being built with a view to connect with the New Jersey Central and the Belvidere Delaware roads, both of which will be made in the immediate vicinity of the town. For the purpose of making these connections a bridge of immense height is now being constructed across the Delaware at Easton, on which the track of both roads will be laid—that of the New Jersey Central crossing at an elevation of some thirty feet above the Belvidere Road, and both occupying the same structure. This bridge presents in its present state, the evidences of immense labor and skill, and is being constructed for the Lehigh Valley Company by Messrs. W. A. Atwood & Co., whose reputation as bridge builders and constructors of heavy masonry, is being widely spread throughout the country.

At Easton, there will also be, in a comparatively short time, connections by railroad with Williamsport and Catawissa on the one side, and Scranton and the New York and Erie Road on the other, which, added to the collateral connections consequent on those already named cannot fail to render the place one of the most important in the State.

Railways in Great Britain.

The London *Times* presents the following abstract of the report upon the Railways of Great Britain for 1853, presented to the Board of trade.

The length of railway opened previously to December, 1843, was 2,036 miles. The length opened in the year 1844 was 204 miles; in 1845, 296 miles; in 1846, 606 miles; in 1847, 803 miles; in 1848, 1,182 miles; in 1849, 869 miles; in 1850, 625 miles; in 1851, 269 miles; in 1852, 446 miles; and in 1853, 350 miles, making the total length then opened, 7,686 miles; of which 5,848 miles are in England, 995 in Scotland, and 843 miles in Ireland. The length of the narrow gauge railway, including the Irish gauge of 5½ feet, is 6,965 miles of the broad gauge 626 miles, and of the mixed gauge 95 miles. The number of railway companies having single lines of railway at the end of 1853, was 97: the length of single narrow gauge lines, including the Irish gauge, 1,543 miles: of broad gauge 112 miles, and of mixed gauge 53 miles—1,708 miles; of which 1,135 miles of single line are in England, 132 miles in Scotland, and 441 miles in Ireland. The length of single line open at the end of 1852 was 1,485 miles, and of 1851, 1,307 miles. A single line of railway cannot be worked with safety except under special regulations, so framed as to prevent the possibility of engines or trains, moving in opposite directions from meeting on the single line. Such regulations are, however, inconsistent with a large amount of traffic.

The amount of capital invested in railways at the end of 1852 was £264,165,680, of which £161,400,256 consisted of ordinary capital, £98,700,755 of preference capital, and £64,064,668 of loans.—The amount of capital raised for railway purposes in 1849 was £29,574,720; in 1850, £10,522,967; in 1851, £7,970,151, and in 1852, £16,398,993; thus increasing the amount invested in railways at the end of 1849 from £229,747,779 to £264,165,680 at the end of 1852. The amount of money which was raised by railway companies during 1853 has not yet been returned to Parliament, but it may be assumed not to have been less than that raised during 1852, and it is therefore probable that the whole sum raised by railway companies to the end of 1853 is not less than £281,000,000, of which about £42,000,000 may be assumed to have been preferential capital, and nearly £70,000,000 would appear to have been borrowed on the security of the undertakings.

The number of miles of railway in course of construction on the 30th of June, 1853, was 682 miles, and the number of men employed on them was 37,764. The number of miles open for traffic at that date was 7,512, and the number of men employed 80,409. The number of men employed on

railways open for traffic was 9.5 per mile in 1852, and 10.7 per mile in 1853.

The total number of passengers conveyed on railways in the United Kingdom in the year 1853 amounted to 102,286,660; the number in 1852 had been 89,135,729. The total receipts from all sources of traffic amounted in 1853 to £18,035,879, and in 1852 to £15,710,554.

In England the mean length of line open during the year has been increased from 4,355 miles in 1849 to 5,730 miles in 1853; and the total number of passengers conveyed has increased from 49,879,362 in 1849 to 84,212,961 in 1853, being an increase of from 11,450 per mile in 1849 to 14,635 per mile in 1853. The numbers conveyed of each class bear very near the same relative proportion to each other in each year. In 1853 number of first-class was 12.76 per cent., the number of second-class was 37.8 per cent., and the number of third-class 49.42 per cent. of the whole number carried. The receipts from passengers have increased from £5,446,518 in 1849 to 7,326,106 in 1853, being an increase of from £1,255 per mile to £1,279 per mile (the amount received during 1851 having amounted to £1,330 per mile). The receipts per mile from each class in 1849 were, first-class £606, second-class £518, third-class, £331, in 1853 the receipts per mile had diminished on the first and second class to £403 and £474 respectively, and had increased from £1,750,504 in 1849, to £8,112,477 in 1853 being an increase of from £1,090 per mile in 1849, to £1,415 per mile, in 1853; and while the receipts from passengers, in 1849, were larger than the receipts from goods in the proportion of 53.42 to 46.58; in 1853 the contrary was the case—viz., the per centage of the passenger traffic was 47.45, and of the goods traffic, 52.55. In Scotland the progress of traffic has been similar. The mean length of railway in Scotland open during the year has increased from 795 miles, open in 1849, to 987 miles open in 1853. The number of passengers conveyed in 1849 amounted to 7,902,228, and in 1853 to 10,999,224 which represents 9.993 per mile in 1849, against 11,246 per mile in 1853. The receipts of passengers increased from £540,770 to £697,712; or from £680 per mile in 1849, to £713 per mile in 1853. The receipts from first-class passengers were £181 per mile, for second-class £179 per mile, and from third class passengers, £345 per mile, in 1853. The amount received from goods in 1849 was £650,640, and in 1853 it was £1,068,016, representing £818½ per mile, in 1849, against £1,075 per mile in 1853. The relative proportions of the two descriptions of traffic were, in 1849, passenger traffic 45.3, and 54.62; and in 1853 the receipts from goods traffic amounted to 60.48 per cent. of the whole traffic. In Ireland, the mean length of railway open in the year 1849 was 428 miles, and in the year 1853 it was 771 miles. The total number of passengers conveyed in 1849 amounted to 6,059,974 or 14,142 per mile; and in 1853 it amounted 7,074,475, or 9,175 per mile. The receipts from passengers have increased from £299,604, in 1849 to £537,250 in 1853; the receipts per mile having been £688 in 1849 and £696 in 1853. The receipts from goods amounted in 1849, to £127,462, and in 1853 to £294,310, or £297 per mile in 1849, and £387 per mile in 1853. The relative proportion of receipts from the two classes of traffic was in 1849 69.51 per cent from passengers, and 30.49 per cent. from goods, and in 1853 it was 64.62 from passengers, and 35.38 from goods. Since the year 1849, while the number of miles in the United Kingdom had increased 34 per cent., the number of passengers had increased 69 per cent., the receipts from passengers 36 per cent., from goods 71 per cent., and the total receipts had increased 53 per cent. or from £5,115 per mile in 1849, to £2,407 per mile in 1853. The proportionate increase in the number of the lower class of passengers conveyed by railway is greater than that of other classes, and the proportion which the receipts from that class bear to the receipts from other classes is greater for 1853 than it was for 1849. The receipts from goods are also largely increasing, and they bear every year an increasing proportion to passenger traffic.

Large Load for a Freight Engine.

During the last year Mess. Rogers, Ketchum and Grosvenor built two freight engines of an original design for the Buffalo and State Line Railroad. These engines had all their weight on their drivers, six in number; had level cylinders; outside connection; a moderate length of wheel base, and it was intended on both of them to use the cast iron chilled slip tire. For one of the engines the chilled tires could not be had in season, and wrought tires were used. All the features of this design were calculated, when combined, to produce an engine of great efficiency. The engines were completed and put to running, and during the period of their operation have earned the reputation of being the best and most effective freight engines, every way, upon the entire line of roads around the lake shore. The diameter of cylinder of these engines is 16 inches, length of stroke 22 inches, and diameter of drivers 56 inches for the "Vulcan," and 54 inches for the "Vesuvius."

In an Erie and in a Buffalo paper we have noticed accounts of recent performances of these engines which are worth publishing as showing the efficiency of the model which we have so often advocated as proper for all freight roads.

The Erie Constitution of August 23d—says, "The Engine 'Vulcan' took out of this city east on Thursday last a train of 46 cars loaded with freight and live stock, being an aggregate of about 450 tons, the largest and heaviest train ever sent from this point. She went through in time. The 'Vulcan' is from the works of Messrs. Rogers Ketchum and Grosvenor, Paterson, N. J. of about medium size, and is in her line a perfect model of strength. Her mate, the 'Vesuvius' is from the same works and of the same capacity." Another very fair load—The Buffalo Commercial of Tuesday last says "the State Line Railroad brought over their track from Erie last evening, 715 head of cattle. Of these 221 were left at Dunkirk and 493 come through to Buffalo the train consisted of 44 cars and was drawn by the 'Vesuvius.'"

This we think is doing pretty well, the "Vulcan" has chilled tires and the "Vesuvius" wrought iron tires.

These trains were taken over grades of 40 to 45 feet per mile, a circumstance which largely increased the effective duty of the engines.

We are much pleased with the performances of these engines, as affording the best illustrations of the value of the identical arrangements which we have so often urged for the proper adaptation of locomotive power: It is sufficient to say that the old N. England plan, having *inside* connection, 16 by 20 inch cylinder, 4½ feet wheels and a *truck*, would be from 15 to 25 eight wheel cars upon a 45 feet grade.

The efficiency of the chilled tires is seen in the fact that great as was the load of the "Vesuvius" with wrought tires, the "Vulcan" with chilled tires drew two more cars, or 46 cars in all, the largest load ever drawn by one engine over the road.—Both engines were of identical construction with the exception of the tires, and the difference of 2 inches in the diameter of the drivers: The "Vulcan" which took the largest train, having the *largest* drivers, a fact which still further shows the efficiency of the chilled tires; inasmuch as the

tractive power of engines is *inversely* as the size of the drivers.

We are quite convinced that the style of freight engine so successfully brought into use by the State Line Railroad will become generally popular. The particular engines referred to, and which have done Mess. Rogers, Ketchum and Grosvenor so much credit, are described as being very steady on the track, and as being the easiest on *curves* of any engines on the road. The engines are also of extremely simple construction and are consequently very economical for repairs.

Simplicity, durability, steadiness and efficiency are the most desirable qualities for all engines resulting as is always the case in superior *economy*.

The Blue Ridge Railroad of South Carolina.

Mr. Winsmith of the South Carolina Legislature in a speech, delivered before that body, in December 1853, opposed the subscription, on the part of the State, of \$750,000 to the Blue Ridge Railroad. We have looked upon this road, all along, as being for a South Carolina scheme, too near the border of the State, and perhaps with the same view Mr. Winsmith thus opposed the subscription asked.—But we have no doubt of its ultimate construction. And, still further, we are convinced that the direct route through Ashville and the French Broad river valley will *also* be built,—the route advocated by Mr. Winsmith. The Greenville and Columbia road is prepared to meet both roads over the mountains. The North Carolina Central, East Tennessee and Georgia, Spartanburg and Union roads, and roads running from the North Carolina Central to Norfolk,—the city of Columbia too, are all interested in the construction of the Ashville road. We do not believe the construction of the road through Rabun Gap will *prevent* that of the direct route for Charleston, via Ashville. Were but one road to be built, we think South Carolinians generally would choose the latter. It would be only the moneyed interest held by the State in the stock of the South Carolina road that could divert a preference from this to the Rabun Gap route. Anderson, on the shortest line, would be no nearer Charleston than Savannah; while the "cut off" proposed to be built by the Greenville and Columbia road from that point to the South Carolina road at Aiken, would leave nearly the whole State to the North. It would throw Columbia, and the extended system of railroads centering there, *off the route*.

In Mr. Winsmith's speech he says:

By an examination of the surveys of the old Louisville, Cincinnati and Charleston Railroad Company, we will find that a railroad route has already been surveyed, having all the desirable considerations which I have already adverted to. And although combinations of untoward circumstances have heretofore prevented the accomplishment of this great design, yet, sir, from each terminus, that line is rapidly filling up. From Charleston, the road is already built to Columbia, and is in progress of completion to Spartanburg, C. H.—From Cincinnati it is stretching out South very fast, and will soon be completed as far as Knoxville, Tennessee, leaving only the short gap from Knoxville to Spartanburg, C. H., to be filled up.—The survey made by order of the old Louisville, Cincinnati and Charleston Railroad Company is equal in point of accuracy to any, I have no doubt, that has been made by any company in this State. There were, at that time, no rival routes or rival companies. The engineers were directed to ascer-

tain the most eligible location for a railroad to connect the city of Charleston with Cincinnati and the great West. They examined carefully the whole mountain range, and decided unanimously that the Butt mountain Gap was the most suitable point to cross the Blue Ridge, and that the route leading to and from that gap was preferable to any other—that no tunnel was required, and that you could cross the mountain with an ascending and descending grade not exceeding about forty feet to the mile. The distance of railroad to connect Charleston with the West by this route is about fifty miles less than by the Rabun Gap route. It passes through a central portion of the State by Columbia to Charleston. It will not cost more than half as much to complete the connection by this route as by the Rabun Gap.

Institutions for Engineering Instruction.

To master a *profession* one must acquire a knowledge of *principles*. This truth is so evident in its application to all mental training that it does not require to be enforced beyond assertion. *Routine* is the education of a *trade*, and one in which principles are so seldom recognized as often to be entirely overlooked. In Engineering, therefore, which has so well recognized claims as a noble profession, the study of principles is a leading requisite for success.

Our practical engineers are mostly office graduates, but whose opportunities for instruction have been shaped more by *themselves* than by the settled routine of their apprenticeship. Imitation, with most minds, is so much stronger the Perception, that the separation of *principles* from *practice* becomes a slow process. It requires a fortunate and rare quality of mind to become eminent as an engineer, even if under constant practical training.

We are pleased therefore to see increasing facilities for the study of engineering. Systematic instruction is better than "picked up" attainments.

Nearly all the European governments have established national polytechnic schools. In our own country, however, it is a credit rather than a reproach, that we are independent of government patronage; (at least in matters naturally unassociated with government.) Competition in *teaching* and in *learning* makes better teachers and learners than a monopoly of instruction, and an "over issue" of diplomas.

The principles of Engineering are now taught in a number of well regulated institutions in different parts of the country.

The Lawrence Scientific School, under the management of the Trustees of Harvard University, of Cambridge, Mass., has for several years furnished to young men full instruction in Civil and Mining Engineering, Mathematics, Chemistry, Geology and kindred sciences. This institution comprises the best resources of oral and written instruction, having nine distinct professorships filled by gentlemen of the highest talent, and having valuable libraries and apparatus in all the departments of the academic course.

The Polytechnic College of the State of Pennsylvania, chartered in 1853, also offers a course of technical instruction, similar to that pursued in the oldest institutions of Europe. This institution is established in Philadelphia, and is under the general management of a board of Trustees, whose head is Matthew Newkirk, Esq.

The Rensselaer Polytechnic Institute, of Troy N. Y. under the directory of B. Franklin Greene,

Esq., offers full instruction in the elements and practice of Architecture, and in Railway, Hydraulic, Topographical and Mining Engineering.

The Engineers and Mechanics College of Cleveland, Ohio, also, under the management of E. Nugent, Esq., has been established during the present year to afford to young men theoretical and practical instruction in Civil Engineering and Architecture, as well as in Mathematics, Drawing, and Penmanship.

All of these institutions are entitled to popular support, as they all possess abundant resources of instruction for young men seeking distinction in the useful and honorable professions to which they are devoted.

Central Ohio Railroad.

This important road is rapidly approaching completion. It is expected that a locomotive will be run through, from Columbus to Wheeling, by the first of October. The entire length of this road is 136 miles; the Western division from Columbus to Zanesville being 59 miles, and the Eastern division, from Zanesville to Wheeling, 77 miles. 85 miles of the road, east of Columbus, are now in operation.

The commercial and social results which will attend the opening of this road can only be estimated by reference to the success of the leading existing routes between the Atlantic and the Mississippi Valley. It will place the cities of the Chesapeake Bay in connection with nearly every occupied portion of the west. Baltimore, especially, will at once reach the prize for which she has devoted years of exertion. South Eastern Ohio, also, will experience the same influences which railroads have exerted on other portions of that State.

The distance from Baltimore to St. Louis will be but 936 miles, via the Indiana Central and Terre Haute roads; and from Baltimore to Cincinnati, 619 miles. The construction of about 100 miles of road, between the Ohio and Indiana road at Lima, and the Central road at Newark, would complete almost an air line to Chicago; and of uniform gauge between Wheeling and Chicago. In fact, the position of the Central Ohio road to the other roads of that state is such as to place Baltimore, of all the Eastern cities, in the most direct connection with the whole system of railroads intersecting the Mississippi Valley.

The entire line of road will be completed and brought into use at a cost of about \$34,000 per mile, making it, when its permanent construction and the capacity of its establishment are considered, a comparatively cheap road.

The Baltimore and Ohio road, looking to the importance of the completion and operation of this road during this fall, have loaned it upon the obligation of the Central Ohio Company, and for a short time, \$400,000 of bonds of the North Western road of Virginia. These bonds, held by the Baltimore and Ohio Company, were not immediately needed, and were loaned to the Central Company to enable them to purchase an equipment, corresponding with the immense through business which their road is confidently expected to do. Three fifths of these bonds are guaranteed by the city of Baltimore and two fifths by the Baltimore and Ohio railroad company. On the pledge of these bonds the Central Company expect to raise \$300,000 in cash, sufficient with their

present means, to complete and equip their road.

Messrs. Robert Garrett & Sons, are reported to have disposed of above \$1,000,000 of Central Ohio Bonds in Baltimore, where they are now principally held for permanent investment. These bonds were sold at from 85 to 87½.

A large portion of the motive power of this road, (the engines designed to burn bituminous coal) will be supplied by Mess. Smith and Perkins, of Alexandria, Virginia.

Union of the Old Colony and Fall River Railroad of Massachusetts.

The following is the award of the referees, upon which the consolidation of these two companies has been effected:

The value of all the property of the Old Colony Railroad Company, including the franchise, rights of action, and assets, of every description, subject so all its debts and liabilities, absolute and contingent, we award and determine to be the sum of \$1,650,000, which sum is to be deemed and taken as the contributing interest of said Old Colony Railroad Company to the capital stock of the "Old Colony and Fall River Railroad Company" on the 30th day of June, 1854.

The value of all the property of the Fall River Railroad Company, including its franchise, rights of action, and assets of every description, subject to all its debts and liabilities, absolute and contingent, we award and determine to be the sum of \$1,050,000, which sum is to be deemed and taken as the contributing interest of said Fall River Railroad Company to the capital stock of the Old Colony and Fall River Railroad Company on the 30th of June, 1854.

We further award and determine that the whole capital stock of the Old Colony and Fall River Railroad Company aforesaid shall be the sum of \$2,700,000 represented by 27,000 shares of the par value of \$100 each; the proportion of said capital stock to be shared by the stockholders of the Old Colony Railroad Company shall be 16,500 shares thereof; and the proportion of said capital stock to be shared by the stockholders of the Fall River Railroad Company shall be 10,500 shares thereof.

And in consideration thereof, the entire property of the said Old Colony Railroad Company and of the said Fall River Railroad Company, real and personal, including their respective franchises rights of action, and assets of every description, shall be deemed and taken to have vested in, and become the property of the "Old Colony and Fall River Railroad Company, on the 30th day of June last past, subject to all their respective debts and liabilities, absolute and contingent, which are to be assumed and borne by the said Old Colony and Fall River Railroad Company.

In regard to the amount of capital stock of the consolidated company, the following report of a committee, appointed to consider and report thereon, was adopted.

That the amount of the capital stock of the Old Colony Railroad Corporation represented by certificates which have been issued, was \$1,965,100; and the amount of capital stock of the Fall River Railroad Company, represented by certificates which have been issued, was \$1,050,000—making an aggregate of \$3,015,100; and the committee are of opinion that the capital stock of the new corporation formed by the union of both of said former corporations ought to be equal to the aggregate capital stock of both of said corporations, to be divided according to the proportions stated in the award of the referees, viz: in the proportion of 16,500 to the stockholders of the Old Colony Railroad Company and 10,500 to the stockholders of the Fall River Railroad Company.

The committee recommend the adoption of the following resolution:—

Resolved, That the amount of the capital stock

of the Old Colony and Fall River Railroad Company shall be the sum of three millions, fifteen thousand and one hundred dollars (\$3,015,100).

The directors of the new company are Francis B. Crowninshield, Wm. J. Walker, Caleb C. Gilbert and James H. Beal, of Boston; Richard Borden, Fall River; Alexander Holmes, Kingston, and Peter H. Pierce of Middleboro.

Leonard Scott & Company's Reprint of the Foreign Reviews.

To place before such a public as the United States, the tendency of which, from the distracting influences to which it is constantly subjected, is toward *superficiality*, the results of the intellectual vigor and research of *England*, is effecting a good second to none other possible to be conferred upon our people. In this light we regard the early republication of the *English Reviews*,—the *Edinburgh*; the *London Quarterly*; the *Westminster*; the *North British*, with *Blackwood's Magazine*, by Leonard Scott & Co., 79 Fulton street, New York, as an invaluable source to the literature and thought of this country. These works constitute a most complete record of the progress of society in science and art, in ideas, in the theory of government, and in political and religious toleration. They cannot be read without imparting the culture of which they are the expression. They are admirably calculated to abate our great national infirmity, *self-conceit*, by showing that in a great many particulars which constitute true national greatness, we are far behind other people; and that even where we think we must excel, in notions of the competent functions of government, our greatest lights, in correctness of views, and in insight into the nature of man, are far behind what we find in the old country.

We commend the above publications to our readers. The whole *five* may be had for the year, for \$10; or any one of them for \$3. With them all, a man has sufficient literary matter for his reading, and more thought than he can well digest, between number and number.

Iowa.

A road is proposed to be built from Keokuk, northerly through Mount Pleasant, Fredonia, and Muscatine, to Lyons; thus supplying the place of river communication for nearly 200 miles, besides penetrating the interior of the country sufficiently to attract a large part of the interior trade.

This road on the west bank of the Mississippi, together with the Warsaw and Rockford road pursuing the same general course for the same distance on the east bank, will be of great value to St. Louis. Iowa is growing at the most rapid rate and possesses the most extended and substantial elements of future greatness. And by the above occupation of the west bank of the Mississippi, St. Louis will be in a position to intercept a large portion of the trade of Iowa, brought from the interior by the Burlington and Missouri and the Mississippi and Missouri roads.

Harlem Railroad.

Mr. Nicholas Dean has been elected President of the Harlem Railroad Company.

Cleveland and Toledo Railroad.

Mr. Henry Martin, formerly President of the Buffalo and Rochester Railroad, has been elected President of the Cleveland and Toledo Railroad Company, in place of S. F. Vinton, who has resigned. Mr. Martin entered on his duties on the

1st of September. The receipts of this road are rapidly increasing, and promise to be 50 per cent. above those of last year.

American Railroad Journal.

Saturday, September 16, 1854.

New Inventions.

Among the patents granted in June was one to Henry R. Campbell of Lebanon N. H., for "an improvement in railroad tracks and wheels." Instead of a single line of rail on each side of track, two lines are proposed, say $2\frac{1}{2}$ inches apart. For this double system of rails, wheels of perhaps 9 inches width are proposed, with a flange in the center of their width made to run between the double line of rails.

We have no doubt that the expense of an extra line of rails, (\$6000 to \$7000 per mile) would prevent the adoption of any such plan. Besides there would be a difficulty in keeping the space open and clear between the rails.

New Spark Arrester. G. B. Simonds, of New Haven, Conn., and Abel Breuer, of Saugatuck, Conn., have patented a spark arrester in which the draft opening through the top of the outer casing is of the same size and shape as the outside of the deflecting cone immediately below. Around the draft opening, in the top of the outer case, a flange projects downwards to within a few inches of the cone. The cone, having straight sides, projects the sparks outward, and upward instead of downward, the latter being the direction generally given by the deflecting cone in ordinary sparkers. The steam and smoke are expected to escape between the upper edge of the cone and the lower edge of the flange, above described: the sparks being carried past this opening and deflected downwards against the top of the outer casing.—The outer casing, draft opening top of inside pipe and cone are made oval in their horizontal plan, so as to present the least *frontage*, and to diminish the trailing of smoke. The inside pipe has "spreaders" so as to throw the exhaust upon all sides of the cone.

Share and Money Market.

The share market has assumed a new aspect during the past week and has shown an advance as rapid as has been its previous decline. The improvement in some of the leading stocks will be seen by the following table.

	Sept.	Sept.	Sept.	Sept.	Sept.	Sept.
	10	11	12	13	14	15
Erie.....	36	39	40	41½	45	48½
N. York Central.....	89	89	88½	88	89	92
Michigan Southern.....	90	90	90	90	90	90
Michigan Central.....	85	86½	87	87	87	87
Harlem.....	31½	31½	31½	31	32½	32½
Reading.....	68	69	69	68¾	68½	70
Cleveland & Toledo.....	69¾	70	70	70	72	72
Hudson Riv'r.....	40	45	47	45	44	47½

The great advance has been in *Erie*, arising partly from increased confidence as to its value, and partly from a speculative movement. It is stated that a contest for the direction has helped to the recent rise, which is equal to about 20 per

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,748	113,520	none	86
Androscoggin and Kennebec.. "	55	824,863	1,043,540	2,036,140	177,003	80,053	none	32
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	42
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	6	94½	
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	17
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	105½
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	.....	.....	328,782	163,075	5	42
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	70
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	104½
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	20
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	4½
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	ent.	78
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,509	114,098	6	81½
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100½
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6½	77
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	95½
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	61½
Fall River	42	1,050,000	6,208	1,050,000	294,183	126,589	8	93
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	87½
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central "	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony..... "	45	1,064,070	295,038	2,293,534	374,897	122,866	none	99
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	11½
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	52½
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	93½
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	65
Providence and Worcester.. "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	80
Canal..... Conn.	45	922,500	500,000	1,400,000	639,529	294,269	10	119
Hartford and New Haven.... "	72	2,350,000	500,000	1,500,000	329,041	168,902	none	.....
Housatonic..... "	110	.....	.....	2,500,000	.....	.....	.....	.....
Hartford, Prov. and Fishkill.. "	50	.....	.....	In progress	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven.... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	45
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progress	.....	.....	none	.....
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progress	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	36
Hudson River..... "	144	3,740,515	7,046,395	10,527,054	1,063,659	338,783	none	42
Harlem..... "	130	4,725,250	977,463	6,102,935	681,445	324,494	4	31
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	22½
New York Central..... "	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	89½
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	11
Oswego and Syracuse..... "	35	350,000	206,000	633,598	92,353	46,072	.....	.....
Plattsburg and Montreal..... "	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,495	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	608,942	316,259	10	131
New Jersey Central..... "	63	1,679,935	1,500,000	3,195,222	365,833	179,210	7	95
Cumberland Valley..... Penn.	56	1,184,500	18,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster.. "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	68
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,038	541,769	5	69

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	85
Philadelphia and Trenton..... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	97
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	49½
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna..... "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg..... "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac..... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac..... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh..... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina..... S. C.	110	.....	.....	In prog.	.....	.....	.....	.....
Greenville and Columbia..... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	934,424	456,468	7½	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River..... Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston..... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point..... "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	80	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia..... Tenn.	60	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga..... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington..... Ky.	73	1,430,150	900,000	In prog.	.....	.....	.....	.....
Frankfort and Lexington..... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort..... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington..... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh..... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	59
Cleveland and Toledo..... "	147	2,000,000	1,600,000	.....	.....	.....	.....	71½
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus..... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	100
Columbus, Piqua and Indiana..... "	46	.....	.....	2,000,000	.....	.....	.....	.....
Columbus and Lake Erie..... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton..... "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	.....
Cincinnati and Marietta..... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	.....
Mansfield and Sandusky..... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie..... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77½
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley..... "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	.....
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine..... "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati..... "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	.....
Lafayette and Indianapolis..... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru..... "	159	2,647,700	1,241,300	2,400,000	516,414	268,075	10	.....
Terre Haute and Indianapolis..... "	72	632,387	663,100	1,353,019	105,944	71,446	4	.....
Rock Island and Chicago..... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi..... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	.....
Michigan Southern and Ind. N. Mich.	315	.....	8,741,564	7,276,616	1,200,922	586,929	17	90
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	85
St. Louis and Pacific..... Mo.	38	.....	non	In progress	.....	.....	.....	.....

cent. in ten days. The advance in this stock has helped to carry up others. There is however a better feeling prevailing, and we think a gradual improvement may be looked for. We are certain such would be the fact, if the Erie Income bonds could be satisfactorily settled.

There is a steady, though not a large demand for railroad bonds.

The earnings for August as far as heard from are satisfactory. We give the following in addition to the returns in last week.

Pennsylvania R. R.

Receipts for August, 1854..... \$305,668 64
Corresponding month last year..... 236,493 19

Increase..... \$69,175 45

Receipts from January to Aug. 31, 1854..... \$2,431,017 21
Corresponding period last year..... 1,844,869 77

Increase..... \$586,147 44

Michigan Southern R. R.

Passengers and Mails..... \$96,237 47
Freight and Miscellaneous..... 69,712 36

Total..... \$165,949 83

Earnings August 1853..... 155,398 48

Increase..... \$10,551 35

Galena and Chicago R. R.

The receipts of the Chicago and Galena Road in August were..... \$103,000
August, 1853..... 49,000

Increase..... \$54,000

New York Central R. R.

	Passengers.	Freight.	Total.
1854, July.....	\$301,087 76	\$122,429 90	\$423,467 66
1853, July.....	267,562 91	103,128 49	370,691 40

Increase... \$33,474 85 \$19,301 41 \$52,776 26

1854, Aug.....	\$317,000 00	\$198,174 60	\$515,174 60
1853, Aug.....	349,125 76	151,285 18	500,410 94

Increase..... \$14,763 60

Ohio and Pennsylvania R. R.

The receipts of the Ohio and Pennsylvania Road in August, 1854, were..... \$110,238 38
For August, 1853..... 66,928 28

Increase, 65 per cent..... \$43,310 10

For the first eight months of 1854..... 631,473 33

For the first five months of 1853..... 364,848 86

Increase, 73 per cent..... \$266,623 47

The earnings of the Chicago and Rock Island Railroad for August were \$97,611.

Appointment.

E. C. Thompson, Esq., well known to the Eastern public as a conductor of the Boston & Maine Railroad for many years past, and an universal favorite, has been appointed Superintendent of the Manchester & Lawrence Railroad.—*State of Maine.*

Pittsburg and Connellsville Railroad

That portion of this road now under contract, is being pushed forward with a considerable degree of vigor. It is supposed that the balance of the road will not be placed under contract before next spring. In the meantime the different corps of Engineers are busily engaged in running experimental lines so as to determine the most practicable route.

Alton and Terre Haute R. R.

This road is rapidly progressing to completion. Nearly forty miles east of Alton are now in readiness for the trains.

Erie Railroad.—How Should the Income Bonds be Paid?

The writer of the following is a gentleman in influential position, at the head of a large banking house, and one of the extensive buyers of our railroad securities for foreign account. His opinion is the more valuable for the reason, that he has not recommended *Erie* to his customers, for fear of a crisis similar to the one that has happened. He has full confidence however in the capacity of the road for success, and stands ready to give it his encouragement and support, the moment a correct and consistent policy shall be agreed upon. With such a policy, the Erie Company would not be compelled to execute a "chattel mortgage" to raise the paltry sum of \$500,000, nor submit to the humiliating necessity of having all their wants, and all the steps to relieve them, paraded before the public. Without a policy which shall secure the co-operation of the conservative portion of the community, particularly of such banking houses in this city as control the public sentiment in Europe in reference to our railroads, we see little hope for permanent improvement in the stock and securities of the Erie road. A very few men among us, a majority of whom, we presume, have no interest of any kind in the road, control the market value of this stock; or we should say, rather, could put its securities to their former figure, by the simple expression of favorable opinion as to its management. Shall not such an easy remedy for the difficulties under which the road is laboring be resorted to?

To the Editor of the R. R. JOURNAL.

I beg leave to address you a few lines on a subject that is just now attracting universal attention—the Erie Railroad and its debts.

The floating debt, the directors tell us, is provided for. They tell us further, that they hope soon to make proposals for liquidating the Income Bonds, due on the first of February, and they state that the road has earned, *net*, after paying all expenses, discounts, interests and commissions, full \$616,000 in nine months. I believe the above statement to be true; at all events I have no doubt it is possible.

Now to the point—How are the Income Bonds due 1st February 1855, amounting, if I mistake not, to \$2,700,000, to be met?

I propose, and propose it not only to the Erie Railroad Company and its directors, but to the community at large, and to the foreign holders of the Income Bonds that the Company honestly and candidly confess their inability to pay them *cash*, and submit the following compromise:

The Directors state that the road has earned *net*, after paying all expenses, interests, discounts, and commissions, \$616,000 in nine months. If correct, the road, with its rapidly increasing business, will surely earn \$620,000 yearly, *net*, for each of the 4 years to come. To pay the Income Bonds, issue an equal number of new Bonds due 1st February 1859, to be secured by sinking fund in hands of well known and trustworthy men, not connected with the Erie Railroad Company as Directors.

To the sinking fund is to be carried annually \$620,000 [in semi-annual payments; the first payment of \$310,000 to be made 1st August 1855. All monies paid into sinking fund to be invested in the new Bonds so long as they can be had at,

or below *par*. Otherwise put out on good security at 7 per cent. This sinking fund would work as follows:

Payment 1st August 1855.....	\$310,000 00
Int. to 1st Feb'y 1856 at 7 per cent. =	
3½ per cent.....	10,850 00

\$320,850 00

Payment 1st Feb'y 1856.....	310,000 00
-----------------------------	------------

gives sinking fund 1st Feb'y 1856....	\$630,850 00
Same amount on 1st Feb'y 1857.....	630,850 00
and interest on \$630,850, at 7 per ct..	43,160 50

Sinking fund 1st Feb'y 1857.....	\$1,304,860 50
For 1857-58.....	630,850 00
and interest on \$1,304,860, at 7 per cent.	78,340 23

Sinking fund 1st Feb'y 1858.....	\$2,014,050 73
for 1858-59.....	630,850 00
and interest at 7 per cent. on \$2,014,050.....	140,983 55

Sinking fund 1st February 1859....	\$2,785,884 28
------------------------------------	----------------

or \$85,800 more than wanted.

The remedy is clear and near enough; why not adopt it?

The Directors show us \$616,000 cleared in nine months. Surely then it is in their power to pay off Income Bonds in 4 years as above.

I believe a 25 years' 7 per cent. loan is intended to be proposed with 1½ yearly or 1 per cent. semi-annual sinking fund. Any one who will take the trouble to calculate will find that a 7 per cent. loan can be extinguished in 25 years by a 1 per cent. semi-annual sinking fund invested at 7 per cent. again.

Let us look at results of the two propositions. If the short loan 4 years, with the \$310,000 semi-annual sinking fund be adopted, the Income Bonds are settled by the time the second mortgage is due, and the world, seeing the strength and productiveness of this great road, will be ready buyers for the 4 millions third mortgage bonds, set apart to liquidate an equal amount of the second mortgage due 1859,—the entire bonded debt will rapidly rise, as confidence is restored. But the shares, what will they be worth, if it be known that before the end of 1859, all chance of dividend is cut off. They are lower now than Hudson River Railroad shares that never paid a dividend, and is not likely to pay one sooner than Erie Company. But the shareholders are not, and cannot be injured. Brokers will, though, for it will for a time kill speculation in Erie; but there is field enough left to make brokerage on other stocks, so in fact no one will be injured; for if speculation be stopped on *Erie*, it will fall on something else.

If the 25 year loan is adopted what will be the result. The Directors are out of trouble, and may be able in 6 months from now to declare a dividend. Some knowing ones will make money on shares, but how about bonded debt? The 25 year loan will not sell at *par*; though secured by sinking fund, and in 1859 the 4 million third mortgage set apart to extinguish like amount of second mortgage again will, if saleable at all, sell below *par*. The Company to favor speculators in shares, only increase debt, and pay interest on money they never touched, they again sink on these seven millions to be sold between now and 1860 a capital of at least one million which in fact the stock loses, as the Company has ultimately to pay it.

The question it seems to me is simply this: Is

it better to have the stock at 35 per cent. or 5 per cent. below value of Hudson River Railroad, that never paid a dividend, the result of giving up 4 years dividends to restore the Company to general confidence and credit, or is it better to make a long loan and carry stock up in view of early dividends, to see it and its bonds again depressed in 1859 as it now is? A 4 year loan and large sinking fund will fully restore the Company to public confidence. Speculation in shares may cease, but with every \$310,000 paid into sinking fund, confidence in shares must revive. Slowly, but surely they will rise, to keep up; while a long loan may bring about rapid rise, and give a few a chance to realise fortunes, while in 1859 fortunes will again be lost, in the same manner they have been, on the shares, if the third mortgage does not sell freely to redeem second mortgage.

Suppose the 25 year loan is accepted, what will it sell at? will it sell over 80? will it sell at that price? In 1859 will the third mortgage sell better, while this 25 year loan with sinking fund exists? The Company will sink 1 million to 1½ million in discount on loans. Please calculate the amount of this interest for 25 years to come. A capital invested at 7 per cent. doubles, calculating interest upon interest, in about 11 years! Stockholders by sinking 1 million in discount thus sacrifice in 11 years about 2 millions, in 22 years about 4 millions of dollars; and if 1½ million is sunk in discounts on loans it will run up to a sacrifice of about seven millions in 25 years.

Better face it at once and lose 4 years' dividends to restore bonds and stock to confidence and value. It is the cheapest remedy after all.

Another thing I would suggest is that where the debt is equal to, or exceeds the capital stock of a company, the company should admit as directors a fair proportion of bond holders. Perhaps the Directors of Erie Railroad Company do not represent, in themselves, one million, *par* value, of shares, they may or they may not, and they may not hold one Bond, it seems to me unfair that the stockholders alone should manage a company where the stock is but ⅓ or ¼ of capital invested in road.

I am neither stockholder nor bondholder in Erie Railroad just now, nor have I ever been a stockholder. I have but a general interest in the road as the most prominent and productive one in the United States, if not in the world. I look upon it as a great and glorious undertaking, that even with the deficient management under which it has suffered, cannot be ruined. It will, it *must* succeed, sooner or later. I am duly desirous to point out the only true remedy, to bring it into permanent favor, and as soon as possible: the more, as in Europe to my knowledge, Erie is the standard by which our railroad securities are generally judged, and any deficient, incorrect, or injudicious course will lead to the general discredit of all our railroads. I feel confident that a short loan, with an adequate sinking fund will prove to the world at large, that our railroads are no humbug concerns, and though we may for a time misjudge and mismanage, we in the end are good for our debts.

Possibly with the arrangement for floating debt, it will not suit the Erie Company to create a 4 year loan, and give up to trustees \$310,000 semi-annually. That of course must be considered, an

if necessary a 5 or 6 year loan be substituted for the 4 year one, I propose. What and all I ask is that the Company show to the world they can pay off a loan. Nothing harms us, and our credit abroad more, than paying off old debts by creating new ones. I appeal finally to all railroads, if they have their own, and the general credit at heart, to create sinking funds even for debts that are long since negotiated. It will raise our credit abroad and revive demand for our securities, and as natural consequence, improve prices.

Sept. 6th, 1854.

M.

(For the American Railroad Journal.)

Erie Railroad--Its Engineering History.

Mr. Editor—I have read with attention and satisfaction your article upon the "Erie Railroad" in the JOURNAL of September 2d. And, with your permission, will correct some statements which I think are calculated to do injustice to individuals heretofore connected with the road.

You say "the company suffered exceedingly for the want of a competent Chief of the engineering department, to give consistency and uniformity to the estimates and expenditures. No proper idea seems ever to have been formed of the cost or the magnitude of the work, but estimate after estimate of final cost appear to have been made from the extent of the demands immediately pressing upon the Company." You also say in another place: "Another great mistake was the neglect of the Company to employ a competent chief engineer during the progress of the work" &c.

You will recollect that the first Chief Engineer of the Erie Railroad was BENJ. WRIGHT, under whose directions in 1834 and 1835, the first surveys were made by James Seymour and Charles Ellet, jr. No one will dispute the claim of Judge Wright to a place in the first rank of engineers. His report is not before me, but I recollect that he made the route for the road 483 miles long, that he reported that an inclined plane would be required at the westerly descent of Shawangunk Mountain, and another one at the western terminus of the road near Dunkirk, that the ruling grades on every working division of the road would be at least 70 feet per mile, and in some cases considerably more, that no curve would be of less radius than 500 feet, and that the total cost of the road would be five millions of dollars. I will submit for your consideration, as well as the consideration of others who are familiar with railroad matters, whether you would rather, to-day, own stock in a road built upon Judge Wright's plan at a cost of five millions, than the road as actually built at a cost of thirty-five millions?

During Judge Wright's administration he was assisted by such men as Edwin F. Johnson, Col. Talcott, Major Courtenay, Charles Ellet jr., James Seymour, H. C. Seymour and others; and consulted especially with Moncure Robinson and Jonathan Knight; and at the time of his leaving the road (Fall of 1836, I believe,) it was ascertained as the result of further and very extensive examinations along the whole length of the line, that the Shawangunk Mountain could be overcome by grades of 100 feet per mile and that the descent to Lake Erie could be accomplished by a grade of sixty-eight feet per mile.

During Judge Wright's administration 40 miles of the line was definitely located and about two-

thirds graded between the mouth of the Callicoon Creek and the village of Deposit on the Delaware River.

The work was suspended in the spring of 1837. In the summer of 1838 Major T. S. Brown was appointed to locate the western ten miles, leading out of Dunkirk, and H. C. Seymour the eastern ten miles from Piermont. Mr. E. F. Johnson acting as consulting engineer. The grade at the western end of the road was reduced to 60 feet per mile. The eastern end was also located with the same maximum, and both extremities put under contract.

Edward Miller of Pennsylvania was appointed chief engineer in the summer of 1839 and filled the office till the assignment in 1841; Major Brown acting as associate engineer. During his administration the line from Binghamton to Dunkirk was located, and partly constructed, the location was made with reference to using piles wherever the ground would admit, and more than one hundred miles were actually driven upon the Susquehanna and Western Divisions; H. C. Seymour having charge as Division Engineer of the Eastern, A. C. Morton of the Delaware, Geo. E. Hoffman of the Central, Charles B. Stuart of the Susquehanna, and Major Brown of the Western Division.

The line from Hornellsville, twelve miles westward to Almond Summit, was located and partly graded upon a maximum grade of sixty-nine feet to the mile. No definite location of the line had been decided upon up to this time, (except the 40 miles on the Delaware River) between the Shawangunk summit and Binghamton. During the assignment, Major Brown was appointed Chief Engineer. On the resumption of work in 1845 by the Board of Directors of which Mr. Loder was chosen President, Major Brown was retained as Engineer and Horatio Allen was appointed Consulting Engineer, the question of location between Shawangunk summit and Binghamton was taken up, and after a long struggle in the Legislatures of New York and Pennsylvania the necessary laws were passed authorizing the Company to locate a portion of their road in Pennsylvania. The New York Legislature appointed a commission consisting of Messrs. John B. Jervis, Horatio Allen, and O. W. Childs, to examine this question with reference to the comparative merits of the interior route through Sullivan county and the one now adopted. The commission decided in favor of the latter, principally on account of the great saving in rise and fall, and the reduction of maximum grades. After this decision the line was immediately placed under contract from Shawangunk summit to Port Jervis, and very soon afterwards, to Binghamton. The descending grade from Shawangunk summit to Port Jervis was reduced to 45 feet per mile. The grade along the Delaware between Port Jervis and Deposit (90 miles) does not exceed 15 feet per mile, ascending westerly; and is either level, or descending the whole distance easterly; the summit between Deposit and Susquehanna, (Lanesboro), was overcome by a maximum grade of 60 feet per mile.

Major Brown left the service of this company in the Fall of 1849; up to which time, the road had been completed to Elmira, and the location had been decided upon and the line partly graded

from Elmira to Hornellsville, the previous location made by Mr. Stuart between Binghamton and Hornellsville and upon which piles had been driven nearly the whole distance with maximum grades of 40 feet per mile was generally abandoned, and the line was adapted to a graded road, with maximum grades between Susquehanna and Hornellsville (150 miles) of 15 feet per mile ascending westerly, and 5 ascending easterly.

During the administration of Major Brown, he was assisted by the following Division Engineers: Silas Seymour, from Middletown to Shohola (or Barryville); W. H. Sidell, from Shohola to the mouth of the Callicoon; L. J. Stancliff from Callicoon to Deposit; Julius W. Adams from Deposit to Binghamton; and L. J. Stancliff from Binghamton to Hornellsville. Major Morel took charge of Mr. Stancliff's Division on the Delaware, after Mr. Stancliff was appointed to the Susquehanna Division.

Before Major Brown left the service of the Company (and during the summer of 1848), Silas Seymour was appointed to revise and locate the line between Corning and Lake Erie. The location as before remarked was decided upon as for west as Hornellsville, before his departure for Russia, and the surveys between Hornellsville and Dunkirk were in progress. The surveys were completed in the spring of 1850, and resulted in the recommendation to the board by Mr. Seymour, and Mr. Horatio Allen, Consulting Engineer, of a line which shortened the distance between five and six miles from Hornellsville to Dunkirk, and reduced the maximum grades ascending westerly from 69 to 50 feet per mile, and ascending easterly from 60 to 40 feet per mile. This line was finally adopted by the Board, although in doing so, they abandoned a very large amount of work which had been done upon the old location. The line was immediately put under contract, and the road completed to Dunkirk in the spring of 1851, under the direction of the following Division Engineers, viz: L. J. Stancliff, from Hornellsville to Almond Summit; McRae Swift, from Almond Summit to the Nine mile, (on the Allegany River), and Silas Seymour, from nine mile to Dunkirk. Mr. Horatio Allen continued to act as the Consulting Engineer of the Company until the completion of the road.

From this hasty sketch of the principal features in the Engineering history of the road, you will see that there has been a gradual and constant improvement in the three most important features or characteristics of the road: to wit, alignment, maximum grades, and plan of construction. I think you will also admit that the Company have availed themselves of the best engineering talent in the country during the different stages of the road's progress, running as it does, through a period of seventeen years. It is not claimed that these improvements have been attained without great increased cost; but it is claimed, and can, I think, be clearly demonstrated, that no important change or improvement has been recommended by the Engineers and adopted by the Company up to the time of the completion of the road, that has not resulted, or will not result, in great and permanent advantage to the stockholders, and also to the public.

OBSERVER.

Mobile Harbor.

The improvement of the navigation of her harbor appears to be the condition of the future greatness of Mobile. Otherwise, she has most valuable and indefeasible elements of prosperity. Her central position on the gulf, and on the threshold of a vast natural drainage, besides the most important relation she will soon sustain to a magnificent system of railroads, are all commercial advantages of a superior order. Her rate of growth is probably now greater than that of any other city on the Southern coast.

When the railroads centering at Mobile are considered, and when reasonable estimates are formed of the results likely to attend their completion, it must be admitted that she has commercial resources far in advance of some cities of first rank. With any knowledge of the directness of these roads, and of the great staples produced throughout the ten to twenty degrees of latitude through which they are to pass, Mobile appears with the promise of becoming a great commercial center. We feel certain that a commercial interest is to be soon developed there, sufficient for the proper improvement of her harbor at least, and beyond, the limits of the sea are the bounds to which her trade may extend.

The withdrawal of the steamers running from New York to Mobile, to be put on the New Orleans route, is therefore likely to create a false impression of the commercial wants and of the marine accessibility of Mobile. A large ocean steamer was built more than two years since, expressly for the Mobile trade, and has continued to run regularly from this port for that time. Within a few weeks a new steamer has been added and now, at a time when the usual fall trade is just commencing, both boats are transferred to New Orleans. It is not believed that the commerce of Mobile is declining, or that the difficulties encountered in approaching her piers are increasing. It is supposed that these boats, both of which were built with a full knowledge of the expenses to which they would be subjected for lighterage in Mobile Bay, have merely abandoned a *good* for a *better* business.

As the experience with these steamers may be possibly regarded as a test of the navigable capacity of Mobile Bay we propose to describe its general hydrography and to point out its available and ultimate improvements.

The Bay of Mobile is about 30 miles from North to South, and ranges in width from 3 to 20 miles. The general width of the Northern 20 miles of the bay is not far from nine miles. The rapid increase of width of the Southern portion forms a broad bay on the Eastern side, shut off from the gulf by a long branch of land, and called Bon Secours Bay. This portion of the main bay has nowhere 12 feet depth at mean low tide.

The lower end of the bay is nearly shut off from the gulf by the long branch of land referred to, and by "Dauphin Island." The latter, some 10½ miles long, and very narrow, is probably an extended bar, formed by the counter current between the discharge from the bay and the Gulf Stream. The entrance to the bay, and towards its Western side, is about three miles wide. The navigable portion is however less than one mile in width.—The Main channel, off Mobile point, has 48 feet of water, but the "outer bar," about 5 miles outside,

has but 20¾ feet at mean low tide. Inside Mobile point (31 miles below the city) an anchorage ground, covered with 18 feet of water, extends north about 6 miles and for a general width of about 2 miles. This is called the "Lower fleet," and does not approach within 3 miles of the western shore of the bay. From the 18 feet anchorage, vessels of lighter draught may proceed in 12 feet or more water to within 8 miles of the city, and within 6½ miles of the 15 feet water at the mouth of Mobile river. The upper limit to the 12 feet water is the boundary of the "upper fleet," and this depth of water approaches within 1½ miles of the west shore, at a point 24 miles below the city; to within 2¾ miles of the same and 10 miles below the city; and to within 2400 feet of the east shore at "Alabama city," 14 miles S. S. E. from Mobile. Above the "upper fleet" vessels of but 8 feet draught can go up to Mobile.

The navigable depth of the bay is of course influenced by tides, but these usually rise and fall but to a small amount. The time and height of low water are irregular, and are much influenced by the direction and force of the wind. The average rise and fall, from observations at Fort Morgan, is 1.2 feet. The rise of the highest tide above mean low water is 2.2 feet, the fall of the lowest tide below 1.4 feet; greatest range of tide 3.6 feet. There is generally but one high and one low water in 24 hours, the rise and fall being greatest when the moon's declination is greatest.

The winds blowing from the S. E. and round by S. to S. W. tend to raise the water in Mobile Bay. Northerly winds tend to depress it. The prevailing winds are easterly, the relative duration of a wind from an easterly point to that from a westerly one, for an entire year, being as 2 to 1. The directions of the prevailing winds during the different months are as follows:

Dec., Jany. and Feby. Northerly with an occasional excess of S. E.

March and April, Northerly and S. E.

May, June and July, E., S. E., S. and S. W., with an excess of S. W. (the sea breeze.)

August, variable with an excess of S. W.

Sept., Oct. and Nov. N. and N. E.

Nearly the whole bottom of the bay is of soft blue mud.

The upper end of the bay is formed by the delta of the Mobile and Tensaw rivers, the diluvial deposits of which have formed a nearly continuous bar, covered by less than 5 feet of water, and extending across the bay. In the single channel through this bar the water is 12 feet, while at Dog River Bar, at the termination of the channel upon the level bottom, the depth at mean low tide is but 8½ feet. 3½ miles of the main channel have less than 11 feet depth. The deepest water on the bars at the mouth of the Mississippi, in the South West Pass, is 13 feet.

One improvement now going on is the contraction of the channel of Mobile river, whereby greater scouring power is anticipated. The closing of some of the unused passes at the north of the river may be alone sufficient for the abrasion of Dog River Bar for two or three feet.

The citizens of Mobile, now bound by pressing engagements upon their railroads have not yet undertaken any municipal action with reference

to the improvement of their harbor. As the last hope of aid from the national government has fallen under the presidential veto of the River and Harbor bill, the people of Alabama may complete the improvement in their own capacity.

At Alabama port, 24 miles below Mobile and on the west shore of the bay, the 12 feet water approaches to within 1½ miles of the shore. The Mobile and Ohio road will probably extend to this point, where a pier of about the length of the Piermont pier of the Erie railroad would carry the trains to the vessels' sides. 10 miles below the city, at Deer River point, a pier of 2¾ miles would be required to reach 12 feet water. These two points are the nearest to the two-fathom soundings of any on the west shore. On the East shore the Mobile and Girard road, or the Savannah and Mobile road, could reach 12 feet water by a pier of 2400 feet from Alabama City, 14 miles S. S. E. of Mobile.

If however the 6½ miles of the channel, between the "upper fleet" and the 15 feet water at the mouth of Mobile river, be deepened to 12 feet, a cost of tracks and piers below, equal to \$1,000,000 could be saved, and with a vastly greater convenience to the mercantile interest of Mobile.

North Alabama and Grand Junction Railway.

We are indebted to Mr. J. C. Avery, Civil Engineer, for a copy of the Southern Standard, Columbus, Miss., containing an able communication addressed by him to that paper, in reference to a proposed railroad from Columbus to the Tennessee river, at Decatur, Alabama. The scheme is called the "North Alabama and Grand Junction Railroad," and, if executed, would form a principal and most important link in the grand trunk railway line extending through Virginia, from Maine to the Gulf of Mexico. The length of the projected road, as is estimated, is 131 miles, for which it is proposed to raise a sufficient amount to pay the expenses of a preliminary survey.

At Decatur, says Mr. Avery, it will connect directly with a chain of roads, either completed or in active progress, extending some 1,450 miles on nearly an air-line to Bangor, Me., passing through Huntsville, Knoxville, Lynchburg, Washington, Baltimore, Philadelphia, New York and Boston, and constituting, with the proposed extension south-westerly, the longest air line road in the world. While this line will furnish a direct outlet to the Gulf for the trade and travel of the entire country east of the Alleghenies, embracing all of New England and the greater portion of the middle States as far South as the Carolinas, there is still another line of roads skirting the Cumberland Mountains on the west, and opening a very direct route from Decatur to Cincinnati, passing through Huntsville, Ala., Winchester and McMinnville, Tenn., and Danville and Lexington, Ky. This line, in connection with the North Alabama and Grand Junction Railroad will form part of the shortest connection between Cincinnati, the most important commercial city and railway centre in the west, and the Gulf ports. A third route has been chartered, the greater portion of which is now in progress of construction, extending from Decatur through Pulaski, Columbia and Nashville, Tenn., to Louisville, Ky.

The communication proceeds to say:

These three trunk roads, by reason of their admirable location and connections, will control at least two thirds of the business between the Gulf and the Northern and Eastern States.

The North Alabama and Grand Junction Road was projected with a view to effecting the *shortest, cheapest and most direct* connection between the system of roads above referred to, all converging to the common point, Decatur, and those terminating on the Gulf.

Columbus, the southern terminus of the road, will have railway communication with Mobile in less than a year, and, by means of a road recently chartered between Jackson, Miss., and the point of junction of the Columbus Branch with the Mobile road, styled the "South-western-Air-Line Extension Railroad," a direct connection will be effected with both the New Orleans and Texas Roads.

By inspection of a map of the United States, it will be seen that the cities of Jackson and Columbus, Miss., and Decatur, Ala., are precisely in the same straight line, which line being produced would coincide very nearly with the chain of roads before referred to, leading from the latter city in the direction of New York, thus giving us an *air-line road* from Jackson, Miss., nearly to the extreme eastern boundary of Maine, a distance of more than 1,700 miles! In connection with the New Orleans and Jackson Road, it would constitute a grand National thoroughfare, extending diagonally across the whole breadth of the Union, and connecting the principal commercial depot of the South-west with all the Northern Atlantic cities.

It may be safely affirmed that no other line of roads, looking to the same general connections, can compete with the route here marked out, in all the elements essential to the cheap and rapid transport of freight and passengers between the two extremes. Through Virginia and Tennessee, the route is remarkably direct, and rendered entirely secure from competition by the mountainous character of the country on either side of the line. Going south-westerly from Decatur, nature seems to have made express provision for the extension of the road in a straight line to Jackson, Miss., a careful reconnaissance of the route demonstrating the existence of an unusually favorable line for the construction of a road, both as regards first cost and economical working.

At Jackson, as has been stated, we not only connect directly with the New Orleans road, but also meet a road now in process of construction, running due west through Vicksburg to Shreveport, La., and soon to be extended entirely across the State of Texas, and perhaps eventually to reach the Pacific.

This is a most important connection for our projected line, as it will throw upon it the great bulk of the travel and transportation between Louisiana and Texas, and the Northern and Eastern States.

By the proposed connections, the distance between New Orleans and N. York will be reduced to 1,430 miles, and the time of transit to 2½ days; from New Orleans to Cincinnati 877 miles, time 1½ days, and to Louisville 760 miles, time 1½ days.

By the construction of the short link between Columbus and Decatur, these results may be realized within a period of three years, as this will allow ample time for the completion of all the other connections referred to.

The connection of Decatur, Ala., with Jackson, Miss., is very important, for the reasons urged by Mr. Avery. But as a railroad for that purpose would properly be deflected to Pikeville, to avoid the broken ground in the south of Lawrence county, and for local purposes, it appears to us that it should thence continue to Aberdeen, Miss., and connect with the Great Northern road; rather than to construct a rival line (known as the

"South Western Air line extension") from Columbus to Jackson.

Railroads in Iowa.

We condense from the correspondence of the *Democratic Press*, the following information relative to the progress of Iowa in railroads and in the development of her towns and cities.

There are three divisions of the Mississippi and Missouri road, viz: first, second and third.

The Davenport and Iowa is the first division, and will run ultimately to Council Bluffs. It is located to Fort Des Moines, running through the southern corner of Scott County, thence through the northern line of Muscatine, via Moscow, thence through Johnson to Iowa City, thence through Iowa County, eight miles north of the Southern line, and six south of Marengo; thence bearing north through Poweshick, thence west through Jasper, via Newton, thence south-west to Des Moines in Polk County. The heaviest grading on this road is through Jasper County. January 1st it will be in running order from Davenport to Iowa City. One survey has been made from Fort Des Moines to Kanesville and the Bluffs.

The Muscatine and Oskaloosa is the second. It is located to Oskaloosa, has three hundred men at work, and is under contract to Fredona. This road will probably run to the mouth of the Platte. It is not, at any rate, the intention, to run it to Council Bluffs. From Muscatine it runs south-west to Columbus City, in Louisa Co.; thence west through Louisa and Washington, via the town of Washington, thence through Keokuk, six miles north of the southern county line, thence to Oskaloosa, in Mahaska Co.

The Muscatine and Cedar Rapids branch is the third division of the M. & M. Road. It is under contract from Muscatine to Moscow, and will be completed by first of May next. The M. & M. Company is composed principally of stockholders in the Chicago & Rock Island Railroad.

The Burlington and Wisconsin, a connection of the Northern Cross and Military Tract Road to Aurora. It is controlled by the Michigan Central Railroad. It is located and under contract to Ottumwa, running north of west through Des Moines and Henry counties, via the towns of Hartford and Mt. Pleasant, thence to Fairfield in Jefferson Co., thence to Ottumwa, in Wapello. It will probably run thence to the mouth of the Platte, nearly through the centre of the counties of Monroe, Lucas, Clarke, Union, Adams, Montgomery and Mills. It is built by the Michigan Central Company. We thus have three lines west from the Mississippi, all converging to nearly the same point. It is now, however, considered a well settled fact that fifteen miles of rich country on each side of a railroad track is sufficient for its support. If such is the case, Iowa can support many more railroads that have yet been located or talked of.

Another road is in contemplation from Dubuque west. What steps have been or will be taken with regard to it, I have not been able to learn.

Of Muscatine the correspondent of the *Press* says:

Muscatine county contains ten whole and three fractional townships, containing in all an area of four hundred and thirty-two square miles, and two hundred and seventy-six thousand four hundred and eighty acres of land. The county and present city of Muscatine was first settled by Col. George Davenport. Its distance above St. Louis is three hundred miles; eighty above the Lower Rapids, and thirty below the Upper Rapids; one hundred and thirty below Dubuque; thirty miles east of Iowa City. and fifteen south, making a direct north-west route to the latter place. The number of inhabitants, at the census of 1850, I think, was something over three thousand—an estimate in 1851 made it over four, and it is now about five thousand. Bloomington was the original name of the town; and I notice it still holds that now, on the tables of distances on many of the Mississippi steamers. The name was changed

in 1845. In 1853 Muscatine was incorporated as a city.

The business of Muscatine is principally in lumber, about ten million feet being sold annually, besides large quantities of laths, shingles and wooden ware. Two steam saw mills saw four million feet per annum. The logs come principally from Minnesota above the Falls of St. Anthony, and are from two to four weeks in reaching Muscatine. Coal is abundant in the northern part of Muscatine county.

Iowa City is 33 miles north-west from Muscatine. It probably contains a population at the present time of near 3,000 inhabitants.

The population of Iowa was, in 1852, 230,000, and is now expected to be fully up to 350,000. A recent census of some of the principal counties and towns is as follows:

Present Population of Counties and Towns.			
County.	Population.	Largest town in county.	Population.
Lee.....	21,780	Keokuk.....	4,789
Van Buren.....	17,750		
Dubuque.....	16,600	Dubuque.....	6,634
Des Moines.....	16,336	Burlington.....	7,306
Scott.....	12,570	Davenport.....	5,272
Jackson.....	12,093		
Jefferson.....	11,045	Fairfield.....	1,013
Wapello.....	10,000		
Muscatine.....	9,499	Muscatine.....	3,694
Johnson.....	8,446	Iowa City.....	2,670

Cleveland Locomotives.

Nearly all of our Exchanges have copied extraordinary accounts of the economical performance of these engines, without enlightening us upon the means by which such results have been attained. Here is one:

They are turning out some valuable locomotives at the Cuyahoga Works in Cleveland. One of them was run a distance of 104 miles, using only three-fourths of a cord of wood, by actual measurement. The train consisted of four cars, made twenty-one stops, and kept up the usual rate of speed. The engine weighs twenty-five tons, and has a six foot driver. The amount of fuel usually consumed in running that distance, is 3 cords.

Again, we are told that another engine ran over 400 miles with "one tender of wood." Now we trust our friend Mr. E. B. Sterling, the principal proprietor of these works, will let the public know by what means such economy is attained. Is it due to using coke or coal with wood, or to the superior quality of the wood, or to any new arrangement of the parts of the engine? The *Railroad Journal*, we should suggest would be the best medium for giving the desired information.

Iron Bridges.

We find in the *Philadelphia Register* the following fair hit upon the weak faith of many people in our country who doubt the safety of iron bridges. From its signature and tone we should say it was from Herman Haupt, Esq., the able engineer of the Pennsylvania Railroad Company, and whose bridges, constructed of iron, will doubtless long outlive the prejudice which has for a few years existed against this class of structures. In England, timber bridges are as rare, and perhaps as much distrusted, as iron bridges are at home.

IRON BRIDGES.

The *Ledger* of yesterday had an article from the *National Intelligencer* noticing the fall of an iron bridge at Washington, which closes with this remark:

"These frequent disasters must impair confidence in iron for such purposes."

We would suggest that as many persons have

been known to die in bed, it might be well to caution the public against the use of such articles.

If a chain strong enough to bear only 10 lbs. should break with the weight of 100 lbs., should the material on that account be condemned? Iron is, next to stone, the most reliable material that can be found for bridges, and the most worthy of confidence, but not one man in twenty who pretends to plan bridges knows how to calculate their strength. The failures that have taken place have all been the result of defective proportion, and should have been anticipated.

Indianapolis and Cincinnati Railroad.

The following is the recent report of the President to the stockholders of this road. The results of operating the road, although made up from the most unproductive months of the year, show a rate of annual profit of above six per cent. on the total cost of the work; while the advance on the value of the land owned by the company, would, if considered, increase this rate. The current full year, during all of which this road will have the advantage of continuous connections to Chicago, and during which its local business will become better developed, while its expenses are lessened, will furnish yet better results.

This road will always furnish the shortest route between the two cities of Indianapolis and Cincinnati, both of which, (having now an aggregate population of nearly 250,000) are growing at the most rapid rate which daily increasing railroad facilities can induce. Lawrenceburg has an advantage also in its position on the Ohio river, as freight can be carried from the river to Indianapolis, and to the upper portions of the state, cheaper via Lawrenceburg and the Indianapolis and Cincinnati railroad than by any other route.

The ultimate construction of a railroad from Greensburg, on this road, to Terre Haute, will also make this road a part of a great route between St. Louis and Cincinnati.

REPORT.

The undersigned submits to the Stockholders of the Company a full exhibit of its condition and affairs, embracing its operations since the first of December last, when the running of our cars had well commenced, to the first of July last. This exhibit is the result of a very careful and thorough examination and review of all the affairs of the Company since its organization, and the results compare accurately with the books of the Company; and give a reliable and full view of its concerns.

DR. INDIANAPOLIS & CINCINNATI R. R.

To amount of Stock in Road paid for....	\$1,213,723 88
To 1st Mortgage 7 per cent. Bonds.....	500,000 00
To 2d Mortgage 7 per cent. Bonds.....	400,000 00
To Income 7 per cent. Bonds.....	8,000 00
To Real Estate 10 per cent. Bonds....	200,000 00
To Income 10 per cent. Bonds.....	200,000 00
To Bills Payable....	253,440 38
To receipts for transportation, 7 months from December 1st, 1853, to July 1st, 1854.....	145,947 80
To profits on Real Estate sold since December 1st....	16,307 00
	<hr/> \$2,937,418 51

CR.

By amount paid for construction of Road.....	\$1,739,304 17
By cost of Land reserved for use of Company.....	63,275 00
By cost of Equipments for Road.....	342,325 21
By interest on Stock to 1st January, 1854, in Stock....	106,194 09
By amount paid for taxes and repairs on Real Estate....	8,295 73
By amount paid for taxes on Capital Stock of Company.....	9,160 00
By Bills Receivable..	151,599 30
By cost of running road 7 months, from December 1st, 1853,.....	70,868 56
By 2d Mortgage 7 per cent. Bonds unsold.....	50,000 00
By 10 per cent. Income Bonds unsold.....	36,500 00
By Interest paid on Bonds since December 1st.....	49,320 00
By Real Estate on hand.....	304,066 00
By 5,208 Cords Wood on hand, cost, \$1,-25.....	6,510 00
	<hr/> \$2,937,418 51

Cost of Road and Equipments.....	\$2,081,629 38
Cost of Land used for Company.....	63,275 00
Cost of Road and Equipments, and Land in use.....	\$2,144,904 00
Cost per mile.....	23,832 20
Floating debt of Company, 1st July, 1854.....	\$253,440 38
Means of payment.	
Bills Receivable (chiefly for Land sold)....	\$151,399 30
Real Estate on hand for sale.....	304,066 00
2d Mortgage Bonds unsold.....	50,000 00
10 per cent. Income Bonds unsold.....	36,500 00
	<hr/> \$542,165 30
Deduct proceeds of Lands pledged for payment of Real Estate Bonds.....	\$200,000 00
Leaving applicable to Floating Debt	<hr/> \$342,156 30

The required increase of equipment, and expenditures for ballasting Road, and building Depots, &c., have added beyond our expectations to the debt of the Company; an experience which seems to have been usual in our country, where our roads are pressed into use, as soon as the track is laid down, and along the route of which new villages and business stations are springing up constantly, requiring accommodations.

As will be seen above, the gross receipts for seven months, including the summer, the most unproductive months, and a month in the winter, in which (an unusual occurrence) the river was frozen, were \$145,947.80, or nearly \$21,000.00 per month. Had the uniform tariff of freight, recently established by all the Railroads centering at Indianapolis, been then in operation, the receipts on the same amount of business would have been about \$24,000.00 a month, without increasing expenses; so that the receipts for the ensuing year, which will include the fall, the most productive months,

would be much larger, while the expenses, from the greatly improved state of the road, the experience of officers and hands, and better depot accommodations, may be expected to be largely diminished.

The expenses for transportation during the seven months, has been 70,868.56, or about 48 per cent. of the gross receipts.

Although the net earnings of the road, after paying the interest on all except the Real Estate Bonds, which is a charge upon the lands, have been \$41,809.24—about 3½ per cent. on the Capital Stock—still, as they have been used for the road, and payment of debts, it has been thought best to make no dividend until January next.

The result of the first few months operations, commenced in the winter, when the road was but partially ballasted, along a route to which the business of the country to be affected by it, had to be gradually conformed, affords very satisfactory evidence of the reliable character of the estimated productiveness of our road. The number of promising villages and business stations, and of saw and grist mills, and other manufacturing improvements already erected, proves that the expectations formed of the value of the local business of our line, are to be abundantly realized.

T. A. MORRIS, Pres.

Office Indianapolis & Cincinnati Railroad, }
Lawrenceburg, August 21, 1854. }

Erie Canal Enlargement.

By the recent awards of the enlargement contracts it appears that important gains are made by the State; considering the relation of the present contracts to the engineer's estimates, and that by so far are the public works relieved from the responsibility of the expenditure charged upon them by their opponents. The Albany Journal compares the bids and estimates as follows:

Name of Canal.	Aggregate of bid on which the work was awarded.	Engineers' estimate.	Amount less than estimate.
Erie E. Division.	\$314,603	\$415,576	\$100,973
Erie M. Division.	325,041	387,317	62,275
Erie W. Division.	284,446	364,786	80,340
Champlain.....	57,676	82,450	24,774
Black River.....	74,181	79,000	4,869
Oswego.....	222,387	254,986	32,599
Cayuga & Seneca.	140,763	175,443	34,679
Total.....	\$1,419,050	\$1,759,561	\$340,511
Awards less than estimates.			340,511
Being 19 35-100 per cent. below the estimates.			

Opening of the Quebec and Richmond Railroad.

We are gratified in being authorized to announce that the line of Railway from Richmond to Quebec, will be publicly opened for travel on Monday, the 2d day of October next, on and after which date, regular trains will be run daily, between Quebec and Portland, and between Quebec and Montreal. The entire distance between Portland and Quebec will be 320 miles, and between Quebec and Montreal 172 miles. Trains already pass over the line from Quebec to Richmond, but there still remain a few items of work to put the line in complete order.

The extreme drought of this summer has been favorable for railway construction, and the Grand Trunk Company have spared neither pains or expense to have the entire line to Montreal and Quebec, in the most perfect running order. The speed and regularity with which the line is now worked excites admiration, and we may fairly point to it as the most thoroughly planned, the best constructed and managed road on this continent.

The opening of this line to Quebec will be a most important event in the history of our railway system, and the commercial advantages that our city is to derive from its completion are already being shadowed forth in the events that are occurring in our midst.

Canadian names and faces are as familiar in our streets as those of our nearest neighbors, and the trade of the coming winter will give us notions, of which our fathers had but little knowledge. Lord Elgin's prediction seems very nearly realized—"that Portland is to become a Canadian sea-port."—*State of Maine.*

Workshops of the Northern Indiana Railroad Co.

On the fourteen acres set apart by the Northern Indiana Railroad Company for work shops in Toledo, will be erected now as speedily as the work can be done, the following buildings:

An engine house, in the form of a half circle which is to be 518 feet on the outside.

A machine, and smith shop, 64 by 190.

A car shop, 64 feet by 166.

A building for boiler, brass and copper shops, 80 feet by 100.

A paint shop, 40 feet by 115.

A wood house, 40 feet by 150.

A lumber house, 30 feet by 250.

These buildings will be constructed mostly of brick, and the whole cost with the necessary fixtures and machinery, will probably be not less than a hundred and twenty thousand dollars.—They are all to be located between Wade street and the railroad track—the whole of the middle ground being judged requisite to accommodate the business of the roads meeting there.—*Republican.*

Atlantic and Mississippi Railroad.

This company have appealed to some of the Illinois counties, on their line, for subscriptions to aid in the completion of their road. They propose to accept County Bonds, as follows:

Bonds issued in payment of stock, are to be made payable in fifteen years, and none to be issued until the road is one-half graded, and then only as installments become due.

The interest on these bonds to be paid by the company until the road is finished and earning money to meet it.

A large meeting of the citizens of Bond Co. have adopted the following resolution.

Resolved. That in the opinion of this meeting the county of Bond should take seventy five thousand dollars in the stock of the Mississippi and Atlantic Railroad Company, on the terms proposed by the Directors of said Company.

This resolution was then put and adopted by an overwhelming vote of more than ten to one.

The final vote on this subscription will be taken at the November election.

Central Ohio Railroad.

We learn from the Zanesville *Aurora* that the Stockholders of the Central Ohio Railroad, on Monday last elected the following gentlemen as Directors of said Company for the ensuing year:

John H. Sullivan, Chancy Brooks, N. L. Whittlemore, N. Wright, John Davenport, J. W. Hall, George James, S. R. Hosmer, William Gallagher, Samuel Clark, George B. Wright, D. W. Deshler Samuel Brush.

There was no opposition to the ticket elected, with the exception of George James, Esq., of Zanesville. He was elected over Mr. Sarchet, of Cambridge, by a close vote, the vote of the distant stockholders generally having been cast against Mr. James.

Opelika and Girard Railroad of Alabama.

The Railroad from Opelika to Girard is progressing finely. The grading is nearly or quite completed the whole way, and the superstructure is laid down ready to receive iron rails, nearly or quite to Salem a distance of 10 miles from Opelika. The company say the road will be in running order by the first of January next. No arrangement has been made by which the road can cross the Chattahoochee river. The depot, consequently, will have to be made on the western bank.

Chemung R. R.

At an election for Directors of the Chemung railroad Company, held at Elmira, Monday, June 5, 1854, Simeon Benjamin, John Arnot, and A. C. Diven of Elmira, Chas. A. Cook, N. B. Kidder, William N. Clark of Geneva, Robert Bayard, Isaac Otis J. S. T. Stranahan, Frederic Pentz, J. W. Baker, D. S. Mannors, J. J. Lagrave of New York, were duly elected Directors for the ensuing year; and at a meeting of the aforesaid Directors, held in New York on Tuesday, July the 11th inst., Simeon Benjamin was unanimously elected President, Robert Bayard Vice-President, and Isaac Otis Secretary and Treasurer.

Franklin and Warren Railroad.

At the annual meeting of the Stockholders of this road, held at Franklin, Ohio, on the 11th ultimo, the following Directors were chosen:

DIRECTORS.—Marvin Kent, Bela B. Clark, Thomas Earl, Zanes Kent, Daniel Upson, Jacob Allen, Daniel Beckel.

Marvin Kent, was elected President; J. W. Tyler, appointed Secretary; Zanes Kent, Treasurer.

The work is going forward steadily and rapidly, on the heavier sections of the line, says the *Arkon Beacon*.

Coal Railroad to Somerset County Pa.

The Wellersburg Railroad, extending from Barrellville to Wellersburg, and intended to connect the mines of the Union Company with the Mt. Savage Railroad, has been put under contract and the work is being pushed forward with a degree of energy that will ensure its early completion. Messrs. Walker, Abernethy, Dudley & Co., the contractors, have at this time 200 hands at work.

Port Morris Manufactory.

WESTCHESTER COUNTY, N. Y.

ARE prepared to execute orders for all kinds railroad work and have on hand the approved Railroad Box with the carried Journal also Car Couplings (Lewis' Patent) and Rat-cher Wrenches from \$5 to \$10 each.

All orders punctually attended to by addressing the above.

M. C. BAKER.

NB. Long Iron Planing done on reasonable terms.

R. W. DELOID,

37 Gm. 103 Front st., up stairs.

NOTICE TO CONTRACTORS AND OTHERS.

The undersigned is authorized to sell at public Auction on Tuesday, the 19th inst., at Rock-etts, city of Richmond, Va., the Tools, Implements and Machinery used in the construction of the Ship Lock, belonging to the James River and Kanawha Company.

The equipment is complete and well calculated for heavy work, consisting in part of—

1 Horizontal Steam Engine, made by J. P. Morris & Co.; 4 boilers, 13 inch Cylinder, under 5 feet stroke, in good order; 4 Screw Pumps, 28 to 36 feet long, 3 feet diameter in clear, with centre bearings on friction rollers, and well hooped.

A quantity of Russia Hemp 10 inch Cable for driving lands to above—new and half worn.

About 15 Derricks, horse and double and single hand geared—Extra Blocks, &c., &c., to lift 12 tons.

A large assortment of quarrying and cutting Tools.

About 20 Horses with Wagons; Carry-log wheels Harness, &c., &c., suitable for heavy work.

6 Flat-Boats, various sizes, from 25 tons burthen down.

Wheel Barrows, Picks, Shovels, Crow-Bars, Drills, Blacksmiths' and Carpenter's Tools, &c., &c., comprising a complete assortment of everything necessary for a heavy Canal or Railroad job, and affording contractors an excellent opportunity to equip themselves for heavy work.

1t. 36 D. S. WALTON, Engineer.

East'n Div. James River and Kanawha Canal.

500 TONS No. 1 Gleanrock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.

99 and 101 John st.

N. B.—The above Iron constantly imported.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Columbus Ga., Sept. 6th 1854.

SEALED PROPOSALS, will be received by the undersigned at this office until the 1st day of December, for the clearing, Graduation, Track Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 130 miles. The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate Proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work $5\frac{1}{2}$ miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two Rivers will be crossed with the common pile bridging, with Truss Pivot Draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The Country is healthy, with no swamps after leaving the Tensas River; from Mobile to the River (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third ($\frac{1}{3}$) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common Stock of the Road, and relying upon the earnings of the same, for dividends; the balance ($\frac{1}{3}$) to be paid in the (.08) per cent. Convertible Bonds of the company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus Ga. Mobile, Ala. or in N. Y. at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding ($\frac{1}{2}$) the amount of the contract, for the timely and faithful completion of the same.

22 $\frac{1}{2}$ miles of the Road from Girard west will be open for business the first of November, and 52 miles (9) months thereafter. It is the intention to have the entire line of (245 miles) open for business early in 1858.

St. 37

GEO. S. RUNEY.

Buffalo Machinery Depot.

BUFFALO, N. Y.

H. C. BROWN, *Sup't.* J. W. HOOKER, *Proprietor.*

I AM prepared to furnish and will keep constantly on hand from the best manufacturers a full stock of *Machinery's Tools* for railroad and other shops; such as Engine and Hand Lathes, Large Driver Lathes, Car Wheel Boring Mills, Power and Hand Planers, Drill Presses, Punch and Shears, Axle Lathes, Power Wheel Presses, Bolt Cutters, &c.

J. W. HOOKER, Buffalo, N. Y.

Fire! Fire! Fire!

Preserve your books in one of Duryea & Forsyth's celebrated Fire King safes. They are perfectly secure and excel in finish.

J. W. HOOKER, Agent, Buffalo.

Railroad Track, Suspension, and Depot Scales, Dormant, and Portable Warehouse Scales, Trucers, Baggage Barrows, and Manifest Presses.

Buffalo Machinery Depot,

General Agency for Rochester Scale Works.

H. C. BROWN, *Sup't.* J. W. HOOKER.

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per linear yard. For sale by

THEODORE DEHON,

26 $\frac{1}{2}$ Broadway,

New York.

Contracts made as above for Rails deliverable at English or American ports at lowest rates.

36 St.

ZERAH COLBURN,

ENGINEER AND AGENT

FOR the Design, Construction, Valuation and Purchase of Locomotives and Railroad Machinery.

Offers his services to Railroad Companies in either of these departments, having long experience and the best facilities for all.

As CONSULTING ENGINEER he will advise as to the value or adaptation of any system of motive power, and furnish drawings, estimates and specifications for any arrangement of engine.

As ACTING ENGINEER he will superintend the construction, survey, or reconstruction of any railroad machinery, and guarantee satisfactory results.

As CONTRACTING ENGINEER, having connection with the most reliable and successful manufacturers, he will negotiate for the purchase of Locomotives of the very best construction and proportions. Also Wheels, Tires and Repair Shop Machinery.

Having much experience in Patent Business he will undertake the preparation of Drawings, Specifications, Applications for Patent or caveat and other papers necessary for inventors. He is able to give material assistance in bringing inventions and improvements in Railroad Machinery into favorable notice.

CHILLED TIRES FOR LOCOMOTIVE DRIVING WHEELS.

Zerah Colburn retains the principal agency for the sale and right of use of this valuable improvement, and will furnish the most substantial guarantees of its Safety, Durability, Adhesion and great Economy.

Office, 3d floor American Railroad Journal Building,
No. 9 Spruce street,
New York.

REFERENCES.

The New Jersey Locomotive and Machine Co.
James Jackson, Pres't., Paterson, N. J.
Chas. W. Elliott, Vice Pres't., 59 Beaver str., N. Y.
Henry V. Poor, Esq., Editor Railroad Journal, New York.
Geo. D. Phelps, Pres't. Del. Lack and Western Railroad.
Geo. W. Whistler, Vice Pres't New York & New Haven R.R.
William Raymond Lee, Esq., Boston.
Bush & Lobdell, Wilmington, Del.
Oliver M. Hyde, Esq., Mayor City of Detroit.

NUGENT'S COLLEGE

OF ENGINEERS AND MECHANICS,

Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

New York and Erie R. R.

PASSENGER TRAINS

leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo direct, over the N. Y. & E. R. R. and the B. & N. Y. C. R. R., without change of baggage or cars.

DUNKIRK EXPRESS, at 6 a. m. for Dunkirk.

MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations. Passengers by this Train will remain over night at any station between Binghamton and Corning, and proceed the next morning.

WAY EXPRESS, at 1 p. m. for Dunkirk.

ROCKLAND PASSENGER, at 4 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 6 p. m. for Dunkirk and Buffalo.

EMIGRANT, at 6 p. m., for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 6 p. m.

These Express Trains connect at Elmira with the Elmira and Niagara Falls Railroad for Niagara Falls; at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, &c.

D. C. McCALLUM, General Sup't.

OFFICE CINCINNATI, HAMILTON & DAYTON R. R. Co.

Cincinnati, August 8th, 1864.

THE Board of Directors of this Company have this day declared a Dividend of Five per cent. out of the net earnings of the Company for the six months ending 31. July, payable in Scrip bearing Seven per cent. interest redeemable in three years. The Scrip will be delivered on and after Sept. 1st, to the Stockholders registered in Cincinnati on application at the office of the Company, and to those registered in New York at the office of the Ohio Life Insurance & Trust Company in that city. The Transfer Books will be closed for ten days from this date.

32 1m]

FRANK S. BOND, Secretary.

For Sale.

A STATIONARY Engine, having cylinders 13 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,

Paterson, New Jersey,

Jul. 14 29 tf.] or 74 Broadway, New York.

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

To Engineers and Surveyors.

A YOUNG man, 18 years old, wants a situation (to learn the business) as chain carrier, in a railroad survey. No objections to go to any part of the country, or world. (Good reference can be given if required. Address A. S., Office of this Journal.

(32 1m)

RAILROAD STOCKS, BONDS & STATE SECURITIES.

The subscriber offers for sale—

Ohio and Mississippi Railroad Company, 7 per cent. second mortgage, convertible Bonds. Interest payable semi-annually in New York.

Scioto and Hocking Valley Railroad Company, 7 per cent. first mortgage, convertible Bonds. Interest payable semi-annually in New York.

Cincinnati, Western Railroad Company, 8 per cent. Real Estate Bonds. Interest payable semi-annually in New York.

Hamilton County, Ohio, 6 per cent. Bonds. Interest payable semi-annually in New York.

Louisville and Portland R. R. Co. Bonds.

Maysville and Lexington R. R. Co., 6 per cent. second mortgage, convertible Bonds.

Louisville City Bonds.

Cincinnati, Logansport and Chicago, R. R. Co., 10 per cent. Income Bonds.

RAILROAD STOCKS.

Covington and Lexington R. R. Stock.

Cincinnati, Hamilton and Dayton R. R. Stock.

Little Miami R. R. Stock.

Ohio and Mississippi R. R. Stock.

Southern Bank of Kentucky Stock.

Columbus and Xenia R. R. Stock.

Cincinnati and Chicago R. R. Stock.

Central Indiana R. R. Stock.

Cincinnati and Indianapolis R. R. Stock.

Indianapolis and Bellefontaine R. R. Stock.

Cincinnati, Wilmington and Zanesville R. R. Stock.

WANTED—\$100,000, for which the best securities will be given.

WANTED—\$40,000, on commercial paper.

ISAAC OSBORN DAVIS,

Stock Exchange and Financial Agency Office,

No. 38 Third street,

Cincinnati, Ohio.

32 1m]

ON THE APPLICATION OF IRON TO BUILDING PURPOSES.—JOHN WILEY, No. 167 Broadway, has just published—

FAIRBAIRN ON THE APPLICATION OF CAST AND WROUGHT IRON TO BUILDING PURPOSES. By William Fairbairn, C. E., F. R. S., F. G. S., etc. 1 vol. 8vo., with numerous Diagrams and Illustrations, and tables for calculating the strength of materials &c. Price \$2.

SELECTIONS FROM CONTENTS.—On Cast Iron Beams for supporting the Floors of Buildings—Cast Iron Beams with Flanches—Experiments made at Leeds by the Author—Rules for the Strength of Cast Iron Beams—Table of Result—On Compound or Trussed Cast Iron Beams or Girders—Rule for Calculating the Strength of do.—Comparison of Cost—Process of Toughening Cast Iron—Experiments—Cupola—Air Furnace—On Wrought Iron Beams for supporting the Floors of Buildings, and for other purposes—Experiments on the strength &c., of do.—On Wrought Iron Trellis Girders—Formula for Calculating the Strength of Trellis Beams, &c., &c.

"No engineer can do without this book."—Scientific American.

[34. 2t.

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,

RICHARD W. TYSON.

No. 25 South Charles str.

Baltimore, July 1st, 1864.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,

RICHARD W. TYSON.

[33 3m]

Baltimore, July 1st, 1864.

Notice of Copartnership.

MR. PETER MARIE, heretofore of the firm of DECOPPET & CO., has this day formed a copartnership with Mr. RUDOLPH KANZ, (for many years with the banking house of Messrs. L. Von Hoffman & Co.) under the firm of MARIE & KANZ, at No. 27 William street.

Their attention will be devoted to the purchase and sale on Commission of Stocks, Bonds and Foreign Exchange, and to the negotiation of Business Paper.

New York, 1st September, 1864.

36 8t.

Rensselaer Polytechnic Institute.

DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS,—including Railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the Annual Register, giving full information respecting the Institute, apply to

R. FRANKLIN GREENE, Director, R. P. I.
Troy, New York.

32 3m]

Lowmoor iron.

W. BAILEY LANG & CO., 54 CLIFF STREET, have in stock and offer for sale an assortment of Round, Flat and Square Bars LOWMOOR IRON, which they will sell by the ton or single bar. The attention of manufacturers, Railway Managers and Mechanics is particularly directed to the quality of this Iron, as its great strength, uniformity, and freedom from flaws, render it the best Iron in the market, where first quality is required.

W. BAILEY LANG & CO., being Sole Agents in the United States and Canada for the LOWMOOR CO., will execute orders at manufacturer's prices.

6t.31

RAILROAD SPIKES.

WROUGHT IRON

Chairs and Fastenings.

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.

The best quality of Refined Iron is used and all orders filled with despatch.

J. HOPKINSON SMITH,
No. 25 South Charles st.

Please direct the name in full.
Baltimore, July 1st, 1864.

[33 tf.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to

EDW. BECH & KUNHARDT, 62 Beaver St.,

Or, A. TOWAR, Agent Pokeepsie Iron Works,
23½
Pokeepsie, N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to Railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
Or BRIDGES & BRO.
64 Courtland st., New York,

19 tf

To Contractors for Railroad Iron.

PROPOSALS will be received until the 20th September for nine thousand tons of railroad iron T pattern, sixty pounds to the yard, One-half to be delivered at Charleston, South Carolina, and one-half at Wilmington, North Carolina, delivery to commence in January and close in August, equal quantities to be delivered in each month at each place.

Payment will be made immediately on the delivery of each cargo, in North Carolina Funds. The contract will be given to the lowest responsible bidder provided the price be satisfactory. Bidders will endorse their bids—"Proposals for Railroad Iron"—and address them to Cyrus P. Mendenhall, Secretary, North Carolina Railroad Company, Greensboro, N. C.

WALTER GWYNN,
Chief Eng. N. O. R. R. Co.

Raleigh, August 3d, 1864.

[3t. t d

Machinists' Tools.**SHRIVER & BROTHERS,**

Cumberland, Maryland,

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools.

These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others requiring first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address

SHRIVER & BROTHERS, Fulton Works,

Cumberland, Maryland.

August 19th, 1864

[32. 6m

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.
SECOND QUARTO SERIES, VOL. X., No. 38] SATURDAY, SEPTEMBER 23, 1854. [WHOLE No. 962, VOL. XXVII.

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

Engineering History of the Erie Railroad.....	593
Railroads in Illinois.....	595
Greenville and Columbia R. R.....	598
Victoria Bridge at Montreal.....	598
Ohio and Pennsylvania R. R.....	606, 598
Public Works of Virginia.....	599
Memphis, Clarksville and Louisville R. R.....	599
Share and Money Market.....	600
New York and New Haven R. R.....	601
Indebtedness of Railroads.....	602
Journal of Railroad Law.....	602
Improved Cross Ties.....	602
Commerce of Railroads of Cuba.....	603
Chartiers Valley Railroad.....	603
Steamboat Accidents.....	603
Boston and Maine R. R.....	604
Coal Trade of Cleveland.....	604
Coal fields of the U. S.....	604
Engineering and Mathematical Instruments.....	604
Mobile and Girard Railroad.....	605
Memphis and Little Rock R. R.....	605
Convention of Western R. R. Co's.....	605
Lexington and Big Sandy R. R.....	605
Hannibal and St. Joseph Railroad.....	605
Uniformity of Gauge.....	605

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, September 23, 1854.

Engineering History of the Erie Railroad.

While this subject is fresh before the public, we give another chapter upon the engineering history of this road, confining ourselves chiefly to the period of Mr. E. F. JOHNSON'S connection with it. As we believe this project to be under very great obligations to Mr. Johnson, we conceive it only justice to recapitulate the services which he rendered the road, which are fully understood by the profession, but which have never been properly recognized or acknowledged by the company, or the public.

In the spring of 1829, an anonymous pamphlet appeared from the press of the Messrs. Carrill, of New York, proposing a line of railway from the Hudson to the Mississippi. This pamphlet was from the pen of W. C. Redfield, Esq., since distinguished as the author of a theory of winds and

storms. This pamphlet was submitted to Edwin F. Johnson, then in charge of the department of practical mathematics and civil engineering at the Military Academy at Middletown, Connecticut, with a request that he would give his views in respect to it, for publication. This was accordingly done. Portions of Mr. Johnson's review were incorporated in the second edition of the pamphlet, and the whole was published at the instance of Mr. Redfield, in the *New York Statesman*, in Feb'y, 1830.

The review of Mr. Johnson embraced an investigation into the relative merits of railroads and canals, and, although at the time he wrote there had been no practical demonstration of the applicability of locomotive steam power to railways, the successful experiments on the Liverpool and Manchester Railroad not having then been made, and although the Erie Canal had then been opened throughout for about three years, and the public mind was greatly engrossed and excited by that species of communication, Mr. Johnson came to the conclusion, see p. 9,—“that railways as a means of intercommunication, possess properties which in most situations will render them superior to canals, and that with reference to the United States, considering how diversified is the surface, by hills and vallies, railways when properly constructed will be proved the most valuable and effective; and that ultimately, when their merits become better known and more fully appreciated by far the greater portion of the inland trade and travel will be conducted upon them.”

This point being established, Mr. Johnson proceeds to consider the most suitable location for a great line of railway leading from the Atlantic seaboard into the interior. In this investigation it was not difficult to show that New York City was the proper starting point on the Atlantic. An examination of the physical geography of the vast region lying between the Allegany and Rocky Mountains, and which then (1829) was comparatively very thinly settled, showed that the point most central to the most fertile portion of the Mississippi and Upper St. Lawrence vallies, was situated not far from the junction of the Rock River with the Mississippi in the State of Illinois. From this point to New York City a very direct

line for a railroad, it was believed, could be obtained, passing near the south end of Lake Michigan, along the table land of Northern Ohio, and thence by the Allegany, Susquehanna and Delaware vallies, (the present route of the New York and Erie Railroad) thus avoiding the main range of the Alleghanies, or, to use the words of the review, passing them “where they lose their distinguishing characteristics, as they become merged in the general average surface of the surrounding country, not far from the south line of New York.”

This proposed route was soon after examined by De Witt Clinton, jr., Civil Engineer, under a commission from the General Government, and a favorable report made. This examination consisted merely in an estimate of distances by the traveled roads, &c., and barometrical measurements of the height of prominent points, being similar in its character to the reconnoissances more recently made for a similar purpose from the Mississippi to the Pacific, and did not contribute very much to the knowledge previously possessed of the country over which the route passed.

In 1831, Mr. Johnson published a large edition of his review in pamphlet form. This edition he distributed gratuitously throughout all the towns upon and in the vicinity of the proposed route from New York City to the Mississippi River; and in the winter of 1832, the first charter was granted for the construction of the New York and Erie Railroad; a charter which contained this remarkable provision that, no connection should be formed with any line of railroad leading into the States of Pennsylvania and New Jersey. Thus presenting the very singular spectacle, should the road ever be built, and this provision be enforced, of a great trunk line of road, leading direct from the Lakes to the great emporium on the Atlantic entirely shorn of its branches on one side, a provision inserted ostensibly to prevent the “tapping” of the road by Philadelphia in the vallies of the Susquehanna and Delaware, but designed really it is supposed for a widely different purpose.

In 1834, the State directed a survey to be made of the route from the Hudson to Lake Erie, and Benjamin Wright, who had been prominent as one of the principal engineers of the Erie Canal, was

appointed to the charge of it. Judge Wright selected for his two principal assistants, James Seymour, (now deceased,) and Charles Ellet, jr. The former was placed in charge of the Eastern, and the latter of the Western Division. This survey, which was merely a preliminary one, was necessarily confined to the State of New York, the charter as already stated not permitting any departure from its limits. It commenced at Tappan Sloat, now Piermont, on the Hudson. Thence through Rockland and Orange Counties, and through Sullivan County by the valley of the Neversink River, to the east bank of the Delaware River, at the mouth of the Callicoon. Thence to Deposit on the Delaware, and across to the Susquehanna River at Binghamton. The route down the latter river, from the point where it was first met by the line, not being available, in consequence of the river passing for a distance into Pennsylvania.

From Binghamton, the route of the survey lay along the Susquehanna and Chemung Rivers, thence across to the Allegany Valley; and from the latter to Dunkirk, as the most prominent point on Lake Erie.

The favorable character of this report led to the organization of a company, and in the season of 1835, the surveys of location were commenced under the direction of Judge Wright, the Company's Chief Engineer. A portion of the line was also put under contract, the same season, in the valley of the Delaware, from the mouth of the Callicoon to Deposit, about 40 miles, and the work of grading commenced.

The Company believing that the aid of the State would be required to accomplish the work, and such aid to be justly due to the portion of the State through which the road was to pass, in consequence of the liberal expenditure in the tier of counties occupied by the Erie Canal, presented their petition to the Legislature for assistance; an application which was not received with favor or treated with proper respect by the representatives from the Canal Counties, who designated the petitioners as a band of "sturdy beggars," and the project as "visionary and impracticable."

During this year the Legislature of the State directed the Canal Commissioners to report upon the "relative merits of railways and canals," and the duty of preparing this report was entrusted by the Board to John B. Jervis, Hohnes Hutchinson and Frederic C. Mills; only one of whom had previously any experience upon railroads, and all of them interested professionally in the advancement and extension of the Canal system.

This report, as was anticipated, did not exhibit the railway in a very favorable light; but placed it about where Judge Wright, the prominent Canal Engineer named above, had previously placed it in his letter addressed, if we remember right, to the President of the Chesapeake and Ohio Canal Company, viz—in a *middle* position, as a means of transportation, "between a good turnpike and a canal."

In the spring of 1836, the Directors of the New York and Erie Company concluded to reorganize the Engineer department of their company, and they invited Mr. Johnson and Capt. Talcott to act as associate Engineers, in conjunction with Judge Wright whose duties were to be merely nominal and advisory in their character. Under this ar-

range Mr. Johnson was placed in charge of the portion from the Hudson River to Painted Post about 300 miles, and Capt. Talcott of the remaining portion, to Dunkirk.

When Mr. Johnson entered upon his duties he found, as above stated, the work of grading in progress along the upper part of the valley of the Delaware, and several parties were employed making explorations for the best route from the Delaware west to Painted Post, and east, to the Hudson. An examination of the topographical features of the country soon convinced him that notwithstanding the charter prohibited connections with lines leading into New Jersey and Pennsylvania, the force of circumstances would in time cause such connections to be made, and hence he could not avoid the conclusion, that the main line of the road would eventually find its eastern terminus at Jersey City or Hoboken; and knowing that arrangements had been made for a connection from Newburg (since effected,) he did not consider it expedient in the then weak state of the company's finances, (the individual subscriptions all told not amounting to three millions) to incur any expenditure east of Goshen, believing that a connection with Newburg would serve the wants of the Company, until such time as it would be possible to build the road on the only proper route for it—to pursue to the Hudson River upon the route to New York City.

Mr. Johnson also believed that if the line west from Goshen to the mouth of the Callicoon were built over the hills of Sullivan, where certain local interests were endeavoring to place it, and where all the previous surveys had been made, it must ultimately be abandoned, and placed in the valley of the Delaware. He believed a similar change would have to be made in the line in the Susquehanna at the Great Bend, and that it must eventually occupy the valley of that river, and pass for several miles within the limits of Pennsylvania.

In accordance with this conviction Mr. J. directed a survey to be made, which had not before been done, from the Deer Park Gap along the western slope of the Shawangunk Mountain, to the Delaware Station. This survey showed that the descent to the river could be effected by a line with gradients not exceeding 45 feet per mile, whereas upon the line as surveyed by Judge Wright, the maximum grade at the descent of the mountain was 90 feet per mile, a limit determined upon as the *minimum* in a consultation with Moncure Robinson of Pennsylvania, and Jonathan Knight of the Baltimore and Ohio Railroad. The surveys and examinations of Mr. Johnson also showed that the comparatively level valley of the Delaware could be followed from the Delaware station to the mouth of the Callicoon, without thereby increasing the distance as compared with the line traversing the hills of Sullivan, which had rise and fall of many hundred feet greater, with higher gradients, and from which no convenient connections could be made with the coal fields of northern Pennsylvania.

A similar improvement to the above, it was evident to Mr. Johnson, was practicable at the Great Bend of the Susquehanna. These changes and improvements so necessary to the final success of the undertaking, did not meet the views of many who had local interests to be promoted, and who

unfortunately succeeded in obtaining the sympathy of the consulting Engineer in their behalf; who, however, was not sustained by the company, and who withdrew from its service in the month of March 1837.

Upon the Western Division of the road during this period no attempts at construction had been made; the duties of Capt. Talcott being confined to the surveys and examinations, necessary to a definitive location of the line and of the terminus at Lake Erie, which was fixed at Dunkirk.

The grading along the Delaware commenced under the direction of Judge Wright, in 1835, was being executed with a view to a track of the width of 4 feet 8½ inches. Mr. Johnson by a written report (the first made in this country upon the subject) invited the attention of the Board of Directors to the propriety of increasing the width of the gauge. At this time only sixteen miles of railway were actually in operation of the narrow gauge in the State of New York west of the Hudson.

In 1837, when the affairs of the New York and Erie Company were getting into a more settled condition, and the solid and best men of the city were found in its Direction, with James G. King at their head, and Peter G. Stuyvesant as Treasurer, and the path was becoming plain for the company to pursue, the great revulsion which shook to its foundation the whole financial system of the country occurred, and the New York and Erie Company was forced to succumb to the storm and suspend operations.

Upon the assembling of the Legislature in Jan'y following, the company renewed its application for aid, and a report was prepared by Mr. Johnson based upon the more recent surveys of the entire line, in which the true character and capabilities of the road, its resources for business, &c., were for the first time set forth. Mr. J. demonstrated in this report what few engineers at that time would admit, to wit, the influence of gradients within certain limits of inclination upon the cost of transportation upon a railroad, was very slight, and that a road of the character of the New York and Erie, with gradients not exceeding 60 feet per mile, could transport heavy freight at a cost including profit not exceeding 1½ cents per ton per mile.

This report produced a favorable effect. It convinced many who before believed, and honestly, that the New York and Erie Railroad was a visionary enterprise, that it was not only practicable, but that transportation could be done upon it at remunerating rates. The result was a change or modification of the law granting the credit of the State, by which the company was enabled to avail itself of the loan.

In passing this act the Legislature committed an error by what agency it is not known, by providing that the company were not to derive any benefit from the loan until they had constructed ready for use ten miles of their road at each extremity. By this provision the road of necessity was brought to the Hudson at Piermont, and the building of this portion, and of the portion at Dunkirk, at so early a date, when from its distant and isolated position, it could not be profitably used, the rails upon it after being laid, not being suffered to remain, but were taken up and con-

veyed back again to the Hudson. From these improvident proceedings the company lost more probably than the whole amount of the loan from the State, viz three millions (subsequently converted into a gift) and added probably that amount needlessly to the cost of the road.

Mr. Johnson when in the service of the company prepared specifications and plans for the grading and various mechanical structures, except the larger bridges which were to be erected at a later period. The specifications were drawn up in a more full and perfect manner than had probably previously been done on any railroad in the country, and used through all the subsequent stages of the work. He went to Dunkirk and attended to the revision of the location of the line at that extremity, from Lake Erie to the summit, reducing the gradient from 70 to 60 feet per mile, and the cost in about the same ratio. T. S. Brown, subsequently Chief Engineer, was then the assistant in charge of this Division.

On the Eastern Division Mr. Johnson secured the services as assistant of the late H. C. Seymour to locate the portion at the terminus near the Hudson. Mr. Seymour afterwards filled the office of Chief Engineer and Superintendent of the road with much credit. Mr. Johnson did not remain in the service of the company to put either of the portions thus located under contract but retired receiving at the time an offer which he accepted, of the charge of the surveys upon the New York and Albany, and Ogdensburg and Champlain roads, and he has not since that day been in the employ of the New York and Erie Company.

Mr. Johnson was succeeded by Edward Miller of Pennsylvania as Engineer of the Company, and the latter by Maj. T. S. Brown named above as having previously been in charge of the section at Dunkirk.

The mistakes of the Company in regard to the piled road alluded to by our correspondent of last week were made after Mr. Johnson left the service of the Company, and the plan was never approved by him. At the time of its adoption by the New York and Erie Company, Mr. Johnson gave an opinion adverse to its success in the case of another road.

Ohio and Mississippi Railroad: Illinois Portion.

The following gentlemen have been elected Directors of the O. and M. Railroad, for the ensuing year:

John O'Fallon, Wm. H. Belcher, Sam'l Gaty, of St. Louis, John L. Aspinwall, (of New York,) Solon Humphreys, do., H. D. Bacon, J. H. Alexander, Sidney Breese, (Ills.) Alfred Kitchell, do., Chas. P. Chouteau.

The number, it will be perceived, is ten—it having been reduced from thirteen, the number of which the Board was formerly composed.

It is understood that Col. O'FALLON declines a re-election as President of the Board, and that H. D. BACON, Esq., of St. Louis, will be chosen to succeed him. The other officers are J. H. ALEXANDER, Esq., Vice President and Treasurer, and Geo. K. M. GUNNAGLE, Secretary.

New York Central Railroad.

This Road has a double track now in daily use for more than two-thirds of the way. Something under a hundred miles between Batavia and Syracuse only remain to be completed, which it is expected will be in running order early next year.

Railroads in Illinois.

The progress of railroads in Illinois fully sustains her claim as being the "Empire State of the West." The routes, upon which the future commerce of the State must naturally be directed, are already occupied by roads in operation or in active construction. For, notwithstanding the surface of Illinois is so uniform as to invite communication in every direction, her commercial relations with the whole country have indicated *necessary routes* for her roads, as essential to commercial convenience as those of the State of New York.

The geographical position of Illinois is the chief element of her future greatness. Lying on the east upon the navigation of the great lakes, and on the west upon 600 miles of the Mississippi river; and imposing the least distance and the fewest obstacles between those vast navigable water courses, Illinois is destined to be the highway of a large part of the internal commerce of the country. For the valley of the Upper Mississippi, of which Illinois forms the best portion, and for a vast territory reaching beyond to the base of the Rocky Mountains, Illinois must always furnish the most convenient eastern outlet. Her great lake port, Chicago, must also conduct the commercial exchanges of large amounts of northern and southern products. And, looking beyond to the trade to the Pacific, and of the great continent of the Eastern Hemisphere, the great Central and Northern projected lines of Pacific railroads will meet the navigation of the great lakes at Chicago.

Illinois has vast local resources, superior to those of other large portions of the west. The vast extent and inexhaustible fertility of her river "bottoms," as well as the general excellence of her prairie soil, constitute an agricultural capacity of the highest order. Her broad sub-strata of coal, her lead, iron, limestone and building stone, are her exhaustless staples of mineral wealth. With 55,000 square miles of practicable surface, combining all her elements of natural wealth, Illinois has an inhabitable capacity, perhaps unequalled by any other similar extent of territory on the globe.

Chicago, especially, being literally at the *straits* through which two thirds of the ultimate external commerce of the Upper Mississippi valley must pass, and being the central seat of vast future manufactures of iron, copper and lead, sustained upon the mineral resources of Lake Superior on one hand, and the coal of Southern and Western Illinois on the other;—is the great focal point for the railroad system of the State. Next to Chicago, St. Louis, although an external point, has a most important relation to the commercial and agricultural interests of Illinois. St. Louis will always be the great point from which southern and south western trade, destined for Chicago, will leave the Mississippi river; and, like Buffalo to New York, will always be the great forwarding city to Chicago: Unlike Buffalo, however, St. Louis will always sustain a large commerce of its own, drawn from a wide extent of tributary country, and by its own commercial relation with the ports of the lower Mississippi and of the Mexican Gulf.

The railroad "system" of Illinois is therefore necessarily based upon the connection of Lake

Michigan with the Mississippi. The roads by which Chicago is to become connected with the six hundred miles of the great western water border of the State are as follows:

Galena and Chicago Union;
Chicago, St. Charles and Mississippi;
Chicago and Rock Island;
Aurora Branch, Military Tract and Peoria and Oquawka;
Aurora Branch, Military Tract, and Northern Cross;
Chicago and Rock Island, and Peoria and Bureau Valley;
Chicago and Rock Island, Peoria and Bureau Valley, and Peoria, Jacksonville and Alton;
Chicago and Mississippi; and Illinois Central. (Chicago Branch.)

The points at which these roads will meet the Mississippi are as follows:

Opposite Dubuque, Iowa; at Savannah, Fulton; Albany; Rock Island; Oquawka; opposite Burlington, Iowa; Quincy; opposite Hannibal, Mo.; Alton; Illinoistown, opposite St. Louis, Mo.; and Cairo.

The distances of these points, respectively, from Cairo are, 598 miles, 555 miles, 538, 529, 477, 407, 394, 313, 300, 192 and 172 (Cairo 0) miles.

GALENA AND CHICAGO UNION RAILROAD.

This work was projected in 1836, and commenced under a new organization in 1847. The road was intended to connect Chicago with Galena by a line of 180 miles. It is now completed to Freeport, (121 miles from Chicago) from whence the Illinois Central road will complete the connection with Galena. 25 miles of the Illinois Central, extending beyond Freeport to Warren, are now in operation, leaving about 34 miles yet to be opened. At Warren the Mineral Point road, 32 miles in length, will diverge to Mineral Point in Wisconsin; the work being already in a good state of progress. At Belvidere, 78 miles from Chicago, a branch of 20 miles diverges to Beloit, from whence the Beloit and Madison road, 48 miles in length, will extend to the Capital of Wisconsin. 20 miles of the latter road are about being opened.

The Galena and Chicago company are now engaged in opening a direct line to the Mississippi at Fulton. The new line leaves the present road at 28 miles from Chicago, thence extending 70 miles to Dixonville, from which latter point to the Mississippi river is 37 miles. For the road from Dixon to Fulton, the Galena and Chicago company have made an agreement with the Mississippi and Rock River Junction Co., by which the latter company prepare the roadway for the superstructure, while the former company iron, equip, and operate it, paying the original owners seven per cent. semi annually on all their expenditures for construction. The length of the *direct line* from Chicago to Fulton is 135 miles, all of which is expected to be completed in the present year.

The construction account of the Galena and Chicago company on May 1st 1854 was \$4,516,290; represented in part by \$2,682,167 of paid up stock; \$1,356,000 of 7 per cent. mortgage bonds, and \$26,000 of 10 per cent. convertible bonds.—The balance consists of debts due by the company and of surplus earnings above declared dividends, (these earnings being \$175,694 40.)

Of the construction account, \$797,533 had been expended on the Dixon "direct line" road, upon

which it was estimated that \$525,000 would be yet required for its completion between the "Junction" and Dixon, 70 miles. The cost of extending the line from Dixon to Fulton, 37 miles, is estimated at \$600,000, making the whole cost of the 107 miles of the "direct line," from the Junction to Fulton, \$1,923, 533.

Of the construction account of the Galena and Chicago road, \$379,767 had also been expended upon the 20 miles of the Beloit branch.

The net earnings of this road for four years have been as follows:

	Net Earnings.	Miles open.	Net Earnings per mile.
1851.....	\$78,781	42	\$1,875
1852.....	123,948	62	1,999
1853.....	286,151	90	3,179
1854.....	439,814	150	3,383

The gross receipts for the year ending April 30th 1854 were \$899,043, of which but \$359,199 were expended for operating the road, being 40 per cent. only of the gross earnings.

Office at Chicago.

JOHN B. TURNER, *President.*

W. M. LARRABEE, *Secretary.*

JOHN VAN NORTWICK, *Chief Engineer.*

CHICAGO, ST. CHARLES AND MISSISSIPPI.

This road was projected to give to Chicago the shortest possible connection with the Mississippi, which, making a *detour* into Illinois, is but 130 miles distant by the St. Charles road; being 50 miles less than the distance via Galena, and 5 miles less than the new Fulton and Chicago direct line. It was undeniably by an *error* that the Galena and Chicago road was first located on its present route, an error which that company is now seeking to retrieve by the construction of the Chicago, Dixon and Fulton road. It is an unfortunate circumstance that the Chicago, St. Charles and Mississippi, and the Chicago, Dixon and Fulton roads, having the same eastern terminus, and diverging but 17 miles from each other at Fulton and Savannah, should not have been combined under one interest, so as to remove the necessity for more than *one* road.

As it is, however, the whole of the St. Charles road was put under contract on the 30th of May, 1853; Mess. E. C. and E. B. Litchfield, of New York, taking the entire road, to be constructed and equipped for \$24,500 per mile.

Mess. Collins and Co. of Brooklyn, N. Y., who have the sub-contract for constructing the road from Chicago to Fox River, have their portion of the work nearly completed.

At the last meeting of the stockholders of this company, the subscribed stock was reported as \$1,190,000. No bonds would be issued until after the completion of the road to the Fox River, forty miles from Chicago.

The St. Charles road runs up from Savannah, the point where it strikes the river, to Galena; making a whole length of 160 miles, or 20 miles less between Chicago and Galena than by the present Chicago and Galena road.

The officers of this company are as follows:

President, Ira Minard, St. Charles, Ill.

Vice President, Gurdon S. Hubbard, Chicago.

Secretary, Stevens S. Jones, St. Charles.

Treasurer, Alvah Hunt, New York City.

Chief Engineer, Geo. W. Waite, St. Charles.

ROCKFORD AND ROCK ISLAND RAILROAD.

On reaching Dixon, on the Chicago and Fulton

"direct line," the Rockford and Rock Island road will open an additional line to the Mississippi river at Albany, seven miles below Fulton, and will thence run down the river to Rock Island.

As this road comes under notice in this connection, it is well to indicate its route and objects at this place. The general route of the road is in the Rock River Valley, running from Beloit through Rockford, Byron, Dixon, Sterling and Albany. That portion of the road between Dixon and Albany was put under contract on the 16th of February 1853, to Henry Doolittle, of Dayton, Ohio. This road occupies a route of great value, connecting northern Illinois and Central Wisconsin, by a direct route, with the Mississippi,—being fed by several important roads and being a competitor to none. It passes several flourishing villages abundantly supplied with water power. Its officers during 1853 (we have had no report this year) were,

President, John Dement, Dixon, Ill.

Secretary and Treasurer, J. B. Brooks, Dixon.

Chief Engineer, R. Ogilby, Dixon, Ill.

Consulting Engineer, R. B. Mason, Chicago.

CHICAGO AND ROCK ISLAND RAILROAD.

This road was opened throughout during the past summer. It is 181 miles in length from Chicago to Rock Island City; passing for upwards of 80 miles in the valleys of the Des Plaines and Illinois rivers, and through the villages of Joliet, Morris, Ottawa and Peru. It is the *first* road, in the order of its opening, connecting Chicago by an uninterrupted communication with the Mississippi river. Its earnings, thus far, have been such as to assign it a position among the most successful roads in the west, although it is built at a higher average cost. Rock Island city is the best point at which the Mississippi can be bridged without interfering with its navigation. The right of way across Rock Island is now disputed by the War department, the island being the property of the United States, and subject to the disposition of the Secretary of War. This difficulty will ultimately be arranged, when the Rock Island road, will be extended by nearly the same company, under the title of the Mississippi and Missouri Railroad, through Iowa City to Council Bluffs. The officers of the Rock Island road are as follows:

President, John B. Jervis, New York City.

Treasurer, A. C. Flagg, " " "

Secretary, N. D. Elwood, Joliet, Ill.

Chief Engineer, Wm. Jervis, Chicago.

AURORA BRANCH RAILROAD.

This road, which will be the Chicago trunk of three separate connections with the Mississippi river, extends from the Junction with the Galena and Chicago road to Mendota, on the Galena branch of the Illinois Central road. Length, 58 miles; whole length, over the Galena and Chicago track, to Chicago, 88 miles. Mendota is 16 miles above La Salle, making the entire distance from Chicago to La Salle 104 miles, against 98 miles by the Chicago and Rock Island road. From Mendota the Central Military Tract road will be extended to Galesburg; the most northerly point on the important east and west line of road, now known as the Peoria and Oquawka, but which will ultimately connect Indiana and Iowa. The Military Tract road is now finished to French Grove, 35 miles from Mendota. From Galesburg there will be a direct western connection with the

Mississippi river at Oquawka, and also one of 40 miles to a point opposite Burlington, Iowa. South Westerly of Galesburg, the Northern Cross road will extend 120 miles to Quincy, where the shortest connection can be made with the Hannibal and St. Josephs Railroad of Missouri. The entire distance from Chicago to Quincy by this line is about 292 miles. The entire line is expected to be opened and operated during the present year. The officers of these roads are as follows:

AURORA BRANCH.

President, James S. Joy, Detroit, Mich.

Secretary, A. Robbins, Chicago.

Superintendent, Walter S. Johnson, Chicago.

CENTRAL MILITARY TRACT RAILROAD.

President, J. W. Brooks, Detroit, Mich.

Secretary, David Sanborn, Galesburg, Ill.

NORTHERN CROSS RAILROAD.

President, N. Bushnell, Quincy, Ill.

Chief Engineer, W. H. Sidell, Quincy, Ill.

PEORIA AND BUREAU VALLEY RAILROAD.

This road, leaving the Chicago and Rock Island road at Bureau, 113 miles from Chicago, will extend to Peoria, 47 miles. It is now under contract to Sheffield, Farnham, & Co., and 20 miles are in operation. Surveys have been made by W. G. Wheaton, Esq., resident Engineer of this road, for a direct line to Jacksonville, whence the Jacksonville and Alton road will extend to the latter point. The distance, by Mr. Wheaton's surveys, from Peoria to Jacksonville, is 75¾ miles. We have seen no report of the surveys of Mr. Joseph T. Hunt, engineer of the Jacksonville and Carrollton road, but we are told that the entire line from St. Louis through Jacksonville, Peoria and Bureau, to Chicago, is but 35 miles longer than the Chicago and Mississippi road.

The officers of the Jacksonville and Alton road are as follows:

President, Judge D. M. Woodson, Green Co.

Secretary, George T. Brown, Alton.

Chief Engineer, Joseph T. Hunt, Alton.

PEORIA AND HANNIBAL RAILROAD.

A company has been organized for the construction of a railroad lying mostly in the Illinois river Valley, to connect the above points. Hannibal on the Missouri side, is but 13 miles below Quincy, and 128 above St. Louis. The principal subscriptions towards the construction of this work have thus far been made in Lewistown, Fulton, Co.—This road occupies the best portion of the Illinois River Valley, and will be a most useful road to Chicago, as well as to the country traversed. The following are the officers of this road.

President, Myron Phelps, Lewistown, Fulton Co.

Vice President, L. D. Erwin, Rushville, Schnyler Co.

Treasurer, George Phelps, Lewistown.

Secretary, Thomas Hanna, Vermont Fulton Co.

CHICAGO AND MISSISSIPPI RAILROAD.

This road is the *second* in the order of opening, connecting Chicago directly with the Mississippi river. The entire line was opened throughout, from Alton to Joliet, early in August. Between Joliet and Chicago, 40 miles of the Rock Island road are used. From Alton to St. Louis, 20 miles the distance is run by steamboats. The entire distance from St. Louis to Chicago, by this road, is 280 miles; the road proper being 220 miles long. It is probable that this road will yet enter

Chicago upon an independent line; while, on the other end, a road is building from Alton to Illinois-town opposite St. Louis. It is probable that through trains will yet be run in 9 hours between St. Louis and Lake Michigan.

The Chicago and St. Louis road occupies the *shortest* route between its termini, and must always rank in importance with the great lines which connect the Seaboard with the lakes. Its two terminal cities, with Cincinnati, must always be the great commercial centers of the west, and immense commercial interchanges will always exist between them.

This road has been completed principally by eastern capital. The President of the company is Hon Geo. Bliss, of Springfield Mass.

ILLINOIS CENTRAL RAILROAD, CHICAGO BRANCH.

The Chicago Branch of the Illinois Central road runs direct from Chicago to Cairo, a distance of 365 miles. This portion, together with the main trunk of the road, the *whole* being 704 miles in length, will be opened during the present year.

Such is a brief summary of the lines radiating from Chicago to the western border of the State, and meeting the Mississippi at no less than *twelve* different points. Nearly every one of these roads will have important extensions on the west, south west, or south. All are in fact connected directly or remotely with the great lines projected towards the Pacific, or with the great north and south lines of the Mississippi valley.

The Illinois Central "main trunk," intersecting the State from north to south, will furnish the central thoroughfare for business in that direction, besides opening up vast quantities of coal in the southern part of the State, to the Chicago market.

Besides the system of roads based upon Chicago, Illinois will have *five* other east and west lines, passing across her entire breadth. These lines are as follows:

Peoria and Oquawka, running from the Indiana line to Burlington, Iowa.

Indiana and Illinois Central, and Great Western; together uniting Indianapolis and Hannibal, Mo.

Terre Haute and Alton, indicated by name.

Atlantic and Mississippi, from Terre Haute, Ind., to St. Louis; and

Ohio and Mississippi, from Cincinnati to St. Louis.

PEORIA AND OQUAWKA RAILROAD.

This road, (commenced and carried forward from its western terminus,) leaves the Mississippi opposite Burlington, Iowa, as also from Oquawka in Henderson Co., Ills., the two stems uniting a few miles west of Monmouth. The road thence runs through Galesburg, Peoria, Washington crossing the Illinois Central and Chicago and Mississippi roads, and thence extending to Middleport, in Iroquois Co., nearly 200 miles from Burlington.— From Peoria to Burlington is about 80 miles. At Middleport this road meets the Logansport and Pacific road, running to Logansport, Ind. The Peoria and Oquawka road is under contract to Cruger, Secor, & Co., and has been promised to be in operation throughout by January 1, 1855.— The following are the officers of this road.

President R. Rouse, of Peoria, Ill.

Directors. Fitz Henry Warren, Burlington, Iowa; W. S. Phelps, Elmwood, Peoria Co., Ills.; G. C. Bestor, R. Rouse, P. Sweat, W. Kellogg, and J.

Frink, of Peoria; A. H. Danforth, Washington, Tazewell Co., Ill.; and J. Thomas, of Middleport, Iroquois Co.

INDIANA AND ILLINOIS CENTRAL AND GREAT WESTERN.

The Indiana and Illinois Central road extends on a very direct line from Indianapolis, Ind., to Decatur, in Macon Co., Ill. where it reaches the Great Western road of Illinois. The former road is 149½ miles in length; the latter from Decatur to Naples is 94 miles long. The Indiana and Illinois road is under contract to M. C. Story & Co., of New York, who grade and iron the road, and furnish the equipment for \$22,000 per mile. The whole sum to be paid the contractors, including extra work above the estimates is \$3,738,500; of which 50 per cent. are payable in 7 per cent Company bonds, secured by the whole road: 20 per cent. in stock, and 30 per cent in cash.

The stock account of this company was reported as follows at their last meeting.

Cash subscriptions.....	\$339,500
Land subscriptions.....	1,566,050
Stock issued to solicitors.....	3,400
Stock issued to contractors.....	6,100
	<hr/> \$1,914,050

From the Wabash river to Decatur, a distance of 84 miles, the work has been sublet. The Chief Engineer of this company is John C. Campbell, Esq.

The Great Western road is in operation from Decatur, through Springfield, to Naples on the Illinois river. This road will be ultimately extended to a point opposite Hannibal, Mo., thus completing a great central route from Philadelphia and Baltimore through Columbus, Ohio: Indianapolis, Ind., and Springfield, Ill., to the Missouri river.

The President of the Great Western road is Governor Morris of New York city; Engineer and Superintendent, T. J. Carter, of Springfield Ill.

TERRE HAUTE AND ALTON RAILROAD.

This road will connect the two points indicated in its name, by a line of 170 miles. A large eastern interest is now identified with this enterprise, and it is expected that the whole road will be open in 1855. Messrs. Phelps, Mattoon and Barnes, of Springfield, Mass., are the contractors. It is expected that nearly fifty miles from each end, or 100 miles in all, will be open by the first of January next. The whole distance by this road from Terre Haute to St. Louis, will be about 190 miles.

The stock subscriptions of this road are reported as

1st Mortgage 7 per cent. bonds sold	\$2,900,000
2d " 8 " " sold	1,000,000
2d " 8 " " unsold	250,000
	<hr/> 750,000
Total means	<hr/> \$4,900,000

It is expected that the road can be built and equipped complete for \$4,000,000, by which the necessity of the sale of all of the last issue of bonds will be avoided.

The President of this company is Simeon Ryder of Alton, Ill.; Chief Engineer, O. W. Childs, Alton.

MISSISSIPPI AND ATLANTIC RAILROAD.

This road is doubtless destined to be the great through line from the east to St. Louis. By its connections at Terre Haute it forms the *shortest* lines from Cleveland and Indianapolis. Its length from Terre Haute to Illinoistown, opposite St. Louis, is stated at 162 miles less than one

mile longer than an air line. Occupying the route of the "National Road," and intersecting the most fertile portions of the State, it possesses, in directness and local resources, the best elements of support and cheap operation. With its Indianapolis connections this road offers a route actually shorter between Cincinnati and St. Louis than the Ohio and Mississippi route, while upon the construction of a line of road from Greensburg (on the Indianapolis and Cincinnati road) to Terre Haute, it will be much the shortest route between the two cities and will possess the further advantage of conforming in gauge with all the numerous and important roads which it will intersect. By its connection with the Illinois Central road at Effingham, 97 miles from St. Louis, and 199 miles from Chicago, it will furnish a tolerably direct route between those cities.

The President, John Brough, Esq., of Indianapolis, announces the whole road under contract, to be completed in the summer of 1856.

OHIO AND MISSISSIPPI RAILROAD.

This road is to extend from Cincinnati to St. Louis, a distance of 344 miles. About 70 miles of the eastern and 50 miles of the western end are now open. The whole road is expected to be completed during the coming year. The road is of *six feet* gauge, different from that of all the roads intersected. The President in Ohio, is James C. Hall, of Cincinnati; Engineer, S. S. Post, of Cincinnati.

The President in Illinois is H. D. Bacon of St. Louis.

Estimated cost of this road. \$12,500,000.

The roads not embraced in the "systems" we have described are the Chicago and Milwaukee, Belleville and Illinoistown, Belleville and Murphysboro, and Warsaw and Rockford roads. The general direction of these roads is north and south.

BELLEVILLE AND ILLINOISTOWN RAILROAD.

This road was originally projected from Illinoistown, opposite St. Louis, to Belleville, in St. Clair Co. Under a disputed provision of its charter, and against the pressure of the sentiment of "State policy," long maintained in Illinois, it was afterwards extended to Alton. The whole will probably be finished in the present year. The President of the Company is Col. James L. D. Morrison, of Belleville, St. Clair Co., Ill.

The Belleville and Murphysboro road will extend the above road to a point of intersection with the Illinois Central road near Cairo. The entire line of road from Alton will then not only give to St. Louis a direct southern land route, but will also connect the important systems of road centering respectively upon Alton and Cairo.

WARSAW AND ROCKFORD RAILROAD.

This road follows the valley of the Mississippi river from Warsaw, north to Port Byron on the Rockford and Rock Island road, before noticed. This road is sometimes called the Warsaw and Port Byron road. The Mississippi, for many miles above Warsaw is obstructed by rapids, and to pass around these was the principal object for which this road was projected. In 18 miles only, between Warsaw and Nauvoo upper landing, the descent of the river is 23 feet. From Warsaw to Oquawka the surveyed line is 60 miles, and from Warsaw to Port Byron about 130 miles. The first estimated cost of the whole line was \$2,665,000.— This work has been let to contract to Messrs. Col-

ver, Kent & Co., at \$25,000 per mile. The terms of payment are said to be one half Company bonds, one quarter stock, and one quarter cash.—By the terms of contract the road is to be finished around the "upper" and "lower" rapids by Sept. 15, 1854; the remainder between Nauvoo and Rock Island in thirty three months from the date of contract, or, say, by Jan. 1, 1857.

Engineer, W. R. Kingsley, Esq.

Consulting Engineer, T. S. O'Sullivan, St. Louis.

CHICAGO AND MILWAUKEE RAILROAD.

This road extends 45 miles nearly north, from Chicago to the Wisconsin State Line, where it is extended by the "Green Bay, Milwaukee and Chicago Railroad," directly to Milwaukee and ultimately to Green Bay. Distance from Chicago to Milwaukee 85 miles. This distance is expected to be run over the "Lake Shore" road, as the above is called, by Dec. 1. Messrs. Stone and Witt, of Cleveland, Ohio, are the contractors for the Illinois portion, and Messrs. Bishop & Co., of Bridgeport, Conn., for the Wisconsin portion.

GENERAL RESULT.

We have thus given an imperfect notice of the roads wholly or principally lying in the State of Illinois. We have not alluded to the great eastern and south eastern connections of Chicago with the principal cities of the east and of the Ohio valley. She has already the Central and Southern Michigan roads; the one running 278 miles to Detroit, the other 243 miles to Toledo; and both connecting with the entire railroad system of the Eastern and Middle States. The Fort Wayne and Chicago will by another year complete a direct route to Pittsburg and Philadelphia; and a link from Lima, Ohio, to Newark, on the Central Ohio road, will complete a direct line to Baltimore.

The Cincinnati and Chicago road, 280 miles in length, is pushing forward, and will soon make the shortest route to the Ohio Valley and the South East.

The Joliet and La Porte connection will also be opened at an early day, for the accommodation of trade and travel going from Central Illinois directly east.

So, too, the lines reaching into Wisconsin, but one of which we have noticed, form a most important part of the railroad connections of the Chicago system.

Illinois has now about 1,200 miles of road in operation, and in two years from now will have 2,200 additional miles, making 3,400 in all. Of the roads which we have named, at least 1,850 miles are now in process of construction within the State; not over 350 miles being un-commenced lines.

By the first of January, 1857, the railroad investments established in Illinois, will be fully \$100,000,000, while the ultimate cost of the works we have noticed, when fully equipped and perfected will be considerably more.

Cheap Railroad Construction.

The Greenville and Columbia Railroad of South Carolina has a length, including its branches, of 164 miles. The road was opened to Greenville on Dec. 9th 1853. The entire cost of construction has been less than \$2,000,000, or not \$12,200 per mile. When contemplated outlays necessary to perfect the road, shall all have been made, the stock per mile will be but \$8,000 and the bonded debt but \$1,500. The economical construction of Southern roads can scarcely be realized by those accustomed to Northern lines involving from \$40,000 to \$80,000 per mile.

The Victoria Bridge at Montreal.

The works of this stupendous undertaking being now in active progress, a short account of what has been not inappropriately designated the greatest work of modern times, cannot fail to be interesting to our readers.

As is already well known, the commercial reason given for the construction of the Victoria Bridge, is the necessity for bringing in the exhaustless products of Canada West, and of the Western States of the Union—such as Michigan, Illinois, Iowa, Wisconsin, Minnesota, &c.,—without break of gauge or of bulk, from the extreme Western point of British North American to the Atlantic seaboard. The promoters of the undertaking allege that, by means of the bridge, they will be able to meet the requirements of this traffic more cheaply and expeditiously than by any other existing route, whether of rail or of water; and they must be doubtless strong in the faith, as its cost is to be about seven million of dollars, or about one seventh of the total expenses of building the 1,112 miles comprising the Grand Trunk Railway of Canada.

The bridge is to be tubular, on the plan of the celebrated Britannia Bridge over the Menai Straits, in North Wales. It will consist of 25 spans or spaces for navigation between the twenty-four piers (exclusive of the two abutments) for the support of the tubes. The centre span will be 330 feet wide, and each of the other spans will be 242 feet wide. The width of each of the piers next to the abutments will be fifteen feet, and the width of those approaching the two centre piers will be gradually increased, so that these two piers will each be 18 feet wide, or three feet more than those next the abutments. Each abutment is to be 242 feet long and 90 feet wide, and from the north shore of the St. Lawrence to the north abutment there will be a solid stone embankment, (faced in rough masonry towards the current,) 1,200 feet in length. The stone embankment leading from the south shore of the river to the south abutment, will be 600 feet long. The length of the bridge, from abutment to abutment, will be 8,000 feet, and its total length from river bank to river bank will be 10,248 feet, or 176 feet less than two English miles.

The clear distance between the ordinary summer level of the St. Lawrence and the under surface of the centre tube is to be 60 feet, and the height diminishes towards either side, with a grade at the rate of 1 in 132 or 40 feet in the mile, so that at the outer or river edge of each abutment the height is 36 feet above the summer level. The summer depth of the water in the St. Lawrence varies from 14 feet about the centre to 4 feet towards the banks, and the current runs, at the site of the bridge, at a rate varying from seven to ten miles an hour.

Each of the tubes will be 19 feet in height at the end, whence they will gradually increase to 22 feet 6 inches in the centre. The width of each tube will be 15 feet, or 9 feet 6 inches wider than the rail track. The total weight of iron in the tubes will be 10,400 tons, and they will be bound and riveted together precisely in the same manner and with similar machinery, to that employed in the Britannia Bridge. The principal part of the stone used in the construction of the piers and abutments is a dense, blue lime stone found at *Pointe Claire* on the Ottawa river about 18 miles above Montreal, about 8 above the confluence of that river with the St. Lawrence. A large village has suddenly sprung up at the place, for during the last twelve months, upwards of 500 quarrymen, stone masons, and laborers, have been employed there. Every contrivance that could be adopted to save manual labor, has also been applied, and its extent will be judged from the fact that the machinery and at the Quarry and at the adjacent jetty has (including the cost of the jetty) involved an outlay of \$160,000. Three powerful steam Tugs and 35 barges capable of carrying 200 tons of stone, have been specially built for the work, at a cost of about \$120,000. These are used for the conveyance of the stone to the piers, and by the

end of September next, a Railway on the permanent line of the Grand Trunk track, will be laid down from the quarry (close to which the permanent line will pass,) to the north shore of the St. Lawrence, so as to convey along it, the stone required for the North embankment and for the northern abutment.

The piers close to the abutments will each contain about 6,000 tons of masonry. Scarcely a block used in the construction of the piers will be less than 7 tons weight, and many of them, especially those exposed to the force of the current, and to the breaking up of ice in spring, will weigh fully 10 tons each. As the construction of "Pier No. 1" is already several feet above the bed of the river, the process of binding the blocks together can now be seen and appreciated. In addition to the abundant use of the best water cement, each stone is clamped to its neighbors in several places by iron rivets, and the interstices between the rivets and the blocks are filled up with molten lead. If the mighty St. Lawrence conquers these combined appliances, then indeed is there an end to all mechanical resistances.

In consequences of the increased height and width of the piers converging towards the centre, the weight of stone in those that will bear the centre tube will be about 8,000 tons each. The total amount of masonry in the piers will be 27,500,000 cubic feet, which at 13 1-2 feet to the ton, gives a total weight of about 205,000 tons.

Mr. Robert Stephenson and Mr. A. M. Ross are the engineers of the bridge, on behalf of the Grand Trunk Railway. The former gentleman visited Canada last year, and purposes returning again when the works have made further progress. The latter is permanently located in the Province, not only for the superintendence of the bridge, but also as Engineer in Chief of the Railway Company.

The contractors are Messrs. Peto, Brassey, Betts & Jackson, and their representative in Canada for the Victoria bridge, and for the Railway from Montreal to Kingston, a distance of 180 miles is Mr. James Hodges, a gentleman well known in connection with some of the most important engineering works in England.

The coffer dams (entirely on a new principle, invented by Mr. Hodges) for the northern abutment and the three first adjacent piers, have been sometime successfully placed. The masonry in "Pier No. 1" as has already been stated, is several feet above the bed of the St. Lawrence. It is commenced in the next pier, and is ready for a beginning in the abutment. The whole of these will be raised ten feet above the water level of the St. Lawrence (which is 17 feet above the summer level,) before the ice sets in in December—when all masonry work will have to be suspended until the spring of 1855.

Unless unforeseen circumstances should occur it is intended that the first train shall go through the Victoria Bridge in the summer of 1858.—*State of Maine.*

Ohio and Pennsylvania Railroad.

We publish entire the following statement addressed by the President of the above company to Winslow, Lanier & Co.

{ OFFICE OHIO AND PENNSYLVANIA RAILROAD CO.
{ *Pittsburg*, September 7, 1854.

GENTS.—In reply to your inquiries, I beg leave to submit the subjoined statement:

The Ohio and Pennsylvania Railroad, 187 miles in length, was completed and the Express Trains commenced running on the 16th May, 1853. The road is of the most substantial character, with rails of the T pattern, 60lbs. to the yard, one half of which is of American manufacture; is all ballasted with the exception of eight or ten miles, and I may say the whole road is in prime running order.

From Pittsburg to Sewickley, twelve miles, the road has a double track, and at intervals of four or five miles over the entire line long "sidings." The track is of the Ohio gauge, 4 feet 10 inches, connecting with the great system of roads in the

State of Ohio, over which the trains of all can pass without transshipment—as an illustration of which we have found at our terminus at Pittsburg at one time the cars of eleven different Ohio Railroads delivering or receiving merchandise and produce to and from the West, and at all times more or less are arriving and departing daily.

The company own 41 locomotives and 537 cars of various kinds, of the estimated value of \$750,000.

The road is a great trunk line, traversing a rich, populous, and highly cultivated region; the direct extension of the Central Pennsylvania Railroad, and connecting most favorably with the roads to Cincinnati, Louisville and Lexington, Ky., with the Indianapolis and Terre Haute lines to St. Louis, and with the Ohio and Indiana Railroad to Fort Wayne, which will be completed to the latter place in the course of a month, and in rapid progress thence to Chicago; and when this is done, it cannot fail to become the leading thoroughfare between those growing cities of the West and New York and Philadelphia—furnishing us with a route nearly 100 miles in actual distance shorter than by the way of the lakes. The Ohio and Pennsylvania connects also with the roads to Chicago, Toledo, Detroit, Cleveland and Sandusky, with favorable running arrangements with each of them; and it is confidently believed, when the direct line by the way of Fort Wayne to Chicago is completed, that it will add from 33 to 50 per cent. to the income of our road.

The following summary exhibits the cost of the Ohio and Pennsylvania Railroad to this date:

Capital stock paid.....	\$2,224,100 00
Mortgage Bonds.....	1,750,000 00
Income.....	1,675,000 00
Floating debt after deducting available means.....	181,040 76
	\$5,880,140 76

The company own the following assets, which will prove available in a short time:

Mortgage bonds, Ohio, and Indiana Railroad,	\$300,000 00
Stock..... ditto.....	100,000 00
Stock, Springfield Railroad.....	62,500 00
	\$462,500 00

Reduce the actual cost to..... \$5,368,640 76

The Income debt was about \$95,000 greater, but that amount of bonds have recently been surrendered and converted into the stock of the company; and it is supposed the progress of conversion will be anticipated, and a much larger amount retired and converted into stock, during the ensuing year.

It is the determination of the Directors to make no further issue of Income Bonds, until it shall become necessary to extend a double track over a part or the whole road, and which is not anticipated for some two or three years.

It is our purpose also to enter into no new obligations, either for construction or any other account, further than may be absolutely necessary to keep the line in good order, and provide for the rapidly increasing business of the road.

The receipts of the road have largely exceeded the calculations of its friends, as you will perceive from the following results:

For 1852 the receipts were.....	\$315,118 53
" 1853 ".....	668,004 49
Increase.....	\$352,885 96
From the 1st January to 1 September of the present year, (8 months,) the receipts were.....	\$631,473 33
Corresponding months last year.....	364,848 86
Increase 73 per cent.....	\$266,624 47
For August, 1854.....	\$110,238 38
" 1853.....	66,928 28
Increase 65 per cent.....	\$43,310 10

Solomon W. Roberts, Esq., our Superintendent and Chief Engineer, estimated the receipts of 1854 at \$900,000; they will reach, if not exceed, \$1,000,000, or upwards of \$5,000 per mile per annum on the entire length of the road, giving 9 per cent. on a cost of \$6,000,000.

Since the through opening of the Road, some sixteen months, there has been declared and paid three semi-annual dividends; the first in July, 1853, of 3½ per cent., and in January and in July, 1854, 4 per cent. each.

The period has now arrived in the affairs of this company, when it will doubtless be looked for, on the part of those interested in its stock and securities, that some efficient measures should be adopted for a gradual reduction of its indebtedness, and final liquidation of its Income Bonds. To this end the following plan has been suggested as practicable, in view of late results in the receipts of the road, which the Board of Directors will promptly carry out, it having met the approval of your reflection and judgement, to wit:

The creation of a "Sinking Fund" for the liquidation of the Income Bonds, by setting aside the sum of twenty-five thousand dollars per annum out of the net earnings of the company, payable in sums of \$6,250 quarterly, commencing in January next. These payments will be regularly made to you, as our agents, to invest the same in the Income Bonds of the Ohio and Pennsylvania Railroad company—said bonds as purchased to be cancelled.

It is believed that this sum of \$25,000 per annum thus applied, together with the probable surrender of bonds for conversion into the stock of the company, will entirely liquidate the issue of Income Bonds. But if it is found at the end of two years from the first day of January, 1855, that the bonds are not thus being surrendered in sufficient amount, with the before-mentioned payments of \$25,000 per annum, to produce this result, then the Board of Directors will make provision for a sufficient increase of that amount to meet the case, so that the Income Bonds will be provided for by or before their maturity.

Respectfully Yours, &c..

W. ROBINSON, Jr., President.

Messrs. Winslow, Lanier & Co,

Public Works of Virginia.

Appointments of State Proxies and Directors.

The following appointments of State proxies and directors, were made by the Board of Public Works at their recent meeting, that being the time for making the annual appointments:

Alexandria, Loudoun and Hampshire Railroad Company.—John Bruce, John W. Luke and George H. Smoot, proxies. John Powell, Jno. F. Dyer and Jno. Janney, directors.

Fredericksburg and Gordonsville Railroad Company.—John Seddon, Dr. J. R. Taylor and S. G. Daniel, proxies. O. M. Crutchfield, John Lee and A. K. Phillips, directors.

Manassas Gap Railroad Company.—Hiram Martz, Philip Pitman, George W. Brent, proxies. Charles H. Hunton, Wm. H. Irwin and Andrew Pitman, directors.

Norfolk and Petersburg Railroad Company.—Chas. H. Shield, Thomas H. Daniel and Jas. H. Johnson, proxies. A. F. Leonard, Josiah Wills and Walter H. Taylor, directors.

Orange and Alexandria Railroad Company.—Nathaniel J. Welch, B. H. Berry and Henry Shackelford, proxies. Inman Horner, Siles Burke and John Willis, directors.

Richmond, Fredericksburg and Potomac Railroad Company.—Wm. W. Crump, proxy. Jno. S. Caskey, director.

Richmond and Petersburg Railroad Company.—Wm. F. Watson, proxy. Francis E. Rives, Chas. Ellis and Roscoe B. Heath, directors.

Richmond and Danville Railroad Company.—B. F. Garrett, Wm. M. Tredway and T. W. McCance, proxies. J. B. Stovall, B. M. Jones and Lewis E. Harvie, directors.

Richmond and York River Railroad Company.—Beverly B. Douglass, Samuel F. Harwood and

Lemael J. Bowden, proxies. Wm. B. Taliaferro, H. B. Tomlin and Reger A. Pryor, directors.

Roanoke Valley Railroad Company.—Tucker Carrington, proxy. Henry Wood, Jas. E. Haskins and Robert C. Nelson, directors.

South Side Railroad Company.—Thos. Wallace, E. G. Booth and Henry F. Bocock, proxies.—James Alfred Jones, John S. Sturdivant, John S. Thornton, directors.

Virginia Central Railroad Company.—John Harman, Wm. F. Gordon and John Echols, proxies.—Wm. Overton, S. Carpenter and Samuel B. Brown, directors.

Virginia and Tennessee Railroad Company.—Chas. L. Crockett, John M. Preston and Benjamin Wilkes, proxies. Thomas L. Preston, W. T. Anderson and Wm. A. Read, directors.

Winchester and Potomac Railroad Company.—Dr. Robert T. Baldwin, John R. Tucker and George B. Beall, proxies. Jas. P. Riely, Jas. M. Mason, and Andrew S. Hunter, directors.

Dismal Swamp Canal Company.—C. W. Newton, Tazewell Taylor and Simeon Wheeler, proxies.

Memphis, Clarksville, and Louisville Railroad.

The above road is the Kentucky extension of the Memphis and Ohio railroad; extending the latter from the Tennessee river, across the Cumberland river, and through Clarksville, to the Kentucky State line, in the direction of Bowling Green. Its length, by the line of survey lately adopted is 55 miles. This line is therefore a link in the lines between Memphis and Louisville and between Memphis and Cincinnati, and the upper valley of the Ohio. Being extended by a Kentucky road it connects with the Louisville and Nashville road at Bowling Green, and from the latter road will extend to Danville, Lexington and Cincinnati.

The plan of this road was first proposed in Clarksville, and a Company was organized at that place to undertake its construction. It was expected that Memphis people would unite to complete a connection between Memphis and Louisville. No action has however been made in Memphis for securing this purpose in the manner stated. It is probable that the direct line will be constructed from Paris across the State line and through Hopkinsville, to Louisville, in which case Memphis will be placed on the most direct route to Louisville, Cincinnati and the east.

The resources of the Clarksville road as now stated are—

Individual stock.....	\$250,000
Montgomery county bonds.....	250,000
City bonds of Clarksville.....	100,000
State aid of \$10,000 per mile.....	550,000
State aid \$130,000 per Bridge.....	200,000
	\$1,350,000

The estimated cost of the work is \$1,650,000, exclusive of \$85,000 for the construction of Cumberland river bridge, making the total cost \$1,735,000.

At the present time nothing has been done upon the work beyond the prosecution of diligent surveys, resulting in the route now adopted. The report of the Engineer, E. Peabody, Esq., shows the line to have maximum grades of 53 feet per mile, which cannot be considered incompatible with speed and economy of operation.

The crossing of the Tennessee river, not included as the engineer says in the cost of this road, is estimated to cost \$165,000. It will be seen however that the company report \$200,000 as the amount to which they will be entitled from the State, for bridging the Cumberland and Tennessee

rivers. If the company undertake these works the cost of their road, will be carried, by their own estimates, to \$1,900,000.

American Railroad Journal.

Saturday, September 23, 1854.

Share and Money Market.

Stock market has shown considerable fluctuation during the past week but without any general improvement. There has, however, been a considerable advance in Bonds, which remains unchecked. The following table will show the variations of the market for four weeks past.

	1. Sept.	8. Sept.	15. Sept.	20. Sept.
U. S. 6 per cent.				
1867-8	116½	116¾	117	117
Panama R. R. shares	85	88	88	89
N.Y. & Erie R.R. shs.	32¾	38¾	44	45½
N.Y. Centr. R.R. shs.	86	89	92	92
Mich Centr. R.R. shs.	82½	86	90	90
Do. South. R.R. shs.	90	89½	93	93
Nor. & Wor. do. do.	43	44	46	47
Hudson River R. R. shares	34	45	43	44½
Reading R. R. shs.	67¾	69	70	74½
Long Island R.R. shs.	22½	30½	25	
Illinois Cen. R.R. shs.	98	100	100½	100
Illinois Cent. bonds.	64	70¾	73½	74½
N.Y. Cen. R.R. bonds.	85¾	86	87½	
Erie R. R. 7's, 1859.	93	92	93	93½
Erie Income bonds.	70	72	77	85
Erie Convert's 1871.	58	63	72	73
Panama R.R. bonds.	87	87	90	90
Penn'a Coal Co.	93	96	98	98
Del. & Hud. Can. do.	110	111	112½	112
Cumbr'd Coal Co.,	27¼	31¼	32	31½
Hudson River R. R., 1st Mortgage.	90	102	101	102
N. York & Harlem.	30	31½	33¾	34½

Although an advance has not yet taken place at all corresponding to the recent decline, yet confidence is being restored. Our people find they were more frightened than hurt, while purchases from abroad are being made in considerable amounts, attracted by the low prices. Our home markets are thus being steadily relieved of a part of their load, the effect of which will soon appear in a general upward movement.

The returns of railroad companies continue to show a satisfactory result.

We give additional earnings of railroads for August as far as they have come to hand.

<i>Michigan Central R. R.</i>			
For passengers.....	\$87,981		
For freight.....	62,328		
	\$150,309		
Receipts for August 1853.....	\$144,712.		
<i>Cleveland and Pittsburgh R. R.</i>			
August, 1854.....	\$37,241	26	
August, 1853.....	38,548	00	
Increase.....	\$692	66	

<i>Baltimore and Ohio R. R.</i>			
Main Stem.	Wash. Br.	Totals.	
For pass'gers. \$48,206 02	\$24,049 10	\$72,255 12	
For freight... 246,929 76	7,960 73	254,880 49	

Total... \$295,135 78 \$31,999 83 \$317,135 61
As compared with August, 1853, these receipts show an increase of \$78,124 39 on the Main Stem, and \$2,803 06 on the Washington Branch—making a total of \$80,927 45.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equip't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	86
Androscoggin and Kennebec.. "	55	824,863	1,043,540	2,036,140	177,003	80,053	none	32
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	42
Port., Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	94½
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	17
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	105½
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	.....	.....	328,782	163,075	5	42
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	70
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	104½
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	20
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	4½
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	78
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	81½
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100½
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6½	77
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	95½
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	61½
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	93
Fitchburg..... "	67	3,540,000	191,600	3,716,870	626,659	214,633	6	87½
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony..... "	45	1,964,070	295,038	2,229,534	374,897	122,866	none	99
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	11½
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	52½
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	93½
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	.....	65
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	80
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven.... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	119
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer "	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven.... "	61	3,000,000	1,641,000	4,478,487	806,713	428,173	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven. "	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	45
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York. "	132	.....	.....	In progres	.....	.....	none	.....
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F.. "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna..... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	36
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	42
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	81
Long Island	95	1,875,148	516,246	2,446,391	205,068	44,070	none	22½
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	89½
Ogdensburg (Northern)..... "	118	1,579,969	2,969,760	5,133,834	480,187	195,847	.....	11
Oswego and Syracuse..... "	35	350,000	208,000	533,598	92,353	46,072	.....	.....
Plattsburg and Montreal.... "	23	174,042	181,550	329,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,450	213,078	96,737	.....	.....
Rutland and Washington..... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	80
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	148
Morris and Essex..... "	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey	31	2,197,840	476,000	8,245,720	603,942	316,259	10	131
New Jersey Central..... "	63	1,679,935	1,500,000	8,195,222	365,833	179,210	7	95
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster... "	36	830,100	713,227	1,702,523	265,827	106,320	8	55
Philadelphia and Reading.... "	95	6,656,382	10,427,800	17,141,987	2,480,626	1,251,987	7	68
Philad., Wilmington and Balt. "	98	5,000,000	2,399,166	8,067,285	868,088	541,769	5	69

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	85	
Philadelphia and Trenton.... "	30							
Pennsylvania Coal Co..... "	47							97
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	494
Washington branch..... "	38	1,650,000		1,650,000	348,622	216,237	8	
Baltimore and Susquehanna.. "	57				413,673	152,536		
Alexandria and Orange..... Va.	65			In prog.				
Manassas Gap..... "	27			In prog.				
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.				70
Richmond and Petersburg.. "	22	685,000		1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	503,000	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762			
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.... "	32	180,000	120,000	416,532	89,776		12	
Wilmington and Raleigh.... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	
Charlotte and South Carolina. S. C.	110							
Greenville and Columbia.... "	140	1,004,231	500,000	In prog.				
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "				In prog.				
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214		934,424	456,468	7½	
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71			In prog.	59,590	21,731		
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	
Alabama and Tennessee River Ala.	55			In prog.				
Memphis and Charleston.... "	93	776,259	400,000	In prog.				
Mobile and Ohio..... "	33	879,868		In prog.				
Montgomery and West Point. "	88	688,611		1,330,960	173,542	76,079	8	
Southern..... Miss.	60							
East Tennessee and Georgia.. Tenn.	80	835,000	541,000	In prog.				
Nashville and Chattanooga.. "	125	2,093,814	850,000	In prog.				
Covington and Lexington.... Ky.	73	1,480,150	900,000	In prog.				63
Frankfort and Lexington.... "	29	357,218		584,902	87,421	44,250		80
Louisville and Frankfort.... "	65							
Maysville and Lexington.... "				In prog.				45
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	59
Cleveland and Toledo..... "	147	2,000,000	1,600,000					71½
Cleveland, and Erie..... "	95							
Cleveland and Columbus.... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	100
Columbus, Piqua and Indiana. "	46			2,000,000				
Columbus and Lake Erie.... "	61							
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967		
Cincinnati and Marietta.... "				In prog.				62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.			75
Dayton and Michigan..... "	20			In prog.				
Eaton and Hamilton..... "	36							56
Greenville and Miami..... "	31							
Hillsboro..... "	37			In prog.				
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	
Mansfield and Sandusky.... "		900,000	1,000,000	1,855,000				
Mad River and Lake Erie.... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401		77½
Ohio Central..... "	57			In prog.				79
Ohio and Mississippi..... "								
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000		Recently opened.			
Ohio and Indiana..... "				In prog.				
Scioto and Hocking Valley.. "	44	750,000	300,000		Recently opened.			
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	
Evansville and Illinois..... Ind.	31			In prog.	237,506			
Indiana Central..... "								
Indiana Northern..... "	131							
Indianapolis and Bellefontaine "	83				Recently opened.			90
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,932	Recently opened.			
Lafayette and Indianapolis.. "	62				opened.			
Madison, Indianapolis & Peru "	159	2,647,700	1,241,300	2,409,000	516,414	268,075	10	
Terre Haute and Indianapolis "	72	632,387	663,100	1,355,019	105,944	71,446	4	
Rock Island and Chicago.... Ill.								
Chicago and Mississippi.... "	135	2,400,000	4,000,000	4,600,000				
Illinois Central..... "								
Galena and Chicago..... "	92		500,000	In prog.	473,548	286,152		
Michigan Southern and Ind. N. Mich.	315		3,741,564	7,276,616	1,200,922	586,929	17	90
Michigan Central..... "	282		3,977,668	8,618,606	1,145,598	582,816	8	85
St. Louis and San Francisco. Mo.	38		non	In progress	Recently opened.			

The following statement will show how the receipts of the Main Stem for eight months this year compare with those of the previous:

	Main Stem 1854.	Main Stem 1853.
January.....	\$254,277 10	\$101,819 49
February.....	279,856 87	99,017 27
March.....	356,880 45	216,257 37
April.....	351,379 81	200,219 59
May.....	366,974 88	204,910 01
June.....	316,802 34	189,967 61
July.....	270,214 10	164,140 42
August.....	295,139 75	217,015 36
Total.....	\$2,491,521 31	\$1,393,407 02
Deduct.....	1,393,407 02	
Increase..	\$1,098,114 29	

New York and New Haven Railroad.

Nearly three months have elapsed since the over-issues in this company were discovered. Yet from the first the directors have been as dumb as an oyster. Not one word of explanation of the fraud, or in vindication of themselves has been uttered. The affair still remains a sealed book; and more than this, we have been informed that another month is to elapse before any communication from the directors is to be expected. In the mean time not a finger has been raised to arrest Mr. Schuyler, nor is there any evidence that any effort has been made to obtain pecuniary satisfaction in compensation, though we presume he is, and always has been in the city.

Now as bad as the fraud was, we think the conduct of the directors since its discovering has been as inexplicable and calculated to do quite as much injury to the credit of our railroads, as the fraud itself. The natural inference from the prolonged silence and inaction of the directors, is a complicity with it. But as we cannot accept such an explanation, we attribute their inaction to incompetence, and to a lack of a perception of what is proper to be done under the circumstances. Men who witnessed and sanctioned Schuyler's legal peculations for so long a time must be wanting in any important moral element. Till his recent frauds were exposed he was the God of their idolatry. It is not strange that such men should not know what to do under the circumstances in which they are placed.

How does the prompt action of the Harlem Company contrast with the silence of the New Haven. The directors of the former met the crisis at once, made a clean breast of it, vindicated their own integrity by the prosecution of the offender, and took such action as left themselves and the Company and the general credit of the country, without stain. Why have not the New Haven Company imitated the example of the former? Is there something in their case which they are afraid to make known? But is anything to be gained by delay, by which the wrong that has been done will be doubled by the suspicion and distrust which will be created?

We hope the meeting of the stockholders called for Thursday evening will take prompt action in the premises. We think its first step should be to call for a report from the directors and the second to call upon them to resign. They have been connected with the road a sufficient length of time to witness the ruin of one of the best projects in the country, and we think they have fairly earned the privilege of retiring into private life.

Will our Railroads ever be out of Debt?

If as correct a sentiment existed upon the subject of railroads as upon mercantile philosophy, brokers and speculators would lose their most fruitful field of operations. If the real strength and responsibilities of railroad enterprises were clearly understood there would be comparatively as little barter in their stocks as in the shares of mercantile copartnerships. A company of individuals, each having a large relative interest in a common property, of whose value a well grounded confidence could be established, would be as little anxious to appear in the "market," as Smith, Jones & Co., Iron dealers; or Butcher and Salter, Provision merchants.

Yet no people appear to have more faith in railroads than our own, while at the same time none could well have a more unsettled estimation of their value. Where other people build their railroads for the accommodation of existing business, we build ours often to create the means of their support. Such is our faith in their usefulness. Our roads in operation,—our people will give a premium on a stock which will pay a handsome dividend, regardless of its liabilities. But if, on the maturity of an obligation, and after all cash means have been exhausted by dividend profits, a company is embarrassed in its operations, its stock is at once sacrificed at alarming rates. At the same time, the net income of the enterprise might show as wide a basis for profit as ever before.

As a class of investments, railroads are profitable. Few will deny this. Where the want of railroads has been felt, or the means to construct them have existed, few have been built and worked at a loss.

Why then is there a general distrust of the value of railroads? Not that "money is tight," or that our people distrust the general honesty of railroad management. Foreigners, who look more to the permanent value of our roads as objects for investment, have manifested hardly any concern for the general effects of an individual instance of fraud. Private letters, received in this country from London, alluded far more feelingly to a single default of payment of interest on the bonds of one of the western roads, than to the over-issue in the New Haven Company.

Of all causes of distrust, the true one is rather the extravagant and dangerous manner in which our railroad companies carry their debts. Many a scheme is commenced upon estimates fifty per cent. below the ultimate cost. Perhaps by the time one half even of the estimated means are obtained, the *clat* of the work is gone. The managers of the enterprise, upon solemn mortgages of all their present and prospective means, must then borrow enough to fairly commence operations. Further progress involves the creation of a large floating debt, at extravagant rates of interest. This is carried by continual sacrifices on the part of the borrowers, who find themselves ultimately compelled to fund it, at a heavy discount, to get rid of its excessive exactions. Yet under all these circumstances of debt, the profits of the scheme are treated as being due to the original stockholders; the maintenance, and not the redemption, of the liabilities being assumed as the function of the debtor. No provision is made for

the payment of the principal of the debt, and its obligation is therefore practically ignored.

A person unused to railway financing would scarcely credit the statement that, in an enterprise involving an expenditure of \$35,000,000, and where the proportion of stock to debt was but as two sevenths to five sevenths, a stockholder would insist upon a seven per cent. annual dividend,—that a board of directors would declare such a one, even where it had *not been earned*,—and that the ability of a work, loaded with a preponderating debt, to pay such a dividend, was regarded as a test of its value as an investment.

The certainty of a dividend, if enough can be got from the earnings of the road to make one, appears settled in the mind of every railroad stockholder. It is this assumed certainty that attracts the "little all of the widow and orphan," so often and so feelingly represented, into the treasury of the railroad corporation. Yet not one stockholder in a hundred, of the class referred to, ever comprehend that their property is mortgaged as soon as subscribed, and that they are to make instead of to receive dividends, and that they are expected besides to redeem the obligations in which they have become involved, under penalty of foreclosure of "all" that they possess. Yet it is truly so.

Nearly all of our roads are more or less in debt; many of them deeply so. These debts have been treated, so far, by those who carry them, as so much capital. They have generally, it is true, a long time to run. But in all the wide spread and interesting literature of railroad reports and exhibits, we have never seen a proposition put forth to redeem such obligations.* The Western Railroad Company of Massachusetts may be said to be the only similar corporation which has made regular and sufficient provision for payment.

It seems necessary to remind the public that all obligations of this kind must be ultimately renewed, redeemed or foreclosed.

The first of these necessary results may not be possible. It is also the most expensive of the three; subjecting the debtor to a perpetual tribute, more than sufficient in a few years to purchase the obligation.

The second optional result extinguishes the debt as well as its accumulating interest.

In a few years it would relieve the whole stock and place it at a real value proportional to that of the work which it represented. It would require the stockholders however to forego for a time a part or the whole of their dividends. The purchase, by the company, out of its earnings above interest payments, of its own bonds at or below par, would constitute the safest and quickest redemption of its debts. Next to this, a sinking fund, in the hands of safe trustees, would help our companies "out of the woods."

The third class of redemption is attachment and sale. It needs no comment.

In thus considering the prudential character of our roads, we are forced to contrast our own way of doing things in the north with the conservative and safe system of conducting railroad enterprises in the south. The consideration of a new railroad project is, in the south, the occasion for large conventions of the people, the backbone of the in-

* The first proposition of the kind appears this week in the report of the Ohio and Pennsylvania Road.

dustry and intelligence of the community. Routes and estimates are submitted to these tribunals, by whom they are considered and discussed.—The amount and source as well as the character of the means advanced become matters of public information. Every one obtaining an office of trust is thereby made accountable to the public. Elevated motives prevail, and the degradations of speculation are little practised. So long as the enterprise can be kept in original hands (and the ability to do so is in proportion to the spirit with which it is sustained) there is seldom any speculation. The expenditures upon construction are characterized by an economy unknown in any other portion of the globe. Most careful in incurring obligations, the south would be most likely to be first in its efforts to redeem them.

Another feature of the Southern railroad system is the loans made, in many cases, by the states, of a fixed sum per mile, or a large fraction of the entire cost of work. This plan creates a class of state bonds, having a better basis than those of any local corporation, and which can be sold at far less sacrifice, while the hazard of redemption is removed from the comparatively weak company to the powerful state.

When will the great body of our roads arouse to the work of strengthening their resources as well as their credit?

Journal of Railroad Law.**THE UNAUTHORIZED TRANSFER OF STOCK.**

In the 3d volume of Selden's Reports of our Court of Appeals is the case of *Pollock & Pollock against the National Bank* and another, decided in 1852, and affirming the following doctrine.

A Bank which has permitted a transfer of stock owned by a stockholder upon a forged power of Attorney, and has cancelled the original certificates may be compelled to issue new certificates to the rightful owners thereof, and if it has no shares which it can so issue, the Bank may be compelled to issue new certificates. In other words, the Bank is liable for the grossest mistakes of their agent performed within the general scope of his authority.

Justice Gardner said in delivering his opinion in the case above-mentioned, that "the Misses Pollock were the acknowledged owners of 50 shares of stock of the National Bank, standing in their names on the books of that institution, with the certificates, the evidence of their title, in their possession. This stock was subsequently transferred from their names to the names of other persons by the permission of the Bank, which received and cancelled the original certificates and has ever since refused to pay dividends to the complainants, or in any way to recognize them as stockholders in the institution, and denied their title to any interest in the capital stock of the Bank. All this has been done without any authority or assent expressed or implied on the part of the true owners, and the question is, are they entitled to any relief? It is said that inasmuch as the transfer was made by virtue of a forged power of Attorney the stock is still the property of the complainants. But a title to stock in the abstract without any legal evidence of such title, without the power of sale or of obtaining dividends is not the ownership which the complainants once possessed and of which they have been deprived by the agents of the Bank. They held certificates; these the Bank has cancelled and instead of issuing new ones to the complainants it denies their right altogether. It was said

that there was no proof that the power of Attorney was forged. But the answer is that the original title of the Misses Pollock is admitted, and if the Bank sets up a title derived from them in lieu of their claim such title must be proved. And the burthen of such proof lies upon the defendants.

Justices Ruggles, Jewett, Johnson and Watson concurred in the above decision; Gridley and Edmonds, Justices, were absent.

But Welles, Justice, dissented from the foregoing decision and denied that the Misses Pollock were, in the existing state of the pleadings, entitled to any relief.

"On what grounds," asked Justice Welles, can the appellants ask to have the National Bank either furnish them with an equal number of shares of stock or pay them the value thereof?

They were the owners of 50 shares of stock in that Bank, which they allege was sold and transferred in their names, by their brother upon a forged power of Attorney. Admitting this was the case, they are still the owners of those fifty shares, and are entitled to receive the dividends payable thereon unless they have in some way ratified the sale, which they deny. They could not be deprived of them without their consent or by due process of law. If the National Bank has refused or shall refuse to pay over to the appellants any dividends that may accrue upon it, I see no difficulty in their sustaining an action at law as for money had and received by the Bank to their use. If it is important for the appellants to have the stock stand in their names upon the books of the Bank, and it becomes necessary to invoke the equitable powers of the Court to effect that object, either by having the transfers or assignment fraudulently made of the same in their names by the brother of the Misses Pollock declared void, or by compelling a re-assignment thereof to them by their claiming to hold the stock and have the same registered by the Bank in their name, or in any other way to be re-instated the apparent as well as the real owners of such stock,—the persons to whom the same was assigned or who claim title thereto to fraudulent assignments are of all others most interested to be heard before the Court can give any judgment in the premises.

It does not appear that the respondents have done any act of which the appellants have a right to complain. The wrong if any which has been done, was committed by the brother of the Misses Pollock in transferring the stock without authority, and in this the purchasers from him, as the appellant's agent or Attorney, must of course be the greatest sufferers, for they have bought without acquiring title to that which they purchased, and have consequently lost whatever they paid for it. But the Bank, I repeat, has done nothing worthy of blame. It could have no legal interest in the question as to who were the owners of the stock in question. Upon a transfer of any of its stock it was its duty to register it in the name of its transferee; and it would be a monstrous doctrine to hold it responsible in any event for the validity and genuineness of such transfer, where good faith has been observed by its managing officers."

The decree in this case was of course in accordance with the decision of the majority of the Court.

(For the American Railroad Journal.)

Improved Cross Ties.

Mr. Editor—I wish to call the attention of parties interested in economizing the expense of maintaining railroads, to the important fact that cross ties charred in an oven may be rendered indestructible for many years.

And the process can be carried on with but little cost if once adopted, for the oven or furnace can be heated with the tops, chips and limbs of the trees cut down for the cross ties. If so, the increased cost of charring, will not, or should not exceed 6 or 8 cts. per tie, if even one-half of that sum. And a tie thus prepared should last at least 20 if not 30 years.

From experiments made for another purpose I am satisfied the plan will be found of great value, and in the end the cheapest ever tried.

Yours

C. K. M.

Vicksburg, Miss.

Commerce and Railroads of Cuba.

An article in the last number of De Bow's excellent "Review," contains the following statements of the resources, extent and internal improvements of Cuba.

The population of Cuba, as officially returned, is 1,050,000; nearly equally divided between whites and blacks, with a slight preponderance in favor of the whites. The actual present population is however believed to be about 1,500,000.—The area of Cuba, is 42,383 square miles.

The annual revenue which Cuba affords to Spain is stated as \$13,821,456; and the expenses of the local government, and public works generally, as \$11,659,750, making the whole annual taxation of the Island \$25,791,206!

Railroads in Cuba.—Internal improvements in Cuba have of late made notable progress, so that, at present, there are 351 miles of railroad connecting some of the most important places. From Havana a railroad extends across the island of Batabano, sending off a branch westward to S. Antonio and Mariel. At S. Felipe, the Havana road turns eastward, and proceeds on to Guines; thence further east it unites, at Union, with the Matanzas Railroad, which has its northern terminus at Matanzas. Farther eastward the Havana road unites with the road to Cardenas. So that Havana, Matanzas, and Cardenas, are united by railroads. A railroad also extends into the interior, 34 miles, from Jucaro, a place on the northern coast, east of Cardenas. From Cienfuegos, a road also extends into the interior to Santa Clara. A railroad extends also from Nuevitas to Puerto Principe, 44 miles. There is also a railroad from the city of Cuba to El Cobre. These roads have many important branches leading into the richest part of the island. Many important roads in the island are also projected, or in progress, which, when completed, will render every part of the island accessible. The highways of the island are, in general, very poor; and in the rainy season, almost impassable, as no improvements are ever made upon them.

The railroad from Havana to Bejucal and Guines, which was opened in 1837-8, was not only the first in Cuba, but the first railroad ever constructed in any Spanish country. It was not until 1848 that the first railroad in Spain was opened—that from Madrid to Aranjuez was opened in 1851, and extended to Tembleque in 1853.

TELEGRAPHS.—The magnetic telegraph is in operation in several parts of Cuba. Lines are being extended from Pinar Del Rio, in the western part of the island, to Santiago de Cuba in the eastern part, with branches to the principal towns on the coasts. Havana is also being connected by telegraph with Matanzas, Cardenas, and Guanajay,

the wires following the railroads. A telegraph line between Havana and Batabano, on the south coast, is now in operation.

The external means of communication with the principal points of the island are very extensive. Steamers and sailing vessels run regularly between all the principal ports. Havana is connected by daily lines of steamers with Matanzas, Cardenas, and Jucaro, arriving at Matanzas in five hours.—Between Batabano and Santiago de Cuba, in the eastern part of the island, steamers and sailing vessels run regularly, touching at Cienfuegos, Trinidad, Santa Cruz and Manzanillo, and arriving at Santiago de Cuba in five days. Steamers also run daily between Batabano and Bailen, touching at Dayaniguas, Coloma, and Punta de Cartas; also weekly between Batabano and the Isle of Pines. Havana is also connected with other important places on the northern coast by regular steamers.

Chartiers Valley Railroad.

A recent exhibit of this company represents the means provided for the construction of their work as follows:

Individual subscriptions.....	\$115,700 00
Alleghany county subscription, bonds	150,000 00
City of Pittsburgh " "	150,000 00
Washington Borough " "	25,000 00
Canonsburg " "	10,000 00
	\$450,700 00

To this sum may also be added the fifteen per cent. of work to be paid contractors in stock, say..... \$50,000 00

Making together..... \$500,000 00

The exhibit says:

The estimated cost of the work of the Catfish route—the one selected—to the point of junction with the Pittsburgh and Steubenville road, is shown, by the Chief Engineer's Report, to be \$570,500 00; and in a subsequent report, he says the work was contracted for at a sum considerably below its estimated cost. Grant, however, that it will cost the full amount estimated, and there remains only the small balance of \$69,000 00 to be provided for by additional subscriptions, or the sale of the bonds of the company, to put the road in complete order for the cars.

The foregoing statement, it is confidently hoped, shows the finances of the Chartiers Valley Railroad to be in such a condition as to inspire confidence in the successful prosecution and speedy completion of the work. The hope is entertained, from information now in the possession of the Board, that further subscriptions will be made by corporations and individuals, more than sufficient to make up the difference indicated. But should they not be made, no doubt is entertained that the company will be able to realize, from the issue and sale of their own bonds, an amount amply sufficient to meet all their wants, when the value and importance of their work is fully understood.

Steamboat Accidents in Six Months.

A report is published by the Secretary of the Treasury of the number and causes of the steamboat accidents which have occurred the first half of the present year.

The Pearl, Wetumka, Federal, Arch, Clifton, Glover, McFadden, Beaver, Dr. Franklin, Detroit, and Lettercope, were lost by collision—ten in all.

The Franklin, St. Charles, Georgia, Belcher, Natchez, Mohican, Saxon, Leak, Tuna, Grand Turk, Sam Dale, Ambassador, Eagle, Mary Agnes, Caroline, Rockaway, Helen and Bradford were destroyed by fire—eighteen.

The Garden City, St. Angi, Aubrey, Elmira, Excel, were all crushed at one time in the ice at St. Louis—five.

The Altona, Choctaw, Youghoghenia, Jack Hayes, Amazonia, Excelsior, J. M. Niles, Julia, Sophia Belle Goude, J. S. Avery, Caspian, Union, Cuba

Monroe, Lamartine, Eliza, Jenny Beal, Cremonia, Pike, Umpire, Wm. Penn, and Gossamer, were snagged—twenty-three.

Eight were destroyed by the explosion of boilers—the Fanny Fern, Kate Kearney, Helen Hensley, Reindeer, Gazelle, Secretary, Gen. Scott, and Penn.

The San Francisco was lost in a gale at sea.

The whole number of lives lost in these various accidents was 516. The amount of property destroyed is estimated at \$2,274,442.

Six of them are pronounced to have been unavoidable. Thirty-five are attributed to accident, four to inattention, sixteen to negligence, and one, the San Francisco, to the unseaworthiness of the vessel.

The report adds that, as the majority of these accidents were not of a character that could be prevented by precaution, and as there is reason to believe that many others have been prevented by the working of the steamboat law of 1852, there is no present need for its modification. So far as the law is concerned, we have no doubt the opinion is correct. Its beneficial effects are matters for congratulation.

But there are one or two other points not alluded to in the report, to which it is worth while to direct attention.

Of these 64 steamboats, fifty two were lost on the rivers of the Southern and Western States, while only one was lost on the Lakes, one in New Jersey, none on the Hudson, and none in all in New England. Either our northeastern boats must be better built or they are more carefully guided than those of our neighbors. We use low pressure and they high. Ours cost the most, but considering the loss of \$2,000,000 worth of theirs in six months which is cheaper in the end?

Again—23 were snagged, or, in other words, lost because Government refuses to remove the obstacles to navigation in the Western rivers. Four steamboats per month are wrecked from this cause.

Two hundred valuable lives were lost, in a Government vessel, selected by Government officials to transport troops. Those who refused to go on board were punished by Court Martial. And now the Government confesses it to have been unseaworthy. Who was to blame for the neglect to inspect that vessel?

We need no new Law to prevent the occurrence of such accidents as the most of these. But we do need the execution of the laws we have.

Boston and Maine Railroad.

We have received a copy of the annual report of the Directors of the Boston and Maine Railroad, which is to be presented to the stockholders of that road at their meeting on the 13th inst. The report, which contains an account of the affairs of the road up to June 1st, 1854 states that the whole capital stock of the road, including a State loan of \$150,000, was then \$4,226,974 52 of which amount there remained unexpended \$70,814 37. The total earnings of the year ending June 1, 1854, were \$850,007 02, expenses, \$404,030 11, leaving the net earnings for the year \$445,976 91. After deducting \$25,214 11 for depreciation, &c., the net earnings amounted to \$420,762 80. Of this sum there had been appropriated for various purposes including two dividends of 4 per cent. each, the sum of \$354,456; and there remained a surplus of \$66,306 80 which added to the surplus of 1853 makes a total surplus on the 1st of June last of \$199,584 68. The assets of the road at the close of the fiscal year, amounted to \$498,513 46 and the liabilities exclusive of the State loan of \$150,000, to \$283,222 02.

The net earnings for the year ending June 1, exhibited an increase of \$56,527 43 over those of the previous year; and the net expenses an increase of \$39,854 52. Thus the receipts have not increased in an equal ratio with the expenses.—Some of the items which compose this extra expense were an increased amount of distance run by the trains, higher prices for fuel, higher wages, and the substitution of horse power for steam in entering Boston. This last item has increased the

expenses about \$10,000 per annum. The Directors devote a brief portion of the report to a vindication of their course of advancing their passenger and freight fares.

During the past year the Directors have found it necessary to purchase additional land for depot purposes at several stations of the interior. The most extensive purchase of the kind was at Lawrence, the amount bought there exceeding \$20,000. During the year, also, four first-class locomotives, five new passenger cars, and eighty-five freight cars were purchased for the use of the road.

The report speaks of the inadequacy of the present accommodations at the Boston terminus of the line. Fifty per cent more of the storehouse accommodations at that point is imperatively demanded by the increasing freight business. The present grounds are capable of affording this and the Directors would have made such a disposition of them last autumn had not the pending questions respecting the manner of using that portion of the grounds prevented them.

The Directors have invested a portion of the reserved fund in the stock of the road, bought when it sold low in the market, and with other portions have made temporary loans to corporations or individuals at six per cent. interest on satisfactory security.

As a whole it is believed that the physical condition of the road has never been more satisfactory than at the present period.—*Journal.*

Coal Trade of Cleveland.

A correspondent of the *Courier and Enquirer* gives the following statements relative to Cleveland and its coal trade.

The estimated receipts into Cleveland this year are about 6,000,000 bushels or 200,000 tons, all bituminous of the best kind. The principal source of supply is from the Canal which passes through Tuscarora, Portage and other counties underlaid with coal. They are generally worked by private interests. This coal finds an outlet in these several markets on the Lakes and in Canada. The Cleveland, and for the manufacture of gas. here for land gas is a beautiful article. Coal sells about the 10 to 15 cts. per bushel at retail, and is a cheapest article in household economy. I wish you could say as much. Wood sells at \$3 per cord. Several new coal fields have been opened, and the coal is said to be superior to any hitherto brought to this market. The Salines Coal from Jefferson County near the Ohio River on the Cleveland and Pittsburgh Railroad, stands very high as a free burning bituminous coal, equal in every respect for the manufacture of gas to the Newcastle, (English,) and so easily worked as to furnish large supplies. The completion of the Mahoning Railroad to Warren will open a vast coal field of superior coal. In regard to the coal trade, Cleveland is to Ohio what Philadelphia is to Pennsylvania. Preparations are being made to send east large quantities of the Ohio bituminous coal; the high price of the English and Scotch being such, they can lay it down, undersell the imported, and make a handsome profit; and for the purposes of fuel and making gas, it is equal to any imported, and for the quantity of coke it produces, it has few superiors.

I have lots of small statistics to provide you with, but have not time to give them to you now. Cleveland is increasing in population and trade, at an astonishing rate. Recently the town on the other side of the river has been annexed, and the population of the city is estimated at the present time at 50,000. Some idea of the rapid growth of the place can be gathered by the population at the several periods named below: In 1796 it was 3; in 1798, 16; in 1825, 500; in 1831, 1,100; in 1835, 5,080; in 1840, 6,071; in 1845, 9,573; in 1850, 17,600; in 1851, 21,140; in 1852, 25,670; in 1854, with Ohio City annexed, it is estimated at 50,000.

The growth of Ohio by means of her liberal railroad system, is extraordinary.

Gallipolis and Chillicothe Railroad of Ohio.

The most direct extensions, into Central Ohio, of the important lines of Virginia railroads descending the Great Kanawha Valley, is by a connection from near Gallipolis to the Cincinnati and Marietta railroad. It is found that a connection can be formed upon such a route, following the valley of Little Raccoon Creek in Gallia Co., Ohio, and with a line of 32 miles in length.

The local influence of a road from Gallipolis to Chillicothe would be to develop the extensive and rich deposits of iron and coal which abound on the route, giving them a direct outlet to the river as well as to Central Ohio and Cincinnati.

A company was organized for this purpose in June 1852, the intention being to run the road via Jackson. Recent surveys have disclosed the superiority of a route through Vinton, and Buckeye Furnace, making a connection of 32 miles between the Ohio river at Gallipolis and the Cincinnati and Marietta road at Hamden. This line will compare in grade and alignment with most first class works, having not over 53 feet grades, and curves of not less than 1910 feet radius.

\$75,000 of stock have been subscribed towards the construction of this road, and during the coming year the work will be commenced. The president of the company is the Hon. Simeon Nash.

The Coal Fields of the United States.

Area of the States.		Coal Areas.	
States.	Sq. Miles.	Sq. Miles.	Proportion of coal.
1. Alabama....	50,875	3,400	1-14th
2. Georgia....	58,200	150	1-386th
3. Tennessee....	44,720	4,300	1-40th
4. Kentucky....	39,015	13,500	1-3rd
5. Virginia....	64,000	21,195	1-3rd
6. Maryland....	10,829	550	1-20th
7. Ohio.....	38,850	11,900	1-3rd
8. Indiana....	34,800	7,700	1-5th
9. Illinois.....	59,130	44,000	3-4ths
10. Pennsylvania...	43,960	15,437	1-3rd
11. Michigan....	60,820	5,000	1-20th
12. Missouri....	60,384	6,000	1-10th

The above table gives an aggregate area in twelve States of 565,238 square miles, of which 133,132 miles, or nearly one-fourth, is composed of coal beds. After making all due allowances for such coal beds as would never be reached by the miner, we have left an enormous yielding area.

Canada contains no workable beds of coal, but Nova Scotia, New Brunswick, and Newfoundland are rich in the article—exceedingly rich.—*Buffalo Democracy.*

Engineering and Mathematical Instruments.

Not many years since, our "surveyors" were obliged to procure their instruments in Europe.—The "tools of the trade," primitive as they often were, were too much for the skill of domestic workmen. Now our own instrument makers furnish instruments of all kinds used in Astronomy and Engineering,—by the Architect, Mechanical Draughtsman, Mathematician, Chemist and Philosopher; and of such accuracy, ease of adjustment, and high finish of working parts as to make us wholly independent of foreign manufacturers.

Among the most successful makers of Engineering and Mathematical Instruments, we have in this city, James Prentice, No. 1 Chambers St.; Benj. Pike & Sons, Broadway; Albert Cook & Co., 19 John St.; Tomas Hunt, 53 Fulton St.; E. & G. W. Blunt, 179 Water St.; and Shanahan and Loeber, 181 William St.

Nearly all of these firms have spacious sales rooms, supplied with all the minor apparatus and materials essential to the professions with which their trade is connected.

H. Sawyer, also carries on the manufacture of Transits and Levels in Union Place, Yonkers, Westchester County, in this state.

In Philadelphia, McAllister & Brother at 48 Chestnut street, manufacture and sell all kinds of mathematical and optical instruments.

In Boston, Joseph Wightman and D. B. Widdifield & Co., have also been long known; the former for the manufacture of Philosophical and Chemical instruments, and the latter for the manufacture of mathematical instruments.

The cards of nearly all of these manufacturers will be found in our advertising columns.

Virginia.

The Railroad Convention, in session at the White Sulphur Springs in Virginia, was addressed on the 25th ult. by T. Dunn English, Capt. Morris, Judge Bayly, Ex-Governor Smith and others; after which the business committee reported in part, that the Covington and Ohio Railroad ought to be completed by the state, without delay; that the faith of the State is pledged for its completion, that the value of said road is enhanced by its light and favorable grades, and its connection with the James River Canal, the Central Railroad, the Orange and Alexandria Railroad, and the Kanawha river and its tributaries; that the James River Canal ought to be extended to Covington, and that the Kanawha river ought to be improved to the highest practicable point for steam navigation.

Cincinnati and Covington Bridge.

It is stated that \$300,000 have been already subscribed towards the construction of a suspension bridge across the Ohio at Cincinnati.

Mobile and Girard Railroad.

The work upon the first 22½ miles is progressing rapidly towards completion, and will be finished by the first of November, unless delayed by the non-arrival of iron. That part of the road lying between Colbert and Union Springs, the Board of Directors are determined to complete at a very early day, as it is regarded as the most important link on the eastern end of the road, and to this end the following resolutions were adopted, at a recent meeting of the Board of Directors on motion of Major Wiley Williams:

Resolved That on all cash subscriptions hereafter made and paid into the capital stock of this company applicable to the construction of the road between Columbus and Union Springs, if the stockholders will double the amount of such subscriptions, semi-annual dividends of four dollars a share will be paid in cash at the office of the company in Columbus.

Resolved, That in all cases of cash subscriptions heretofore made and paid into the capital stock of this company, applied to the road between Columbus and Union Springs, if the stockholders will double the amount of such subscription, semi-annual dividends, at the rate of eight per cent. per annum will be paid on the aggregate amount of stock so subscribed and paid by each stockholder.

Resolved, That the Board of Directors will proceed, on the first Monday in November next, to elect all the subordinate officers and agents required in transacting the business of the Mobile and Girard Railroad Company.

It will be thus seen that all cash subscriptions applicable to the road between Colbert and Union Springs, are preferred above all other stock; and that semi-annual dividends of four per centum are guaranteed upon it; and that all subscriptions heretofore made to this part of the line, may be converted into preferred stock, drawing eight per cent. per annum, if the stockholders will double their subscriptions to the road.

These propositions are exceedingly liberal and cannot fail to command the favorable consideration of capitalists.—*Columbus Times*.

Deepening Rivers.

The process of raking rivers for the purpose of deepening the channel has been successful in this and other countries when the apparatus used was very imperfect, being simply a rake, or a collection of rakes to drag upon the bottom, following its inequalities, and depending principally upon the current to wash away the sand or gravel after it has been disturbed. Such a rake has been used for a number of years with success below the locks at the Kennebec dam.

There is now in successful operation upon the Gage shoal, in the Kennebec river, under the superintendence of Mr. George Williams, an apparatus on a large scale, and with many improvements over any thing of the kind ever before attempted. This apparatus was designed by Col. John L. Smith, U. S. Engineers, and built by Mr. William Jones of Augusta. It consists of two flat boats each 14 feet wide and 50 feet long; these are connected by a platform crossing both decks and holding them 14 feet apart. The rake is in the form of a harrow, but having two lines of frame and teeth. Each arm of this rake is 50 feet in length and its spread is 50 feet. The frame is of hard pine 12 inches square. The teeth are in the form of cultivator teeth, two feet long and weigh 45 pounds each, and are placed one foot apart. This immense rake or harrow is hung under and between the boats. By means of posts coming up through the platform, this rake can be raised or depressed to any required depth, and is held in its place by strong braces and chains properly placed. These boats are towed by a steamer attached to a strong beam fastened across their bows. It has now been in operation about a week; long enough to prove that this process, under favorable circumstances, will be by far the most rapid and economical means of deepening the channels of our rivers.—*Kennebec (Me.) Journal*.

Memphis and Little Rock Railroad.

From L. D. Stickney, Esq., secretary of the above named road, who arrived in Little Rock on the 15th ult., we learn that the road is in a prosperous and flourishing condition. The survey is progressing. The bonds of the city of Memphis subscribed in aid of this road have been negotiated for iron, cars, and locomotives, on very favorable terms to the company.

The city of Memphis have raised their subscription to \$200,000, and the city pledged itself, as soon as the road is completed to the St. Francis river, to make an additional subscription of \$350,000, for which she will issue her bonds, making in all nearly one million of dollars which this road will receive of foreign aid.

Mr. Bradley, the contractor has made an arrangement by which six hundred laborers will be put to work on the road by the first day of October next.

The counties of Crittenden, St. Francis, and the northern part of Monroe have taken hold of this enterprise in earnest, and, during a short stay in Prairie county, Mr. Stickney received subscriptions amounting to more than \$25,000, one citizen Dr. W. C. Hazen, subscribing \$5,000.

Convention of Western R. R. Companies.

The following call was addressed by the Union Railroad Company of Indiana for a general convention of the Railroad companies of the west, to have been held in Columbus, Ohio, on the 21st inst. We shall report the proceedings so soon as they shall transpire.

OFFICE UNION RAILWAY COMPANY,
Indianapolis, September, 5th, 1854.

SIR: At a meeting of the Board of the Union Railway Company, held at Indianapolis, this day; present, the Presidents of the Indiana Central Railway Co., Indianapolis and Cincinnati R. R. Co., Terre Haute & Richmond R. R. Co., Madison, In-

dianapolis & Peru R. R. Co., Indianapolis & Bellefontaine R. R. Co., the following resolution was unanimously adopted, and is transmitted to your company as therein directed.

Resolved, That in view of the action recently taken by the leading lines of Eastern Railroads in the matter of Fares and Freights, the speed of trains, and the system of free passes, it is expedient that Western Roads should hold consultation touching the same matters; and that, to this end, the companies here represented invite a meeting of Roads in Ohio and Indiana, to be held at Columbus, Ohio, on Thursday, the 21st day of September instant.

It is earnestly requested that your company will be represented at the proposed meeting.

By order of the Board.

JNO. BROUGH.

President Union Railway Company.

Hannibal and St. Joseph Railroad.

The St Joseph Gazette of 30th ult. states that the work on this road is going rapidly forward.

The work commences on the East side of the Platte river, about ten miles from St. Joseph.—The grading is going on rapidly, and it will soon be completed to Castile, a distance of fifteen miles from the point where the work was begun. The section between the Platte and the St. Joseph will be started in a short time, and a sufficient force put on it to complete the grading in four months. The road for twenty five miles will be ready for laying down the rails by the first day of next April; "and soon after," says the editor of the *Gazette*, "we may expect to hear the iron horse snorting in our midst."

The first station, East of St. Joseph about thirteen miles, is called Easton. It is in the valley of the James Branch, on the edge of a fine prairie, with an abundance of springs to water it. A sale of lots will take place there on the first Saturday of October next, where, says the *Gazette*, there will be a good chance for profitable investments. The country is said to be healthy, and the farmers prosperous.

North Western Railroad of Pennsylvania.

The New Castle *Journal* states that the work on the North Western Railroad is progressing rapidly. Hands are on all the sections let. On Walker's Summit section about one hundred hands are at work; on Moorhead's contract there are some fifty, and over twelve hundred persons are engaged on that portion now under contract. Mr. Keenen, who has the contract for erecting the bridge over the Alleghany river, is making considerable progress on the stone work of that heavy improvement.

The editor seems sanguine that, if those who have subscribed are punctual in their payments, the road will be finished in the course of a couple of years.

The North Western road extending from the Cleveland and Mahoning road, at the Ohio State Line, to the Pennsylvania Central road, 2½ miles from Blairsville, is part of a line of 472 miles of continuous gauge from Cleveland to Philadelphia; being 22 miles shorter than via Pittsburgh. The North Western road is 87 miles in length.

Lexington and Big Sandy Railroad

The Mount Sterling *Whig* says that the work on this road has been steadily progressing with a good force, which force is to be decreased on some sections and increased on others, particularly on the heaviest work in Fayette county. The stockholders at the Big Sandy end object to this, and claim the right to spend their subscription—said to be nearly \$400,000—at that end, which will probably be conceded.

None of the county bonds held by this Road have been sold, and some \$60,000 would lift all that have been hypothecated. The *Whig* says the monthly estimates—between \$30,000 and \$40,000—are promptly paid.

Uniformity of Gauge.

It is a proof of the practical indifference of the distinctions of "gauge" that the inequality of width, considered necessary for the discrimination of "broad" and "narrow," has been growing less and less ever since any change from the common standard was first proposed. When Brunel added 50 per cent. to the ordinary width, it would have seemed reasonable that, in time, we should have had ten, twenty, or perhaps fifty feet gauges. The broad gauge of Brunel, however, was laid down upon but a few hundred miles in England, and has been attempted nowhere else. The seven feet gauge was admitted to be *too wide*. The same is now true of the *six feet* gauge, where the increase over the original and common standard is but 27 per cent. The engineering preference of the country is now pretty well decided in favor of the $5\frac{1}{2}$ feet gauge; only 17 per cent. wider than the original. And, so long as the limit of gauge is controlled by the arrangement of the locomotive, and by the necessary capacity and steadiness of the cars, it may be expected that, as the one becomes simplified, and the other conditions attained perhaps by different means, that even the common gauge may come to be considered as mechanically *too wide*; since any gauge, or double system of rails, is mechanically inferior to a single rail.

For disturbing gauges, less than $5\frac{1}{2}$ feet width, there cannot of course be even an engineering apology. The evils consequent upon the accidental adoption of the 4 feet 10 inch and 5 feet gauges, will be felt more and more every year.—We say accidental adoption as we never could recognize any engineering pretext for such a slight difference of width, and do not know as the communities who have thus isolated themselves contemplated a deliberate *obstruction*.

The more the railroad system of the country becomes consolidated, the more is felt the *want* of continuous connections. A difference of gauge is an exclusion, nearly as embarrassing as an open stream across the route of a public highway.

The vast sums expended for bridging our rivers in all directions, for railroads and highways, are the willing contributions made by commerce for facilities nearly identical with those furnished by uniform connections of gauge. Yet, where a break at the Miami river would not be tolerated by an Ohio railroad, the same road may perhaps cross a dozen others of *different gauge*. Roads projected into unoccupied districts having, as was supposed, a *choice* of gauge, are found, in a few years, involved in numerous connections with other similar works,—the offshoots of other systems—and of conflicting gauge. Canada, which was believed to be *entirely* independent of a foreign gauge, will connect with the New England gauge at the Montreal Bridge; and with the "common," the New York and Erie, and the "Ohio" gauges at Niagara Falls—all different from her own. West of the Mississippi also, where the railroad system is already committed to the $5\frac{1}{2}$ feet gauge, the roads projected from the Illinois system and entering Iowa at Rock Island, will extend a disturbing gauge.

The evasion of the test of continuous connections, practiced by many advocates of the *wide gauge* (7, 6, $5\frac{1}{2}$ or 5 feet) is worthy of illustration. We never knew an advocate of an obstructing gauge who did not claim "a limit to the per-

iod of motion of the rolling stock," or that "rolling stock must be kept under proprietary supervision," or something to the same effect. But how different from the implied sense of these restrictions are the operations of railway traffic, wherever freedom of movement can be had. The report of the President of the Ohio and Pennsylvania road, (having but one *intersecting* road) states that the cars of *eleven* different Ohio railroads have been found *at one time*, in its yards at Pittsburgh. Some of these cars had doubtless come 400 miles; and did the same gauge continue through Indiana, no doubt but that others might have come from Terre Haute, or Chicago. No expression is made of inconvenience in the distinction or the direction of these cars, but on the contrary it is cited as an illustration of the advantages of the connections enjoyed by the Ohio and Pennsylvania road. And such it is. In the railroad depots of Boston, the freight cars of nearly all, and the *passenger* cars of several of the "upper roads," extending to Lake Champlain, the St. Lawrence and northern New Hampshire, are always to be found. Such illustrations will continue to grow more abundant as our roads are extended.

The intervals for examination, and for ordinary repairs of freight and passenger cars, occur as well in a continuous as in a reciprocating movement. The passenger and freight cars of the New York and Erie road run "through," for 470 miles, and the freight cars run to Niagara Falls and Buffalo. The wheels and axles, the boxes or springs of a car, can as well be renewed or repaired when it is full as when it is empty. The *body* of the car is not subject to frequent or extensive repairs.

We regret to see the inconveniences, which are daily arising from breaks of gauge; breaks which are as embarrassing when caused by a difference of two inches as of twenty.

No railroad can avoid connections unless by voluntary exclusion, or by natural obstacles. On the contrary, connections are sought in most cases as the surest bond of mutual interests, and for the promotion of public convenience.

Many of our oldest and most active roads have established the gauge of their particular sections of country. Projected extensions and connections, which are the expression of railway progress, must be made with great judgment to secure the most substantial advantages from the greatest number of tributaries.

Ohio may be mentioned in illustration of the extent and complication of railroad connections. The railroad system of this state may be called external, for it does not originate or concentrate within the state. Unlike the system of Illinois, the railroad system of this state is not based principally upon a common point like Chicago; and unlike that of Indiana it does not concentrate upon a single interior town like Indianapolis.—Ohio is the intermediate crossing ground for all the important lines of road connecting New York, Philadelphia and Baltimore, each, with Chicago, St. Louis and Cincinnati. The general relation of the railroad system of Ohio to that of the whole country, may be understood at once by fixing three points on the right and three more on the left hand side of a sheet of paper, and then drawing three lines from each point on one side to each of those on the other side. These lines will re-

present the general direction of the routes between the three great eastern and the three great western cities; the focus of one set of lines, and the intersection of all the others being within Ohio.

Yet the gauge of Ohio is different from that of all the states on her eastern and on her western borders. How long will it take to discover the *want* of uniformity?

Ohio and Pennsylvania Railroad.

We give in another column a statement which places the financial condition of this company in a very favorable light. The success of this project ought to satisfy all the parties who have contributed toward its construction. As an evidence of sagacious management, we refer to the proposition for a *sinking* fund for the purpose of retiring the Income bonds as they fall due. It is one of the first propositions of this kind proceeding directly from a company. We hope and expect to see the example generally followed. The earnings of our railroads will allow the establishment of such funds in almost every instance, and still have a sum sufficient for a satisfactory dividend. Such a course would have a much greater influence in putting up prices than to divide the total earnings, without reference to future liabilities. If our companies failed to make suitable provision for the ultimate payment of their debts, when contracted, it is fortunately not too late to correct their mistakes. Their loans are mostly on long time, leaving ample opportunities for the adoption of measures to secure their final liquidation. That one mistake has been made is no excuse why they should commit another; but is an additional reason why they should retrieve the first.

Vicksburg, Shreveport and Texas Railroad.

The Savannah News states that Col. Wm. G. Bonner, of Milledgeville, has been appointed Chief Engineer of the Vicksburg; Shreveport and Texas Railroad, and will soon enter upon the duties of that office.

Albany and Susquehanna Railroad.

Hon. Levi Dimmick, of Binghampton, has been appointed one of the Directors of the Albany and Susquehanna Railroad.

SEPTIMUS NORRIS

CIVIL, MECHANICAL & CONSULTING ENG

OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement, at the times and places therein mentioned:—

Sealed proposals will be received at the Engineer's Office in the city of Utica, until Monday, the 9th day of October next, at 10 o'clock, A. M., for the following described work:—

Description of Work.	Amount of Penalty in Bond.	Time of Completion.
Section No. 16.....	\$7,500....	1st April, 1856.
" 36.....	3,300....	"
" 37.....	5,200....	"
" 57.....	7,000....	" 1857.
" 58.....	9,500....	"
" 59.....	6,000....	"
" 60.....	6,000....	"
" 61.....	6,000....	"
" 62.....	12,400....	"
" 75.....	5,100....	" 1856.
" 78.....	5,800....	"
" 131.....	5,300....	" 1857.
" 132.....	5,800....	"
" 133.....	6,000....	"
Lock No. 34.....	5,600....	1st July, 1856.
" 38.....	6,000....	"
" 40.....	6,200....	"
" 42.....	6,200....	"
Waste Weir on Sec. 120.	1,200....	1st April, 1855.
Bridge Abutments on Sections 15, 16 and 17.....	2,500....	1st July, 1855.
Bridge Abutments of Sections 36 and 37...	1,300....	"
Bridge Abutments on Sections 57, 58 and 59 and Main street Bridge at Fultonville.	3,000....	" 1855.
Bridge Abutments on Sections 60, 61 and 62.....	2,000....	"
Bridge Abutments on Sections 75 and 78...	1,500....	" 1855.
Bridge Abutments on Sections 111, 115, 121 and 122.....	2,000....	"
Bridge Abutments on Sections 132 and 133.	900....	" 1856.
Culverts on Sections 59 and 60.....	1,200....	"
Culverts on Section 75.	600....	1st April, 1856.
Culvert at Van Vran- ken's on Section 18..	300....	1st July, 1855.
Culverts on Sections 112 and 121.....	1,100....	1st April, 1856.
Culverts on Sections 131, 132 and 133....	1,200....	1st July, 1856.
Completion of Phillips' Aqueduct.....	1,300....	1st April, 1855.

Sealed proposals will be received at the Engineer's Office at Lyons Falls until Thursday, the 12th day of October next, at 10 o'clock A. M., for the following described work:—

Reservoir at Wood Hull		
Lake	\$3,700....	1st Oct., 1855.
Reserv'r at N'rth Br'nch		
Lake	5,500....	"
11 Lock Houses from		
Boonville to Lyons		
Falls.....	1,000....	"
Sluices around Locks		
No's. 34 to 69 inclus.	2,900....	1st Aug. 1855.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse until Saturday, the 14th day of October next at 10 o'clock in the forenoon for the following described work:—

Section No.195.....	\$6,400.....	1st April, 1857.
" 196.....	4,300.....	"
" 197.....	7,200.....	"
Centre Port Aqueduct..	3,400.....	"
Port Byron do.....	7,000.....	"

Sealed proposals will be received at the En-

Section No. 4 below Salina.....	7,400....	"
Part of Sections 14 and 15, Gascon Rapids....	12,700....	"
Part of Sections 16 and 17, above Phoenix....	6,400....	"
Part of Sections 17 and 18, above Phoenix...	7,700....	"
Part of Sections 22 and 23, Morseman level..	6,500....	"
Section 27 at Fulton...	6,000....	"

Dam and Guard Gate on Section 10.....	5,600....	"
Culverts on Sections 1 to 5 inclusive.....	2,200....	"
Road and Farm Bridge Abutments on Sec- tions 1, 4 and 10	2,300....	"

Section	276,	with penalty in bond of	\$9,000.
"	277,	"	"	6,700.
"	278,	"	"	7,000.
"	279,	"	"	7,600.
"	280,	"	"	8,400.
"	281,	"	"	9,200.
"	282,	"	"	5,700.
"	283,	"	"	4,100.
"	316,	"	"	6,600.
"	317,	"	"	6,500.
"	318,	"	"	9,400.
"	319,	"	"	9,300.
"	320,	"	"	9,200.
"	322,	"	"	10,100.
"	323,	"	"	8,000.
"	324,	"	"	7,700.
"	325,	"	"	7,100.
"	326,	"	"	9,400.
"	327,	"	"	7,600.
"	328,	"	"	8,800.
"	329,	"	"	9,700.
"	330,	"	"	13,000.
"	331,	"	"	8,500.
"	332,	"	"	8,500.
"	333,	"	"	12,200.
"	334,	"	"	13,000.
"	335,	"	"	8,000.
"	336,	"	"	6,000.

The superstructure of Genesee street Bridge and the Culvert on Section 306 to be completed by the 1st day of April, 1855, and the remainder of the above work by April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and

Dated at ALBANY, Sept. 13th, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT, } Canal Comm'rs.
CORNELIUS GARDINIER, }
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

ZERAH COLBURN,

ENGINEER AND AGENT

FOR the Design, Construction, Valuation and Purchase of Locomotives and Railroad Machinery.

Offers his services to Railroad Companies in either of these departments, having long experience and the best facilities for all.

As CONSULTING ENGINEER he will advise as to the value or adaptation of any system of motive power, and furnish drawings, estimates and specifications for any arrangement of engine.

As ACTING ENGINEER he will superintend the construction, survey, or reconstruction of any railroad machinery, and guarantee satisfactory results.

As CONTRACTING ENGINEER, having connection with the most reliable and successful manufacturers, he will negotiate for the purchase of Locomotives of the very best construction and proportions. Also Wheels, Tires and Repair Shop Machinery.

Having much experience in Patent Business he will undertake the preparation of Drawings, Specifications, Applications for Patent or Caveat and other papers necessary for inventors. He is able to give material assistance in bringing inventions and improvements in Railroad Machinery into favorable notice.

CHILLED TIRES FOR LOCOMOTIVE DRIVING WHEELS.

Zerah Colburn retains the principal agency for the sale and right of use of this valuable improvement, and will furnish the most substantial guarantees of its Safety, Durability, Ahesion and great Economy.

Office, 3d floor American Railroad Journal Building,
No. 9 Spruce street
New York.

REFERENCES.

The New Jersey Locomotive and Machine Co.
James Jackson, Pres't., Paterson, N. J.
Onas W. Elliott, Vice Pres't., 59 Beaver str., N. Y.
Henry V. Poor, Esq., Editor Railroad Journal, New York.
Geo. D. Phelps, Pres't. Del., Lack and Western Railroad.
Geo. W. Whistler, Vice Pres't. New York & New Haven R.R.
William Raymond Lee, Esq., Boston.
Bush & Lobdell, Wilmington, Del.
Oliver M. Hyde, Esq., Mayor City of Detroit.

NUGENT'S COLLEGEOF
ENGINEERS AND MECHANICS

Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

New York and Erie R. R.

On and after Wednesday, Sept. 20th, and until further notice

PASSENGER TRAINS

will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo.

DUNKIRK EXPRESS, at 6 a. m. for Dunkirk.

MAIL, at 8 1/4 a. m. for Dunkirk and Buffalo, and intermediate stations.

ROCKLAND PASSENGER, at 3 1/2 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAT PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5 1/2 p. m. for Dunkirk and Buffalo.

EMIGRANT, at 6 p. m., for Dunkirk and Buffalo and intermediate Stations.

On Sundays only one Express Train—at 5 1/2 p. m.

These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

For Sale.

A STATIONARY Engine, having cylinders 13 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
jul.14 29 tf.] or 74 Broadway, New York.

Rensselaer Polytechnic Institute.

DESIGNED for the education of Architects and Civil Engineers, including Railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the Annual Register, giving full information respecting the Institute, apply to

R. FRANKLIN GREENE, Director, R. P. I.

32 3m]

Troy, New York.

500 TONS No.1 Glogarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.

99 and 101 John st.

N. B.—The above Iron constantly imported. [32 tf

Buffalo Machinery Depot.

BUFFALO, N. Y.

H. C. BROWN, Supt. J. W. HOOKER, Proprietor.

I AM prepared to furnish and will keep constantly on hand from the best manufacturers a full stock of *Machinists' Tools* for railroad and other shops; such as Engine and Hand Lathes, Large Driver Lathes, Car Wheel Boring Mills, Power and Hand Planers, Drill Presses, Punch and Shears, Axle Lathes, Power Wheel Presses, Bolt Outters, &c.

J. W. HOOKER, Buffalo, N. Y.

Fire! Fire! Fire!

Preserve your books in one of Duryee & Forsyth's celebrated *Fire King* safes. They are perfectly secure and excel in finish.

J. W. HOOKER, Agent, Buffalo.

Railroad Track, Suspension, and Depot Scales, Dormant, and Portable Warehouse Scales, Trucrs, Baggage Barrows, and Manifest Presses.

Buffalo Machinery Depot,

General Agency for Rochester Scale Works.

H. C. BROWN, Supt.

J. W. HOOKER.

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per linear yard. For sale by

THEODORE DEHON,

26 1/2 Broadway,

New York.

Contracts made as above for Rails deliverable at English or American ports at lowest rates. 36 St.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,

Columbus Ga., Sept. 5th 1854. }

SEALED PROPOSALS, will be received by the undersigned at this office until the 1st day of December, for the clearing, Graduation, Track Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 130 miles. The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate Proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work 5 1/2 miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two Rivers will be crossed with the common pile bridging, with Truss Pivot Draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The Country is healthy, with no swamps after leaving the Tensas River; from Mobile to the River (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third (1/3) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common Stock of the Road, and relying upon the earnings of the same, for dividends; the balance (1/3) to be paid in the (.08) per cent. Convertible Bonds of the company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus Ga. Mobile, Ala. or in N. Y. at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding (1/4) the amount of the contract, for the timely and faithful completion of the same.

22 1/2 miles of the Road from Girard west will be open for business the first of November, and 52 miles (9) months thereafter. It is the intention to have the entire line of (245 miles) open for business early in 1855.

8c.37

GEO. S. RONEY.

Port Morris Manufactory.

WESTCHESTER COUNTY, N. Y.

ARE prepared to execute orders for all kinds railroad work and have on hand the approved Railroad Box with the raised Journal also Car Couplings (Lewis' Patent) and Ratchet Wrenches from \$5 to \$10 each.

All orders punctually attended to by addressing the above

M. C. BAKER.

NB. Long Iron Planing done on reasonable terms.

37 6m.

108 Front st., up stairs 1/2

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH;

RICHARD W. TYSON,

No. 25 South Charles str.

Baltimore, July 1st, 1854.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,

RICHARD W. TYSON.

Baltimore, July 1st, 1854.

[33 3m]

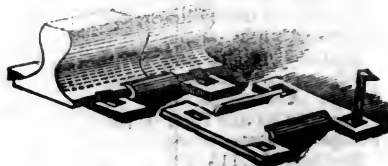
Notice of Copartnership.

MR. PETER MARIE, heretofore of the firm of DECOPPET & CO., has this day formed a copartnership with Mr. RUDOLPH KANZ, (for many years with the banking house of Messrs. L. Von Hoffman & Co.), under the firm of MARIE & KANZ, at No. 27 William street.

Their attention will be devoted to the purchase and sale on Commission of Stocks, Bonds and Foreign Exchange, and to the negotiation of Business Paper.

New York, 1st September, 1854.

36 St.

RAILROAD SPIKES.**WROUGHT IRON
Chairs and Fastenings.**

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.

The best quality of Refined Iron is used, and all orders filled with despatch.

J. HOPKINSON SMITH,

No. 25 South Charles str.

Please direct the name in full.

Baltimore, July 1st, 1854.

[33 tf

**Steam Engine and Blowing
Cylinders for Blast Furnace
for Sale.**

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to

EDW. BECH & KUNHARDT, 62 Beaver St.,

Or, A. TOWAR, Agent Pokeepsie Iron Works, Pokeepsie, N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to Railroad purpose, which will be sold at a reasonable price. For further information, apply to.

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

Or BRIDGES & BRO.,

64 Courtland st., New York,

19 tf

**Machinists' Tools.
SHRIVER & BROTHERS,
Cumberland, Maryland,**

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools.

These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others requiring first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address

SHRIVER & BROTHERS, Fulton Works,

Cumberland, Maryland.

August 19th, 1854

[32 6m

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 39]

SATURDAY, SEPTEMBER 30, 1854.

[WHOLE No. 963, VOL. XXVII.

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

New York and New Haven Railroad.....	609
Sacketts Harbor and Saratoga Railroad.....	612
Improvement of the Locomotive.....	612
New York Coal Roads.....	613
Annual Register of the Polytechnic Institute.....	614
Dilatation of Cast Iron by Successive Heating.....	615
Reform in Railroad Management.....	615
Black River and Utica Railroad.....	615
Rock Island Bridge.....	615
Hartford and New Haven Railroad.....	615
Railroad History.....	617
Fitchburg Railroad.....	618
Erie Railroad.....	620
Sunbury and Erie Railroad.....	621
Boston and New York Central Railroad.....	622
Indianapolis and Peru Railroad.....	622
Alabama and Tennessee Railroad.....	622
Orange and Alexandria Railroad.....	622

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, September 30, 1854.

New York and New Haven Railroad.

Below we give the report of the Directors of the New Haven Company in reference to the recent over-issues of its stock by its late President, Mr. Schuyler, with a legal opinion that the Company are not liable therefor.

The report contains nothing that the public did not know within three days after the fraud was discovered. It merely repeats the statement then put forth by the Directors as to the nature and extents of the frauds, with expressions of astonishment, that a man of the vast integrity and credit which Mr. Schuyler enjoyed could commit them.

The report is characteristic of the parties making it. It is a studious attempt to conceal, if not to suppress facts material to be known. The fraud having been committed, somebody having lost money, the responsibility created is the great matter to be determined. The public wish to know when the over-issues commenced, whether they were entered upon the Books of the Company, and whether the Directors could have discovered them by the exercise of due diligence, before

they reached the enormous amount of \$2,000,000, as it may become a question whether the directors are not liable, if not to the holders of the spurious stock, to the company. It is also important that the sums in which the issues were made should be known, as well as the parties who received them, that the public, or a jury if need be, may judge whether from the relations such parties sustained to Mr. Schuyler, they took with an actual or implied notice of the fraud. Such are some of the questions which the directors should have answered. The public want something more than the re-announcement of the fraud. They want to know all the circumstances attending its commission, as aids toward forming a correct opinion as to the liabilities involved.

The only fact that the directors offer in self vindication is the previous character that Mr. Schuyler enjoyed for "perfect honor and integrity." Judged by their standard, Mr. Schuyler may have been the man described; but with men of another standard he was a very different one. To hold the office of President of a road, and to be privately interested in a contract for its construction, as it is generally believed Mr. Schuyler was, is incompatible with "perfect honor and integrity," and is so regarded by the public, which had pronounced a different judgment from that of the directors long before the final catastrophe. It was well known that Mr. Schuyler's path had been strewn with the fleshless skeletons of the roads with which he had been connected. By sagacious men the fact that Mr. Schuyler had had the control of a road, was considered as a sufficient reason against purchasing its securities. We should like to have the directors point out some monument of his marvellous integrity, and wonderful administrative powers of which they speak so eloquently. We think the history of the New Haven Railroad, with which work he was connected from the outset, well illustrates the degree in which Mr. Schuyler possessed both of these qualities. The road was let in a gross contract; the contractors to do the engineering; both evidences of fraud which can hardly be rebutted. The result was a miserable road at enormous cost. A faulty construction has been the source of a constant outlay to repair and correct the mischief

that had been done, while the general tone of its management has been far below the average standard. The capital account exceeds nearly twice what the actual cost of the road should have been; the balance having gone into the pockets of Schuyler and others. As President and Chief Manager of the road, Mr. Schuyler could not have been interested as contractor, and have made a large sum by so doing without a substitution of his office; just as much so as if the Comptroller of the City should enter into copartnership with contractors upon the streets or public buildings. The offence is not quite so glaring in one case as the other,—only from a vitiated public sentiment. A man who will do this, is not only wanting in integrity, but in a decent regard for his own reputation. A President of a road whose sense of obligation of what he owes to his position and the public, is so weak, that he will secretly prostitute that position to his private advantage, will do a worse act under the pressure of a greater temptation or necessity. The apparent success of Mr. Schuyler, and his reputed great wealth, shielded him from general animadversion. Now that he has fallen, the public tongue is loosed to express only its previous convictions. He was not a man of integrity. He was a versatile plausible man, without sagacity or judgment as his whole career shows. We should like to know one thing which he did that was well done. He owed his influence to the fact of being the pet and favorite of a rich and powerful clique, by which he was advanced to positions of great trust and emolument. We know it to be ungenerous to speak harshly of a fallen man, and would not so freely in the present instance, had we not often in the height of his popularity expressed similar opinions both in the JOURNAL and otherwise.

The report of the directors is accompanied by the opinion of two able lawyers that the Company is not liable on account of the frauds—not for the stock, for the reason that the entire amount authorized had been previously issued—nor for the money received by Mr. Schuyler, for the reason that in selling the spurious stock, and in receiving money for the same, he did not presume to act as agent of the Company. There is no fallacy in this reasoning upon the premises assumed;

and upon similar premises, we took a similar view of the case in an article in the JOURNAL of the 16th of July, immediately after the discovery of the fraud. We are not certain that the opinion then given is not correct. But there is a view of the case which we did not then present, and which is not presented in the above opinion. It is undoubtedly *law*, that an agent can bind his principal only within the scope of his acknowledged duties. But if the principal invests the agent with such powers, and allows him to transact his business in such a manner, that a third party cannot determine between a fraudulent or authorized act, may it not be a question whether the principal be not equally bound by both? It is a legal maxim that a person shall not be relieved from the consequences of his own wrong. Thus if A. B. sell a horse belonging to C. D., to a third party, C. D. standing by, and not protesting against such sale, he is bound by it: not that A. B. was his agent, but that he consented to the wrongful act. The opinion is not alluding to this opposing view of the case, which is not only very obvious, but very hard to answer, must be regarded as *ex parte*; and perhaps might have been directly the reverse, had the lawyers been employed by the other side. It is an argument, not a judgment in the case; and as such, is very proper, if the directors, or the company seek to get rid of liability.

Another fact which may have a bearing upon the case is the high character which the stockholders had previously given of Mr. Schuyler, as testified by his long continuance in office, and by a direct expression of their opinion. We know how resolutions like the one passed in his favor in 1849, are got up, and that they are often a part of the machinery which a designing man uses to accomplish his objects, rather than the unbiassed opinion of those by whom they purport to be offered. The resolution referred to may not have been the act of one-in fifty of the stockholders; yet it must be taken as the opinion of *all*, as bound by the proceedings of a properly constituted meeting. If the stockholders have held Mr. Schuyler up to the public as a man in whom extraordinary confidence was to be placed, are not the public justified in taking their certificate of the good character of their agent without further inquiry? If their acts tended to allay ordinary suspicion and inquiry, are they not to be bound so far as they mislead the public? If Mr. Schuyler had been an agent only recently employed by the company, then the public might have justly been censurable in trusting too credulously to a new man. We make the suggestions for what they are worth without asserting that they are a full answer to the arguments presented on the other side.

It may turn out that the holders of the stock received directly from Mr. Schuyler will be regarded in a different light from purchasers at second, or third hand. As between these, and the holders of the *bona fide* stock, we think the former entitled to the greatest sympathy. We think the *bona fide* stockholders deserve a moderate punishment at least, for the entire indifference which they have manifested to the management of their property. It is most extraordinary, and more inexplicable from the fact, that so many of the *bona fide* stockholders are Connecticut men. We do not believe there was ever another instance in which

a property equal to \$6,000,000 was entrusted to a directory owning only \$20,700 of it. A directory too composed neither of Clintons nor Fultons, but men whose highest ambition is to serve themselves, and who from their immense wealth, and the pressure of their own affairs, would not collectively have given a day of genuine service to the road, at the price of all the stock they held. We mean no other reflection than that men who have no interest in an important work, and who do not expect to give any time or attention to it, have no right to be in its management, and would not, if they possessed the highest moral sensibilities. The object and result of all such *sinecures* is a fraud. Men are constantly importuned, and allow themselves to be placed in influential positions in which they are promised an entire exemption from all labor and care, for the purpose of adding credit to a company or scheme. The public accustomed to confide in such men, in private relations, transfer such confidence to the institutions or projects with which they see them connected, but in the service of which, not one quality which secured this confidence in the outset, is put forth. In other words, men are accustomed to sell or give away their reputations, to aid or oblige a friend. We cannot regard the connection of the directors of the New Haven Company with this road in any other light. The result in this case places such conduct in its true view. Had the directors felt, or exercised, an ordinary interest in the road, we do not think it possible Mr. Schuyler could have committed his fraud. Had he been closely watched, the idea would never have entered into his imagination. The entire immunity he enjoyed was the cause of his fall; and morally the directors are responsible for every cent that has been lost. An ordinary vigilance would have prevented any such loss. By becoming directors they assumed to exercise such vigilance; and by not doing so, they have been guilty of a direct breach of trust.

If stockholders in a road will allow themselves to be fooled and their interests trifled with in the manner that the New Haven stockholders have done, they have no cause of complaint save against themselves. If they will put in as directors, men who have no interest in their road, and who feel none in its success, or management, they must take the consequences. They must have for years seen that they have been most outrageously swindled by the excessive cost of construction, the profits of which must have been pocketed by somebody. If they had not the force, or did not feel sufficient interest to see where the money ostensibly spent in construction went, we do not see why they should be particularly incensed at the last catastrophe, which is only the culmination of numerous smaller ones.

But we have said enough. We will now proceed to the—

REPORT.

The Directors of the New York and New Haven Railroad Company submit to the stockholders the following report, in relation to the issue of fraudulent stock by their late President.

Robert Schuyler was first appointed the President of the company on the 19th day of May, 1846, and by successive and unintermitted elections he has held the office up to the 3d day of July last, when he sent to one of the members of the Board a letter resigning his office. During

that period of eight years, and up to the discovery of his recent frauds, he had sustained the highest reputation for intelligence and integrity, and was particularly distinguished for his experience and skill in the construction and management of railroads. An abundant evidence of this is found in the eagerness with which his services and advice were sought on these subjects, and the numerous lucrative and responsible railroad offices he has held during that time, and the powerful influence he has always exercised in their government.

While President of this company he was of course its chief executive officer, exercising the principal powers of the corporation, enjoying the full confidence of the company and of the Directors, who never had, until the recent discovery, the slightest doubt of his perfect integrity and honor.

As some evidence of the estimation in which Mr. Schuyler was held by the stockholders, we refer to the following resolution, passed unanimously at a meeting of the stockholders held in November, 1849.

"Resolved, That the stockholders have entire confidence in the President and Board of Directors, believing them to have executed the important trust committed to them not only with zeal and fidelity, but with high intelligence."

It is apparent from the repeated and unanimous votes by which Mr. Schuyler has been constantly re-elected, that his conduct as President has met the approbation and confidence of the stockholders.

Mr. Schuyler was also the Transfer Agent of the company from the commencement of its operations. The company being a Connecticut corporation, its principal office was necessarily in that State.

The principal part of its business, however, was transacted in the City of New York; its offices were practically there. Its principal stock account was kept there, and Mr. Schuyler, when acting in that capacity, exercised the office and duty usually intrusted to one of the highest officers of all such corporations.

The provision for the transfer of shares in New York was such as obtained generally in that city, except the greater security that the Transfer Agent was a Director and President of the company, possessing its unlimited confidence and that of its stockholders, and was not a mere clerk or agent employed at a salary. His duties and powers as such were clearly marked out by the By-Laws of the company. No greater guards could have been thrown around the execution of his duties, unless they were such as to imply entire unfitness for any position of trust; and his fall struck the Directors, as it did the community, with profound astonishment.

The large sales of the company's stock had attracted the attention of one or two of the Directors as early as the 29th of June, but no suspicions were entertained by any one of Mr. Schuyler's integrity, or that anything was wrong in the management of the company, until the forenoon of the 3d of July, 1854, when a member of the Board met Mr. Schuyler's legal adviser, on his way, as he said, to deliver a letter to the Board, inclosed in a sealed envelope addressed to another Director, who was then out of town. The bearer of the letter intimated that it contained some information in regard to an over-issue of stock, but declined delivering the letter, and it was not received by the person to whom it was addressed until the next day. The Director with whom this conversation was had took immediate possession of the stock ledger, and with several other Directors spent the 4th of July in examining them. The fraud was then discovered, and notice given of it on the morning of the 5th of July, upon the several bulletins. The following is a copy of the letter:

"NEW YORK, July 3; 1854.

"GENTLEMEN: I beg to resign my seat in the Board of Directors of the New York and New Haven Railroad Company, also the office of President, and the appointment of Transfer Agent of

the company. Your attention to the stock ledger of your company is essential, as you will find there much that is wrong. The details can be furnished you with precision, though I cannot do so. In reference to the connection of these transactions with R. & G. L. Schuyler, I wish to make my solemn assurance that in no way has my brother been concerned in them, nor has he ever known or been informed of them; in fact there was no mode in which he could obtain information except from myself and I have ever been quite as careful to keep him in ignorance as any other person. He could not even have ascertained the facts from our own books and accounts and to those of the New Haven Company in my charge he had no access.

"Your obt servant,

ROBERT SCHUYLER.

"To the Directors of the N. Y. and N. H. R. R.

A notice was also given in the newspapers on the evening of the 5th of July, in these words:

"New York and New Haven Railroad Company.—At a meeting of the Board of the Directors of this company, holden this morning, it has been made apparent, on a hasty examination of the stock books, which have been kept by the late President, Robert Schuyler, as Transfer Agent in New York, that by means of false entries, erasures, and other similar practices, an issue of illegal and fraudulent stock has been made within a few months past, to the amount as nearly as can now be ascertained of nearly twenty thousand shares, or two millions of dollars. A rigid examination will immediately be made, by order of the Directors, of the books and papers and the result, when accurately ascertained, will be made public.

"In the meantime the transfer books are closed, by order of the Board."

"By order of the Board of Directors:

"W. W. BOARDMAN, President, *pro tem.*"

"New York, July 5, 1854."

The Directors also took legal advice as to the duty devolving upon them in the emergency, in pursuance of which they appointed a committee to examine the stock accounts of the company, to ascertain precisely the amount of capital stock then outstanding, and how much of the same had been fraudulently or improperly issued, and make a report as soon as possible. As soon as proper assistance could be procured, the committee entered upon the discharge of their duties, and the result of their investigation is contained in the report herewith submitted. By this it appears that the genuine capital stock of the company consists of 30,000 shares of \$100 each, amounting in all to \$3,000,000. That Mr. Schuyler has issued false certificates, purporting to be certificates of stock to the firm of R. & G. L. Schuyler, of which he was a member, and also has fraudulently issued other like false certificates to other persons whose names appear in the Report, amounting in the whole, between the 18th October, 1853, and the 3d July, 1854, inclusive, to 17,732 shares. Besides which there are outstanding certificates in the name of R. & G. L. Schuyler covering 1,648 shares, and in the name of R. Schell & Co. 160 shares. The stock which these last certificates originally represented has been transferred by R. & G. L. Schuyler and Schell & Co. without surrendering the original certificates, and the persons holding these certificates have no such stock to their credit on the books of the company. Of the fraudulent stock, 9,283 shares now stand upon the books of the company in the names of parties to whom they were transferred and issued by R. & G. L. Schuyler. Of the outstanding certificates in the name of R. & G. L. Schuyler, 872 of the 1,648 shares were issued after they had overdrawn their account, which first occurred October 18, 1853. And those in the name of R. Schell & Co., 160 shares, were all for spurious stock. Much time has been consumed in this investigation, but it could not have been done in a shorter period.—The Directors believe that the results are accurately ascertained, and that the report presents the facts as they now exist.

An exceedingly important question arises from

these facts. Are the holders of these false certificates of shares to be regarded and treated as stockholders of the company? Upon this subject, and the other matters connected with it, the Board submits herewith the opinion of their counsel. They say that no power short of the Legislature of the State of Connecticut, with the assent of the stockholders, can increase the capital stock. And that the fraudulent acts of an officer, so greatly transcending any power conferred upon him, or which the Directors or the company could confer upon him, do not bind or implicate the company in any way.

With these facts and opinions before them, the Directors have called a special meeting of the stockholders, at the earliest moment the By-laws would allow to ask their advice and assistance.

The questions arising are so interesting and important, and involve so great an amount of pecuniary interests, that the Directors, whatever may be their individual views as to the duties and obligations of the company, decline to make any decision, or to express any opinion in regard to them, for independent of any doubt of their power in the premises, and of any validity to be accorded to their determination, whatever they may believe justice and equity to require, they feel themselves concluded, by the opinion already referred to, from taking any direct action upon the subject, and they submit the whole matter to the action of the stockholders.

Upon one point, however, which is in the nature of a preliminary question, and which must be settled before the others can be legally taken up, there appears to be no reason for a difference of opinion. A meeting of the stockholders must be legally constituted. Hence, who are the legal members of the corporation and entitled to vote at its meeting, is an important inquiry, and must be answered before the meeting can be properly organized. The charter describes the members as holders of the shares of the capital stock, and this capital stock it limits to 30,000 shares. It then declares that "each share shall entitle the holder thereof to one vote."

It seems, therefore, that none but the holders of the original 30,000 shares and their successors can be members of the corporation, and authorized to vote at its meetings. The charter and the by-laws of the company direct how the stock shall be transferred, and how a person may, by such transfer, become the successor of an original stockholder. A certificate of stock is only evidence. It is not the stock itself, and if improperly or illegally issued, whatever other effect it may have as against the company, it does not constitute the holder a member of the corporation or entitle him to vote at its meetings. The proceedings of the corporation would be vitiated by the admission of those who are not actual corporators to the privilege of voting; and the Directors, therefore, have been compelled to express the opinion, which they and their counsel entertain, that none but the original stockholders and their legal successors can vote at the contemplated meeting. They do not intend, however, to give or intimate any opinion as to the absolute or equitable rights of those who hold the spurious certificates, but simply for the guidance of the presiding officer in organizing the meeting, and for that purpose only, to determine that only the holders of the original capital stock and their successors, as they appear on the books of the company, and by the investigations already referred to, can be admitted to vote. The Directors also wish it to be distinctly understood, that they do not design to express or intimate any opinion as to the course proper to be pursued by the corporation relative to the fraudulent issue of stock.—That is a question, the determination of which belongs to the stockholders collectively.

The unfortunate defection of Mr. Schuyler induced the Board to institute an immediate and careful examination into the pecuniary affairs of the company. With the assistance of a skillful book-keeper, the accounts of Treasurer have been carefully examined and found to be correct—and

properly vouched for. The Bond account has also been examined, and it is found that for all the Bonds issued by the company the company have received the proper consideration in money, except for a small amount, which were hypothecated as security for a note given to raise funds to meet other Bonds, which note will be paid at maturity and the Bonds returned. With the exception of the fraudulent issue of stock already mentioned the Directors have not been able, upon careful examination, to discover anything wrong, or any attempt at fraud on the part of Mr. Schuyler in the affairs of the company, with the exception of two acceptances of \$10,000 each, purporting to have been drawn by R. & G. L. Schuyler on the company, and accepted by R. Schuyler as President. These were not transactions of the company, and the avails of the drafts were never realized by it—and as the transaction was out of the common course, and he had no authority to accept for the company, or to pledge its credit as security for his firm, the Directors have ordered their Treasurer not to pay them, and will resist their collection if it should be attempted. In view of the great interests involved, and of the probable consequences suspended upon the proceedings of the approaching meeting, the Directors beg leave to urge upon every one entitled to take part in its proceedings to be present, in order that the course which wisdom and justice shall require may be adopted.

By order of the Board of Directors,

WM. W. BOARDMAN, President, *pro tem.*
New York, Sept. 13, 1854.

OPINION OF COUNSEL.

Our opinion has been requested by the New York and New Haven Railroad company, as to their liability for the excessive and unauthorized issue of stock by Robert Schuyler, its late President and Transfer agent in New York.

The facts, as detailed to us, are substantially these:

The company was incorporated by the Legislature of the State of Connecticut, in May, 1844.—The charter contains this clause:

"§ 2 That the capital stock of said company shall be two million of dollars, with the privilege of increasing the same to three million of dollars, and to be divided into shares of one hundred dollars each; which shares shall be deemed personal property, and be transferred in such manner and at such places as the by-laws of said company shall direct."

Immediately after the organization of the company the following rules were adopted by the Board of Directors, under this section, regulating the transfer for its shares:

"The Principal Transfer Office shall be in the city of New Haven, but transfer agencies may be established in the cities of New York and Boston by resolutions of the Board of Directors, and all transfers of stock at any office shall be made under and in compliance with such rules and regulations, and by such instrument of assignment and transfer (which need not be under seal) as may from time to time be made, ordered and appointed by the Board of Directors. Certificates of stock shall be in such form, and issued under such rules and regulations as the Board of Directors may from time to time appoint and direct; but when a certificate of stock has been issued to any stockholder no second or duplicate certificate shall be issued, and no transfer of the stock shall thereafter be made or permitted without the surrender of said certificate, unless the same shall be lost or mislaid, and then only on special resolution of the Board of Directors and in compliance with the rules and regulations, conditions and stipulations, as to the renewal of certificates lost or mislaid, which may be adopted, imposed and required from time to time by the Board of Directors."

Schuyler, being the President of the company, was appointed the Transfer agent in New York; similar agencies being established in New Haven and Boston. Soon afterwards the capital was increased to three millions, as authorized by the section already quoted; the whole of which was

paid in, and scrip certificates issued for the shares to the respective owners. The capital has thus stood at three millions, beyond which it could not be increased without an act of the Legislature of Connecticut, for nearly ten years. In the autumn of 1863, and subsequently, Schuyler, acting as Transfer agent, having blank certificates of stock in his possession, for the purpose of transferring existing shares, when the old certificates should be surrendered, made an illegal issue of certificates, purporting to represent shares in the company, without the knowledge or authority of the Board of Directors, or any member of it; nor prior valid certificate of shares being surrendered.—These illegal certificates were in the same form, and signed in the same manner as the valid certificates, with the name of "R. Schuyler Transfer Agent;" it having been the uniform usage of the company to affix no name to their stock certificates, other than that of their Transfer Agent at the place where the transfer was made. These certificates, to the amount of nearly \$2,000,000, were issued to R. & G. L. Schuyler (a firm in which he was a member,) and to other persons to whom they assigned them, and were used by Schuyler in his own private business, or in that of the firm; chiefly by borrowing money upon them and pledging them as collateral. None of the transactions in these shares were, ostensibly, or really for the benefit of the company; nor in passing them did Schuyler profess to act as the President or Transfer agent of the company, but simply for the firm, as the owner of the shares. Each certificate was for a large number of shares, and those issued to the firm were generally delivered with blank powers of attorney to transfer the stock, signed by Schuyler, in the name of his firm, without being actually transferred on the books.

Upon these facts, we are of opinion,

I. That these certificates of stock are illegal and void, and that they confer upon the holders no rights as stockholders. If the Board of Directors had originally used a like excessive number of shares, their act in so doing would have been illegal and void, and these can stand on no better ground. Indeed, the holders of them are in a much worse condition than the holders of such shares would have been.

II. That the company is not bound to, and that it cannot, lawfully, recognize or adopt them, as representing shares in the company, or as entitling the holders to any of the rights of shareholders. The Board of Directors could not, by any vote or resolution whatever, increase the stock beyond the three millions; their power on that subject was exhausted when they brought it up to that sum, and any effort to go beyond it, would not only have been invalid, but a violation of the charter warranting a forfeiture. It follows as a necessary consequence, that no subordinate agent of the company could do what the Board of Directors itself could not, and that the Board of Directors have no power to ratify or confirm any act which they could not originally perform. The power to admit the holders of these illegal shares as owners of stock, requires not simply their admission as stockholders, but the power to reject and exclude an equal number of shareholders from their rights as such. If the holders of illegal shares are entitled to come in at all, it is as stockholders in a company with a stock of three millions; they received the shares as such and not as shares in a capital of five millions, and their just rights in that event require the *ouster* of an equal number of lawful shares, so as to keep the capital within three million. It is quite obvious that the company have no power to do either of these things.

III. That the unauthorized and illegal act of the Transfer Agent in issuing these certificates to his own firm, and raising money upon them for his and their own use, does not create any debt or any legal obligation against the company. He was only the agent of the company to issue new certificates of stock for the three millions of its lawful capital, whenever certificates previously issued were surrendered. His agency did not ex-

tend, nor could it lawfully extend, to the creation of new shares. No such power had been conferred upon the company, and of course it could not be conferred upon him. He was not empowered to sell or transfer new shares, but simply to transfer the old ones, and all beyond this was a plain excess of power and an obvious illegality. A corporation is never responsible for the unauthorized and unlawful acts of its officers, transcending their corporate powers, though done *colore officii*. To fix the liability, it must appear that the officers were authorized by the charter to do the act, or that it was done *bona fide* in pursuance of a general authority in relation to the subject of it, or that it has been adopted or ratified by the corporation; where it is a matter within the corporate authority.

In the case of a general agent, his acts will be binding on the principal, though he violates his particular instructions, provided the acts done in violation thereof come within the general scope of his authority. But it cannot be said that an act extending beyond the subject, and of course beyond the limits of the agent's authority, can be valid when it also transcends the power and authority of the principal himself, and more especially when in thus transcending the authority of the principal, it is at the same time illegal and against the policy of the law.

IV. It follows from these views, that the Board of Directors has no more authority to recognize the holders of these illegal certificates as creditors of the company for the amount advanced upon them, than it has to admit them to the rights of Stockholders.

The Directors of a Corporation have no power to appropriate its funds, or to give an obligation to pay an illegal claim which is made against it.—This was settled by the Court of Appeals in the case of *Halstead, vs. The Mayor of New York*, (3 Coast. R., 430,) where the Corporation of this city gave its drafts to the Corporation Counsel to pay the costs of defending a suit against some of the Aldermen who had done an act in which the city was not interested, in violation of law, the defense having been assumed by a resolution of the Common Council. It was held that the drafts were void, even in the hands of a third party. If, therefore, the Directors should apply the funds of the company to pay these advances without the consent of the lawful stockholders, they would be liable for misappropriating the company's property, and if they should give the company's bonds for the amount they would be void, and no recovery could be had upon them.

V. That all the holders of the lawful stock should consent, the Board of Directors might recognize holders of the illegal shares as creditors for the sums advanced upon them, and might pay or give the bonds of the company for the amount; so if a like consent was given they might be recognized as stockholders; but in order to do this an act of the Legislature of Connecticut would be necessary, to increase the capital so as to include the whole number of legal and spurious shares, or to reduce the original stock so as to bring it, after adding the spurious shares, within the prescribed limit of three millions. In no other way can this be lawfully done.

WM. CURTIS NOYES,
GEORGE WOOD.

New York, August 9, 1864.

Sackett Harbor and Saratoga Railroad.

At the annual meeting of the stockholders of this road held at the office in Saratoga on the 12th inst., the following gentlemen were elected the directors for the ensuing year:

W. Coventry H. Waddell, Otis Clapp, James M. Marvin, Charles E. Clark, P. Somerville Stewart, Robert John R. Briggs, James Hollister, J. Beckman Finlay, Lyman R. Lyon.

The Chief Engineer reported on the progress of the work of construction, that 1600 men had been employed during the last month and the amount expended was about \$60,000 and that the force was being increased as men could be obtained.

Improvement of the Locomotive.

BY ZERAH COLBURN.

Proportions of the Cylinders, and their Relations to the Boiler.

There are several reasons why a locomotive cylinder should be proportionally small in diameter and long in bore, rather than the reverse. In the engines of William Norris, of Philadelphia, this principle of proportioning the cylinders has been carried out to a considerable extent, and with great success. As, however, its general adoption has not been effected, and as the principle has not been generally discussed, (even if recognized) by locomotive builders, its consideration comes within the scope of the present series of articles.

The advantages of the application of the principle stated may be thus enumerated.

Less relative waste of steam in the steam passages and cylinder ends; by reason of the double circumstance of the less frequent recurrence of the admissions of steam, and the smaller capacity of ports and diminished diameter of cylinder.

Less relative loss of time in changing the motion of the piston, as compared with the duration of the whole stroke.

By allowing of driving wheels of proportionately increased diameter, a given tractive power can be exerted with greater ease of motion; and, probably, by thus increasing the effective value of all the steam used, with greater speed and a consequent actual increase of the tractive power.

The cylinder being smaller in diameter, there is less pressure on the cylinder head; and consequently, with outside connected engines, less tendency to sinuous motion. This tendency arises from the reaction of steam from the pistons upon the cylinder heads; and when the pistons are moving in opposite directions, is exerted to throw the forward end of the engine alternately to each side of the track. This tendency, and its practical effects, have been previously considered.

With a smaller diameter of cylinder, the steam from a given boiler may be worked at a higher pressure; thus allowing the engine to be worked with greater expansive action, and corresponding economy of steam, for a given amount of power.

In practice, a long stroke, even with a correspondingly increased wheel, will start a train quicker, go faster up grade, and control the train in descending, more than the opposite proportion of cylinder.

There is an advantage also in the *fastening* of a long cylinder as compared with a short one; the connection with the frame and smoke-box being made upon a greater extent of surface.

The pistons are lighter and do not wear as much as when they are larger and heavier; and the weight of the cross heads and crank pins, included among the disturbing weights of the engine, is less, and requires less counterbalancing.

The objections to the long cylinder of small bore are comparatively trifling, and have not formed a bar to the use of such cylinders. It is rather the *habit* of making all engines with a stroke of 18 or 20 inches,—a habit confirmed by the former habitual preference for the inside connected engine, with which a long crank-throw would be inconvenient and unsafe.

It should be understood that the most direct method of securing the majority of the advantages of the long stroke is by proportionately enlarging

the driving wheel. Unless for a very level road, the proportion of *three times* the length of stroke for the diameter of wheel is very good for passenger engines. For a generally level road and for fast trains it would be better to depart from this proportion only by retaining a 24 inch stroke and enlarging the driver to 7 feet.

But with the inside connection a long stroke and large wheel, would place the boiler very high, making the engine unsteady; it would cut down the available height for the chimney, and the crank would be perpetually in danger of breakage. Hence, the inside connection, by keeping down the size of the driving wheel, has kept the stroke of 18 or 20 inches in use.

It is of course an obvious principle in the application of steam that the *expenditure of steam* should be considered as the amount used in a given time, and at a given density. Yet, there are frequent cases wherein the allowance of boiler room is based upon the amount of steam used in a given distance, as a mile. New England builders have been deterred from enlarging the cylinders and reducing the size of the drivers of their locomotives, to adapt them to the heavy grades of the eastern roads, partly from an anticipation that it would be difficult to supply sufficient boiler room without crowding the work, or making the engine enormously heavy. They have not recognized the fact that although such an engine might use double the quantity of steam used by their present engines, in going *one mile*, it might be nearly twice as long on the journey, and hence require a boiler of no greater evaporative power per hour. While the volume of steam used per mile in the powerful Winans' engines is *over twice* that used by the standard freight engine of the eastern roads, their boilers are not 30 per cent. larger in heating surface and steam room, and the whole weight of the engine is not above 20 per cent. greater. The New England engines run 20 miles an hour; the Baltimore engines 12. Thus, by sacrificing a little to speed, the Baltimore engines afford double the effective capacity of the New England engines, and with but little increase of the weight of engine or cost of running.

I have talked with eastern men engaged in the superintendence of motive power, who did not believe that the useful effect of their engines could be doubled, even by reduced speed, without doubling the size and weight of the engines. Of course they would not receive such an application of the doctrine of "heavy engines." But the Baltimore and Ohio road carry over 83 feet grades, daily trains of double the weight taken on similar grades by the Western Railroad of Massachusetts.

Yet their engines weigh, in all, but five tons each, more than the eastern engines, and have no greater weight upon any single wheel than have the latter class.

These facts illustrate a useful principle governing the relation between the cylinders and boiler.

It is common at the East to provide exactly the same sized boiler for a given cylinder, whether the engine is to have a $4\frac{1}{2}$ or $5\frac{1}{2}$ feet wheel, and whether it is to go 40 or 15 miles an hour. If anything, the slow engine receives the larger boiler. The builder says "the one engine will go 30 miles with a passenger train, upon one cord of wood, while the other will require a cord every 25

miles running with a freight train." True, but the freight engine is nearly *twice* as long in going 25 miles as the passenger engine is in going 40, and its *hourly* evaporation is consequently but one half, or perhaps *two thirds* as great. The passenger engine burns one cord an hour, while the freight engine with the same sized boiler, burns two-thirds of a cord.

It is an imperfect view of the proportions of boilers that has, along with the preference for the inside connections, kept large driving wheels out of use in New England. No road entering Boston has over $5\frac{1}{2}$ feet driving wheels on any engine. The Western road has but *two* engines having over $5\frac{1}{2}$ feet wheels, which, with one on the Boston and Maine, a few on the Hartford and Springfield and on the Norwich and Worcester, comprise *all* running within the State exceeding the limits above specified. Every one of these engines is outside connected, and three of them are "long stroke." Neglecting the proportions of boiler due to a high wheel and quick speed, it has been found difficult, with the preferences of the builders, to originate power enough to make the large wheel "work."

Although, with a given cylinder, a large wheel develops less volume of steam in going a mile, it is true that to get any benefit from the increased size of wheel, viz: greater speed with a given train, more steam must be used *per hour* and a larger boiler is necessary.

New York as a Manufacturing City.—Our Roads to the Coal Regions.

In any other country, the growth and rank of New York would be remarkable. A city whose simple element of growth is *commerce*, being neither a national nor provincial capital; enjoying neither the collection nor administration of the national revenues; having no natural monopoly of valuable products; and employing no important amount of *productive industry*, to become the greatest and richest city of a continent, is indeed demonstrating a great fact in the philosophy of cities.

New York is an *exchange*, and by no means, to any essential extent, a *workshop*. Drawing no distinctions between the dignity of commerce and that of labor, it is safe to say that the *manufactured materials*, which form a part of our commerce, could not be *produced* here without adding threefold to our population, and largely to our wealth.

It needs no efforts on our part to convince any one of the great influences which manufactures exert upon the communities which conduct them. If New York should acquire the important elements of manufactures, if she should place herself in advantageous connection with raw materials, fuel and food,—manufacturing industry would certainly collect here, and capital would immediately find new and productive employments.

Our present purpose is to consider the channels which are now likely to effect such connections; to indicate their length, physical features, and the progress of their construction; and to exhibit the extent, variety and importance of the manufacturing elements which they are likely to supply to our city.

Scranton, in Luzerne County, which may be considered as the center of the great Northern Coal Basin of Pennsylvania, is within 125 miles of tide water, and 140 miles from New York City.

These distances are by the routes over which the coal of the Lackawanna region will reach us.

From Scranton 61 miles south east, to the crossing of the Delaware River, forms the "Southern Division" of the Delaware, Lackawanna and Western Railroad, one of the most quiet and substantial enterprises among us. This portion of their road is in active construction and is expected to be in operation, and in continuous connection with New York by June 1st, 1855. 25 miles of the rails will be laid before the close of the present season, and the remainder as soon as the frost shall permit in the spring. Scranton being in the center of the Lackawanna Valley, the coal trains will be made up on the summit 18 miles south-east, from whence not only over the remaining distance to the Delaware River, but to New York, the ascending grade will nowhere exceed 22 feet per mile. Returning with empty trains the ascending grade will be 75 feet per mile for 12 miles. Considered with reference to its working capacity, the road has a favorable profile, much more so than would have been inferred by any one from a general knowledge of the country traversed. The route adopted is the result of the most careful examinations, and the favorable grade is obtained by the construction of two tunnels, and of several high embankments and deep cuts.

There is probably no road in the country which will exceed this portion of the Lackawanna and Western Road in solidity and durability. The rail is of 75 and 80 lbs. weight per lineal yard. The sleepers are but 18 inches apart between centers, and the whole road bed is to be ballasted *two feet* in depth with broken stone. The gauge of the track is six feet. Already have the Company purchased or contracted for engines of greater weight and power than are in use on any other roads in the country.

The company are grading their road for a double track. The progress of the work has been rapid considering the nature of the obstacles encountered. The whole line passing through dense forests, and requiring about 2,400,000 cubic yards of earth and 609,000 cubic yards of rock excavation, requires a large force for its construction. By the last report of E. McNeill, Esq., the Company's Chief Engineer, nearly 2,400 men and over 300 horses were then engaged on the work. Such a force, employed in the month of *January*, shows the company's determination to have their work completed at the earliest possible day.

From the crossing of the Delaware River, 18 miles to New Hampton summit, on the New Jersey Central Road, forms the Warren Railroad of New Jersey. This road is under contract to be finished at the same time as the Southern Division of the Lackawanna Road. It preserves the same gauge and ruling grade, and will be of the same substantial construction as the latter work. This portion of the line has two tunnels, and heavy earth and rock work.

From New Hampton Summit the distance to tide water at Elizabetoport is 48 miles, and to Elizabethtown on the New Jersey Railroad, 46 miles. This distance is by the New Jersey Central Railroad now in operation, the ruling grade of which as before stated is but 22 feet for loaded coal trains. An extra rail will be laid on this road to conform with the gauge of the Lackawanna Road.

The Delaware, Lackawanna and Western Railroad Company have a perpetual contract with the Warren and the New Jersey Central Railroad Companies, to carry their coal trains to tide water. The latter company have obligated themselves to lay a second track of six feet gauge, whenever the annual through tonnage of the Lackawanna road shall reach 400,000 tons per annum. The New Jersey Railroad and Transportation Company have also signified their willingness to lay an extra rail upon their road, to carry the wide gauge from Elizabethtown to Jersey City.

In a few months the whole line from the coal fields to tide water will be in active use. The entire line, with a double track, and a heavy equipment—fed by the vast coal measures in the interior, and delivering on the Lackawanna Company's ample grounds at tide water,—will transport 1,500,000 tons per annum.

Contracts for the supply of 500,000 tons per annum have already been made, the freight delivered at Elizabethport being \$2.56 per ton, or 2 cents per ton per mile.

The influences which such a direct and abundant supply of fuel will exert upon our social, commercial and manufacturing interests, cannot be properly estimated. It will effect a most important domestic economy equal in our whole city, to nearly two million dollars per annum. It will save a much greater amount to our steam marine, and thereby to our commerce. It would be enough of a saving in an ocean steamer to reduce the price of an individual passage to Liverpool by as much as \$15.

But, in manufacturing employments, the value of this cheap supply of one of the great mineral products cannot be approximated. It could only be considered by estimating how great a quantity could be supplied. The influence of railroads, in equalizing the price of agricultural products in the interior, has made the sea-board cities able to support manufacturing populations upon such a scale of living, as combined with the facilities of procuring workmen, and the promptness of obtaining and filling orders, and with the saving of transportation, gives the cities an advantage over the interior for many branches of manufactures.

The State of New York abounds in natural productions which form the bases of important manufactures, and which with a supply of fuel, would seek conversion in the city and suburbs of New York. So also does New Jersey. The mineral wealth of these States is of great value. Iron, lead, zinc, limestone, kaolin and other ores and fire-wrought stones and earths, are in immediate or available neighborhood. The vast variety of applications of these materials, to machinery, domestic and marine architecture, railroad superstructure, hardware, stoves and furnaces, fences and paving; to paints, crockery, building materials, glass, chemicals, and for other purposes, show the extent to which they may yet enter into our municipal occupations.

When the great northern coal basin of Pennsylvania is opened to the Delaware River, we shall have the New Jersey Central and Morris and Essex Railroads and the Morris Canal, all ready for the delivery of coal opposite our city. These works intersect extensive portions of the mineral wealth of New Jersey, and will serve to bring in

large quantities of the materials appropriate to manufacturing operations.

It is also probable that the importance will be sometime discovered of building a six-feet gauge road from Paterson, through the Pequannock Valley, to Port Jervis. Such a route, having but one considerable summit, and co-inciding with the general direction from New York City to the Upper Valley of the Delaware, would save full 25 miles of the present length of the Erie Road between Paterson and Port Jervis. It would also develop additional, and very valuable and extensive deposits of minerals; among them the iron and zinc beds of Sussex County.

We have not considered any of the improvements under notice, except with reference to the supply of coal and minerals which they will afford. But apart from this consideration, the New Jersey Central will ultimately become an important trunk road for great North Western, Western and South Western lines of travel. With the Delaware, Lackawanna and Western, the Syracuse and Binghamton, and the Oswego and Syracuse roads, it will form the shortest connection between New York and the Canadas.

With that portion of the Lackawanna Road south of Factoryville, it will open a route through the Upper Valley of the Susquehanna, the shortest to Elmira and Buffalo. With the Sunbury and Erie Road it will make the shortest western connection with Cleveland and Chicago. With a road to Reading, Pa., it will make with the Lebanon Valley, Cumberland Valley, Baltimore and Ohio and Parkersburg roads, the shortest through route to the Ohio River and Cincinnati.

The vigorous prosecution and certain success of the Lackawanna Road will infuse life into all the others mentioned. We shall then witness the advent of a new railroad system, introducing a vast manufacturing element, besides extending our commercial operations and influencing the direction of a large part of our trade and travel with the entire West.

Annual Register of the Rensselaer Polytechnic Institute, 1854.

It is with unusual pleasure that we observe the progress and results of systematic instruction in technical science. The great efforts of modern times are of mind upon matter, and the results of these efforts pervade the entire social organization. The present is in advance of any former period in respect to the cultivation and exercise of the higher powers of the individual; and hence the vast modern appliances for the provision for individual and social wants. It is the practical science and the useful art of modern times which are solving the highest problems of social and political economy; evolving from every material element the greatest useful product with the least physical effort; thus equalizing social conditions, and conferring an inhabitable capacity upon inhabitable areas, far beyond the means of estimation of the theorists of a past age. The great facts of the cultivation and preservation of agricultural products, of the conversion of natural substances into useful objects, and of commercial and social communication, aided by discovery, and invention; by which the means of applying, directing and preserving popular efforts are immensely augmented; all have been more developed and understood within the last one hundred than

in the previous five thousand years. And we cannot estimate the deep influence which these recent conditions will yet have upon our social, political and religious institutions; upon our views and practice of government, our perception and exercise of social and individual rights, and our higher estimation of divine destiny. These are the great moral aspects of our progress and are all certain to bear the impress of the great practical and generalizing spirit of the times.

Where the aims of practical science are so elevated, the seminaries devoted to its cultivation demand recognition and examination.

Included among a few of the institutions of this character, noticed in our last issue, is that known as the "Rensselaer Polytechnic Institute" of Troy, N. Y., and whose establishment is thus set forth in the last Annual Register of the Institute, now before us.

The Rensselaer Polytechnic Institute was founded in 1825, by the late Hon. Stephen Van Rensselaer, as a school of theoretical and practical science. In 1826 it received from the Legislature of the State of New York, its act of incorporation, with those chartered authorities and privileges, usually conveyed to the higher institutions of the State.

In 1849, the Institute was wholly re-organized, and, in its new form, upon the basis of a general Polytechnic Institute. Among the changes then introduced, were, a material enlargement of its course of study, with a proportionate increase of the time allotted to it, and a correspondingly more elevated, and more rigidly held, standard of requirements for the admission of candidates to scholastic honors.

Since its foundation, the Institute has sent forth a considerable number of Graduates, who,—as professors and teachers of the mathematical and physical sciences, as practical chemists and geologists, and as engineers in the various departments of constructive and topographical art,—have contributed to the increase and diffusion of science, as well as to its applications to the business pursuits of life, with a success, to which it is believed, the Institute may refer with becoming confidence and just pride.

The Institute is under the control of a President and Vice President and 16 trustees. The General Director of the Academic department is B. Franklin Greene, Esq. The faculty of the Institute comprises distinct professorships upon the following subjects:

Philosophy of the Mind.
Mechanics, Machines and Construction.
Mathematics, Practical Astronomy and Geodesy.
Physical Geography, and Natural History applied to the Arts.
Practical Geology and Mining.
English Composition and Criticism.
Theoretical, Practical and Technical Chemistry.
Graphics.
French and German Languages.

The course of Instruction, as exhibited in the Register, comprises all the mental and practical operations involved in the subjects taught by the Faculty. The course is based upon an extended system of *Mathematics*, comprising their means of mental discipline with their practical applications to general science and the arts.

The duration of the course is three years, divided in semi-annual sessions of twenty weeks each. The Institute bills are \$35 per session, payable in advance. The entire annual expenses,

necessary for the tuition and support of the student are from \$196 to \$268.

The Register for 1854 contains the names of 104 students, now connected with the Institute, viz:

Students of the third year.....	8
" " " second ".....	19
" " " first ".....	45
" " Preparatory Class.....	32

Total.....104

We are proud of the standing and success of this Institution, and we are certain that its practical value will be still more appreciated and confirmed in the increase of its number of students and the practical results of its tuition.

Dilatation of Cast Iron by Successive Heatings.

We reprint the following article from the September number of the *Plough, Loom and Anvil*.—It is of importance to a large number of our readers, engaged in the construction of machinery, especially so, to those engaged in the making of Boilers, Furnaces and Retorts.

The memoirs of the *Societe Industrielle de Hanovre* contain on this subject a short note, which we here present to our readers:

"The remarkable phenomenon that cast-iron presents after being heated, of not returning, on cooling, to its original dimensions, but of presenting constantly an increase of this volume, and, by consecutive heatings and coolings, of acquiring a permanent volume; larger and larger, was first observed by Prinsep, in 1829. This chemist found that a retort of cast iron, of which the capacity had been measured with care by the weight of mercury it contained, gave the following results. Before even being heated, the retort contained 9.13 cubic feet: and after three successive heatings to the fusing point of silver, the contents was 10.16 cubic inches. The cubic dilatation produced then was 11.28 per cent., or a lineal dilatation of nearly 3.73 per 100. Since this there has been occasion to observe more frequently, and to investigate this property of cast-iron. It has been remarked, in effect, that all grate-bars which sustained a high heat became curved, little by little, that they elongated more and more, until finally they would push out the bars that sustained them.

M. P. W. Brix, in a work he has recently published, entitled *Researches on the Caloric Power of the Principal Combustibles found in Prussia*, has made known some experiments on this subject.—By the aid of numerous measurements, he has found that its permanent length augments after a heating, but that this augmentation was so much the less as the bar had been heated more often, and finally ceased. Thus, a grate-bar of 3.5 feet in length, after three days of a moderate fire, had taken a permanent elongation of 3-16 of an inch, (equal to 0.446 per cent.;) at the end of 17 days, this elongation was 7-16 of an inch, (1.042 per cent.,) and at the end of 30 days had reached 13-16 of an inch, (nearly 2 per cent.,) and did not yet appear to have attained its maximum. Another bar of the same kind, after a long service, had preserved a permanent elongation of 1.25 inches, or nearly 3 per cent. The bars, while in the fire, experience another elongation, which is temporary, and contract as the heat is diminished: and it may hence be concluded with Mr. Brix, that it is proper to give to each new bar a play, longitudinally, of about 1.25 of an inch, or 4 per cent., to allow for this permanent and temporary elongation. In all cases, it is necessary to make it long enough, that when cold it may not fall between the supports, but in general it seems that not sufficient play is given to bars supported in this manner."

NOTE BY TRANSLATOR.—This is a matter very important to be thought of in all cases where cast-iron is submitted to the action of high heat, as furnaces, retorts, boilers, etc., and especially in cases where the cast-iron, in expanding permanently more than the other metal, will give the sur-

face a curved form, and tend to break the rivets, or other parts of the construction, and in certain circumstances might be productive of very inconvenient results. This is very plain to any practical man.

Where the cast-iron part of an engine is rivited to the boiler, as is often the case, the attachments should be made as far as possible, at places not submitted to great changes of temperature; but if this condition cannot be fulfilled, make the attachments in a manner to obviate, as far as possible, the evil referred to. This remark is made, not only with regard to the permanent elongation the cast-iron undergoes, but also with regard to the different degrees of expansion experienced by cast and wrought iron or other metals, by the same increase of temperature. The effects of this are soon noticed in the loosening of joints, warping of surfaces, etc. The intelligent builder with a knowledge of these facts and their extent, can, by the simple laws of common sense, arrange his work properly.

These effects may be noticed in almost every place where cast-iron is submitted to high heats, in retorts, furnaces, etc.: the shoving out of bricks the pushing aside of supports, and neighboring parts, etc.

Reforms in Railroad Management.

A writer in the *Indianapolis Journal* suggests the following subjects for the consideration of the convention of Western Railroad companies, to have been held at Columbus, Sept. 21st. As to the first two sections, it might not be always easy to find the requisite business and semi-professional talent, required for President and Superintendent, combined in the same person. And so of the Masters of Tracks and engine repairs, whose functions belong to two distinct trades; neither of which can be pursued with the tools, training and materials of the other. All the considerations however, merit attention; in or out of convention. The following are the subjects suggested for consideration.

1st. To unite the duties of President and Superintendent of trains, in one person, drawing but one salary.

2d. Let one person act as Superintendent of Tracks, with care of freight trains, and Chief Machinist.

3d. Dismiss all runners, outside agents, and pay no such expenses as they now incur.

4th. Reduce all salaries of the cushion-chair order to a reasonable amount

5th. Prohibit any officer from giving any free-passes, and let such things be done by the Boards in session only.

6th. Publish a monthly account of receipts and expenditures, including a full and honest statement of the names of all the officers and employees, and each person's salary or pay.

7th. Inquire whether Lawyers, and Doctors, and Politicians, are the best qualified persons for Presidents and Superintendents, or, whether the duties require any other qualifications, than mere legal, medical, or political skill?

8th. Increase the price of freight and passage, until it will remunerate the Stockholders.

9th. Obtain from the Legislature, proper laws to make the watering of stock, punishable by fine and imprisonment in the Penitentiary;—and make it a penal offence, for any officer or Director of a railroad company, to hold a vote or proxy, at any election of the company.

Black River and Utica Railroad.

The President of the Black River and Utica Railroad has given notice to the stockholders that as there appears to be serious if not insurmountable objections to a union between that company and the Rome, Clayton and Ogdensburg Railroad, negotiations on the subject have been discontinued. It is now the intention of the Board to press forward in their original undertaking.

Rock Island Bridge.

A correspondent of the *St. Louis Intelligencer* thus speaks of the bridge now building across the Mississippi at Rock Island.

The connection between the Chicago and Rock Island Railroad, and the Mississippi and Missouri Railroad, is made by the "Mississippi Bridge Company."

The slough on the Illinois side of Rock Island is crossed by an embankment and bridge of three spans, each of 150 feet, resting upon their abutments and piers about 40 feet high.

The main channel of the Mississippi river will be crossed by a bridge of five spans each 250 feet; and two spans for the draw bridge, each 119 feet in the clear.

The draw is to rest upon a very large circular pier—surmounted by a turn table of 36 feet diameter, and will be worked by rack and pinions with such facility that the draw can be opened or closed by two men in one and a half minutes.

It is designed to keep the draw constantly opened during the season of navigation, except when the trains are crossing the bridge.

The total length of the bridge across the main channel between abutments is 1,562 feet, (which is nearly equal to the width of the Mississippi river from the St. Louis to the Bloody Island.)

You will perceive there are two spans in the draw, each wide enough for two of the largest class upper Mississippi river boats to pass abreast with safety.

Crib guards will be made extending up and down the river some 400 feet, for the protection of the pier, so that it is impossible for a boat to strike a pier unless done intentionally. The depth of water in the channel at the present and lowest stage through the draw is ten feet.

The abutments and piers on the Illinois side are completed, as also the abutments on the main channel. A large force is now employed on the main piers, and on the 1st instant, we had the pleasure of witnessing the ceremonies of the baptizing the first stone of the first pier of the first railroad bridge across the first of rivers—"the Father of Waters!"

In this connection we would simply observe, that the party engaged in clearing the upper Rapids, have about completed the worst place in the chain, making the channel four hundred feet wide and four feet deep all the way; when previously it was only eighteen to twenty-four inches deep in many parts.

Hartford and New Haven Railroad.

The annual meeting of the Hartford and New Haven Railroad Company was held at Hartford, on Wednesday, when the following statement of the receipts and expenditures for the year was read:

From Passengers.....	\$476,174 34
From Freight.....	243,643 02
From Mails, expresses, rents, &c....	37,834 21
Total.....	\$757,651 61

Repairing roads and bridges.....	\$81,756 20
Wood, coal and oil.....	75,573 66
Materials and labor on engines and cars.....	44,892 45
General expenses, including taxes, insurances, &c.....	54,687 08
Salaries, labor and transportation expenses.....	98,675 67
Lost and damaged goods, gratuities, &c.....	4,539 12
Station repairs.....	9,589 15
Engines and cars paid for.....	16,337 52
Interest on bonds, &c....	52,444 66
Total.....	\$451,447 52

Net receipts.....\$306,447 09

The President, Mr. Charles F. Pond, having declined to receive compensation for his services the past year, a committee was appointed to procure a

service of plate and present to Mr. Pond, in behalf of the company, in acknowledgement of his faithful and efficient services. The old Board of Directors was re-elected. At a subsequent meeting of it Charles F. Pond was re-elected President, and Horatio Fitch, Secretary and Treasurer.

American Railroad Journal.

Saturday, September 30, 1854.

New York and New Haven Railroad REPORT OF THE DIRECTORS—MEETING OF THE STOCK- HOLDERS.

The brief article upon the subject of this Road in our last issue, was written before the announcement of the immediate publication of the report of the directors, upon the Schuyler fraud, and before the meeting of the stockholders, held at the Metropolitan Hotel, on the 21st inst.

The meeting at the Metropolitan Hotel did not come to much. The number of shares of stock owned by the directors, as verbally reported to the meeting, is as follows:

	Genuine.	Spurious.
Wm. W. Boardman, New Haven..	60	—
Jonathan Sturges, New York..	41	50
Morris Ketchum.....	21	—
Ketchum, Rogers & Co.....	—	365
A. Blackstone, New York.....	19	—
Wm. Worthen, New York.....	10	—
J. E. Thayer & Co., Boston.....	5	—
Wm. B. Burrill, Bridgeport.....	45	—
John C. Sanford.....	—	20
Total.....	201	435

The action and sentiment of the meeting will be seen by the following resolutions which were adopted:

Whereas, It has been represented to this meeting, upon the authority of the President of the New York and New Haven Railroad Company, that the aggregate amount of spurious Stock held by the Board of Directors is larger than the genuine Stock held by them, therefore

Resolved, That it is the sense of this meeting that said Directors should resign.

Resolved, That this meeting appoint a committee of five to prepare and publish, in such form as they may deem most expedient, such an expose of the proceedings of said Company, from its incorporation to the present time as shall place within the knowledge of the stockholders such matters of interest to them which may have been transacted by the present or any former Board of Directors,

Resolved, That this meeting, as a matter of right, call upon the Directors to furnish to said Committee, upon request, any and all books, vouchers, contracts, and other papers as may be within the scope and authority of said company.

Resolved, That said committee be requested to recommend such course as may be necessary in order to protect the interests of those holding the genuine stock.

Resolved, That the action of said Committee be reported to an adjourned meeting of the stockholders, to be held at Brewster's Hall, in the city of New Haven, at such time as they shall deem proper, giving due public notice thereof.

Resolved, That this meeting hereby recommend to the Directors of the New York and New Haven Railroad Company, to offer a reward of \$5,000 for the delivery to the proper authorities of ROBERT SCHUYLER, late President of said company.

The meeting was not largely attended, in consequence, probably, of an early general meeting, already notified by the directors.

Vermont Central railroad.

At a meeting of the Board of Directors, George M. Dexter, Esq., of Boston was elected President.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for 50	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	86
Androscoggin and Kennebec..	55	824,363	1,043,540	2,036,140	177,003	80,053	none	82
Kennebec and Portland.....	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	42
Port., Saco and Portsmouth..	51	1,355,500	123,884	1,459,384	208,669	.....	6	94
York and Cumberland.....	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	17
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	105
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	.....	.....	328,782	163,075	5	42
Manchester and Lawrence....	24	717,543	.....	.....	.....	.....	6	70
Nashua and Lowell.....	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord....	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan	26	.....	.....	673,500	.....	.....	none	10
Connecticut and Passumpsic..	61	1,097,600	550,000	1,745,516	.....	.....	none	20
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central.....	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	4
Vermont and Canada.....	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	78
Western Vermont.....	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell.....	28	1,830,000	206,190	2,044,536	434,599	114,098	6	81
Boston and Maine.....	83	4,076,974	150,000	4,111,345	803,024	418,358	8	100
Boston and Providence.....	55	3,160,000	402,326	3,579,411	509,326	226,639	6	77
Boston and Worcester.....	69	4,500,000	590,541	4,850,754	887,219	413,289	7	95
Cape Cod branch.....	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River.....	52	1,591,110	286,363	1,802,244	258,220	102,098	4	62
Eastern	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	61
Fall River	42	1,050,000	6,208	1,050,000	294,183	126,589	8	93
Fitchburg.....	67	3,540,000	191,500	3,716,870	626,659	214,633	6	87
New Bedford and Taunton...	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony	45	1,964,070	295,038	2,293,534	374,897	122,866	none	99
Taunton Branch.....	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts..	77	2,233,929	1,139,615	3,207,818	244,323	13,144	none	11
Worcester and Nashua.....	46	1,140,000	194,445	1,342,533	182,398	81,807	5	52
Western	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	93
Stonington	50	.....	467,700	.....	240,572	110,892	.....	65
Providence and Worcester...	40	1,457,500	300,000	1,791,999	291,417	120,892	6	80
Canal.....	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven....	72	2,350,000	800,000	3,150,000	639,529	294,269	10	119
Housatonic.....	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill..	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven...	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester.....	54	2,121,110	701,600	2,596,488	267,561	116,965	4	45
Buffalo and New York City.. N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progres	.....	.....	none	.....
Buffalo and State Line.....	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F..	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira.....	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.....	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Erie, (New York and Erie)...	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	44
Hudson River.....	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	44
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	33
Long Island.....	95	1,875,148	516,246	2,446,391	205,068	44,070	none	22
New York Central.....	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	.....
Ogdensburgh (Northern).....	118	1,579,969	2,969,760	5,133,534	480,137	195,847	.....	41
Oswego and Syracuse.....	35	350,000	206,000	533,598	92,353	46,072	.....	.....
Plattsburg and Montreal....	23	174,042	131,000	349,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga....	25	610,000	25,000	744,500	213,078	96,737	.....	.....
Rutland and Washington.....	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington....	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland.....	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston.....	39	430,936	700,000	1,043,357	Recently opened.	.....	none	.....
Watertown and Rome.....	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,499	1,388,385	478,413	10	120
Morris and Essex.....	45	1,022,420	128,000	1,220,325	149,941	79,252	7	.....
New Jersey.....	31	2,197,840	476,000	3,245,720	603,942	316,259	10	131
New Jersey Central.....	63	1,679,935	1,500,000	3,195,222	365,833	179,210	7	95
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East.....	40	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster..	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading....	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	78
Philad., Wilmington and Balt.	98	5,000,000	2,399,168	8,067,285	868,038	541,769	5	69

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central.....	Penn. 250	9,768,165	5,000,000	13,600,000	1,943,827	617,625	...	85
Philadelphia and Trenton....	" 30							
Pennsylvania Coal Co.....	" 47							97
Baltimore and Ohio.....	Md. 381	13,118,902	5,677,103	22,254,338	2,083,420	798,193	7	49½
Washington branch.....	" 38	1,650,000		1,650,000	348,622	216,237	8	
Baltimore and Susquehanna....	" 57				413,673	152,536		
Alexandria and Orange.....	Va. 65			In prog.				
Manassas Gap.....	" 27			In prog.				
Petersburgh.....	" 64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville.....	" 73	1,372,324	200,000	In prog.				70
Richmond and Petersburg.....	" 22	685,000		1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.....	" 76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side.....	" 62	1,357,778	640,000	2,106,467	62,762			
Virginia Central.....	" 107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee.....	" 73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.....	" 32	180,000	120,000	416,532	89,776		12	
Wilmington and Raleigh.....	N. C. 161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	
Charlotte and South Carolina..	S. C. 110							
Greenville and Columbia.....	" 140	1,004,231	500,000	In prog.				
South Carolina.....	" 242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester..	"			In prog.				
Georgia Central.....	Ga. 191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia.....	" 211	4,000,000	1,214		934,424	456,468	7½	
Macon and Western.....	" 101	1,014,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee.....	" 71			In prog.	59,590	21,731		
South Western.....	" 50	586,887	150,000	748,525	129,395	71,535	8	
Alabama and Tennessee River..	Ala. 55			In prog.				
Memphis and Charleston.....	" 93	776,259	400,000	In prog.				
Mobile and Ohio.....	" 33	879,868		In prog.				
Montgomery and West Point....	" 88	688,611		1,330,960	173,542	76,079	8	
Southern.....	Miss. 60							
East Tennessee and Georgia..	Tenn. 80	835,000	541,000	In prog.				
Nashville and Chattanooga....	" 125	2,093,814	850,000	In prog.				
Covington and Lexington.....	Ky. 73	1,430,150	900,000	In prog.				63
Frankfort and Lexington.....	" 29	357,218		584,902	87,421	44,250		80
Louisville and Frankfort.....	" 65							
Maysville and Lexington.....	"			In prog.				45
Cleveland and Pittsburgh.....	Ohio. 100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	50
Cleveland and Toledo.....	" 147	2,000,000	1,600,000					70
Cleveland, and Erie.....	" 95							
Cleveland and Columbus.....	" 135	3,027,000	408,200	3,655,000	777,793	483,454	12	104
Columbus, Piqua and Indiana..	" 46			2,000,000				
Columbus and Lake Erie.....	" 61							
Cincinnati, Ham. and Dayton..	" 60	2,100,000	500,000	2,659,653	321,793	200,967		
Cincinnati and Marietta.....	"			In prog.				62
Dayton and Western.....	" 40	310,000	550,000	925,000	Recently opened.			75
Dayton and Michigan.....	" 20			In prog.				
Eaton and Hamilton.....	" 36							56
Greenville and Miami.....	" 31							
Hillsboro.....	" 37			In prog.				
Little Miami.....	" 84	2,668,402	482,000	3,169,733	667,559	352,133	10	
Mansfield and Sandusky.....	"	900,000	1,000,000	1,855,000				
Mad River and Lake Erie.....	" 167	2,387,200	1,767,000	4,110,148	540,518	113,401		77½
Ohio Central.....	" 57			In prog.				79
Ohio and Mississippi.....	"							
Ohio and Pennsylvania.....	" 187	1,750,700	2,450,000		Recently opened.			
Ohio and Indiana.....	"			In prog.				
Scioto and Hocking Valley....	" 44	750,000	300,000		Recently opened.			
Columbus and Xenia.....	" 54	1,291,700	26,000	1,310,062	314,434	168,612	10	
Evansville and Illinois.....	Ind. 31			In prog.	237,506			
Indiana Central.....	"							
Indiana Northern.....	" 131							
Indianapolis and Bellefontaine	" 83				Recently opened.			90
Indianapolis and Cincinnati..	" 90	1,128,486	1,289,000	1,869,932	Recently opened.			
Lafayette and Indianapolis.....	" 62				opened.			
Madison, Indianapolis & Peru..	" 159	2,647,700	1,241,300	2,409,000	516,414	268,075	10	
Terre Haute and Indianapolis..	" 72	632,387	663,100	1,355,019	105,944	71,446	4	
Rock Island and Chicago.....	Ill. 135	2,400,000	4,000,000	4,600,000				
Chicago and Mississippi.....	"							
Illinois Central.....	" 92		500,000	In prog.	473,548	286,152		
Galena and Chicago.....	" 315		3,741,564	7,276,616	1,200,922	586,929	17	90
Michigan Southern and Ind. N. Mich.	" 282		3,977,568	8,618,505	1,145,598	582,816	8	89
Michigan Central.....	" 88		non	In progress	Recently opened.			

Pacific Railroad of Missouri.

At a meeting of the Board of Directors of the Pacific Railroad, held September 13, the following gentlemen were unanimously elected to fill the vacancy existing in the board by the resignations of Messrs. Allen, Brant, and Walsh, viz: Robt. K. Woods, John How and Chas. K. Dickson.

To the Railway Public.

I have in hand, and upon which considerable progress has already been made, a work upon the Railroads and Canada in the United States; and for the purpose of securing general co-operation, and of obtaining the requisite information, the subjoined circular, (to which was added a full statement of the Boston and Worcester Road, to serve as a model of the kind of statement desired from other companies,) has been sent to all the railroad companies in the United States, and to such parties as were supposed to possess valuable information in reference to them. I now publish the circular in the *Journal*, for the purpose of calling renewed attention to it, and again take occasion to solicit the information desired. I also publish in connection with it, a statement in reference to the *Fitchburg Railroad*; and shall hereafter devote a large part of the *Journal* to the weekly publication of similar statements, in reference to other roads, till the work is ready for publication, which is expected to be in the early part of the ensuing year. As the financial year with many of our companies terminates with the *Calendar* year, I am compelled to wait for such report before putting the proposed work to press.

It will confer a great favor upon me, if Railroad Companies will furnish me with prompt replies to the inquiries addressed to them. By so doing, I can first publish in the *Journal* the statements furnished by the more important companies, thus giving ample opportunity for the correction of any mistakes that may occur. In all cases I wish to have the statements prepared, as far as possible by railroad companies, which I wish to make responsible for their correctness, that they may serve as standards to which subsequent reports may be referred. Where companies are unwilling to make out the statements desired, they will oblige me by sending a full set of their reports, with a copy of their charters.

I have also addressed appropriate circulars to the Secretary of State, of each State, for the purpose of obtaining the legislation of each in reference to public improvements.

I shall feel under great obligation to all persons familiar with the history or working of our railroads, for any facts in reference to them, tending to illustrate the object I have in view.

CIRCULAR.

NEW YORK, August 21st, 1854.

I have in preparation a work upon the Railroads and Canals of the United States, and I take the liberty of applying to you for information in reference to the road which you are connected.

I beg leave to refer you to a succeeding page, upon which you will find a brief history of the Boston and Worcester railroad Company, with a statement showing its financial condition at the present time. I desire a statement in reference to your road, similar to the above, varied of course to meet what is peculiar in its charter, history, or condition.

I am forced to make a direct appeal to Railroad Companies, as the only sources, in many cases, of

information. In few of the States only are Railroad Companies required by law to make public reports of the condition of their affairs, and the results of the operation of their roads. It would be impossible therefore to secure that degree of accuracy desirable in a work like the one proposed, without having the several statements corrected and verified by persons whose positions give them access to all the sources of information, and whose identity with their respective roads have made them familiar with their history. Even where I have the reports published by Railroad Companies I prefer such companies should furnish, in the manner requested, the data to form a basis for a statement of their affairs, especially as it may be desirable to state facts which do not appear in any published report.

The annexed statement of the Boston and Worcester Railroad is designed to serve as a sort of model of what I wish to obtain from every company in the United States. The following recapitulation will show what that statement contains, and what I wish to procure in each case.

1st. The title of your company, its directors and officers, the location of its principal office, of its transfer offices, and the date of its annual meeting, or the close of its financial year.

2d. Its chartered privileges, whether contained in the original act of incorporation, or in amendments thereto.

3d. The first estimated cost of the road, with the estimated amount of its income.

4th. The date of commencement of work of construction; also of the completion of the several divisions, or sections and of the whole road.

5th. A statement showing the physical features of the route of your road, with its alignment and grades. Also a statement showing the length of line, maximum and total gradients in either direction, with the length and inclination of the several planes, without going into too great detail.—Also a statement showing the minimum and total curvature; also the gauge of the road.

6th. The pattern and weight of rail used.

7th. The total cost of road when opened for business, and for each succeeding year; also total amount of stock; the yearly mileage; cost per mile; gross receipts; current expenses; net receipts; dividends; receipts from passengers; do. from freight; do. miscellaneous; yearly earnings per mile, and annual per centage of gross and net receipts on the cost of the road.

8th. The total amount of capital authorized by charter, with the amount of paid up capital for each year. Also the amount taken by corporate, or municipal bodies, and how paid; also the amount and nature of the indebtedness of the company, and how secured; the amount of funded debt, when contracted and when and where payable, and whether convertible into the stock of the company; the rate of interest payable on funded and floating debt, and how and where payable; also the contingent debt of the Company, if any.

9th. The rate and amount of dividend paid since the road went into operation; whether the same was paid in cash or stock; also the amount of earnings expended in construction; also whether any portion of the stock, and what amount, has preference in dividends over other, or common stock.

10th. The length of double track; also of sid-

ings; also the plans or measures in progress for the improvement of the road, and whether the same be in good or bad condition, and whether well or poorly equipped: the amount of equipment, or rolling stock on the road, and its value.

11th. What policy or measures have been adopted, if any, to provide a sinking fund for the payment of the indebtedness as it may fall due; also the present amount of sinking fund; also the amount reserved for repairs or equipment, whether of an ordinary or extraordinary character.

12th. The items that make up the construction account classified under appropriate heads.

13th. A synopsis of the last annual report, with a statement showing the character of the business or traffic for the last year; the amount received from passengers; do. from freight; also the number, and receipts from through passenger and freight business, as distinguished from local or way business: also the expense account of each; also the different items that make up the expense account.

14th. The total number of miles run by the trains the past year, classified as freight, passenger and repair trains; also total number of passengers and tons of freight, distinguishing the through, from way or local passengers and freight, carried one mile.

15th. A copy of the balance sheet of your ledger at the date of your last report.

In addition to the above, please add whatever in the case of your own company may be important or desirable to be known.

I shall feel obliged by the communication of any facts illustrating the history, value, position and progress of Railroads other than these with which you may be connected.

When a Railroad is in progress, please describe the route, the means at the command of the company, the estimated cost of the road, the character of the work, the probable time required for its completion, contracts for construction, with such other information as may be necessary to a distinct idea of the object and condition of the company.

In all cases I desire if possible to obtain full sets of reports issued by the several companies: especially copies of their charters.

I am aware that furnishing the information requested will impose a serious burden upon you.—I would not trouble you were it not absolutely necessary to do so to accomplish the object I have in view, which is to present a full, concise, and correct history of the public works of the United States. I wish each company to furnish the data as materials for its history. I hope it may be some compensation for your trouble that it will be the means of presenting before the public a correct and satisfactory statement of the affairs of the company with which you are connected.

The progress of railroads in the United States, and with that of the country, in intelligence, in wealth, and in social comfort, is without parallel. A history of these works is a most interesting chapter in the history of the country, and better than any thing illustrates the force and practical character of our people.

Respectfully soliciting your aid and co-operation, I am very truly,

HENRY V. POOR.

Editor of the American Railroad Journal.

Fitchburg Railroad.

President, Thomas Whittmore; Treasurer, John P. Welch; Superintendent, L. Bigelow.

Annual meeting, last Tuesday in January.

Principal office, and Transfer office, corner of Haverhill and Causeway streets, Boston.

Length of mainline (double track) 50 93-100 miles.

“ “ Branches (single track) 16 85-100 “

Total

67 78-100

CHARTER.

The Fitchburg Railroad Company was incorporated by the Legislature of Massachusetts, March 3d, 1842, and authorized to construct a railroad from a point on the Charlestown Branch Railroad in West Cambridge, through Watertown, Waltham, Weston, Lincoln, Concord, Acton, Boxboro, Littleton, Harvard, Groton, Shirley Lunenburg, Leominster to Fitchburg. The capital stock was fixed at fifteen thousand shares, or one million five hundred thousand dollars. The company were empowered by purchase or lease, to obtain the use of the Charlestown Branch Railroad, (see Charlestown Branch Railroad), for the transportation of passengers and property thereon. The Legislature reserved the right to authorize any other company to enter with any other railroad on the Fitchburg road, and to use the same, or any part thereof; provided, however, that no other corporation shall so enter with any motive power, unless the Fitchburg company shall refuse to draw over their road, or any part of it, the cars of any other railroad which may be authorized to enter, as above stated. The Legislature also reserved the right to reduce, from time to time, after the expiration of five years from the opening of the road, the rate of tolls and profits, but not without the consent of the corporation below a rate that would produce at least ten per cent. per annum. Subsequent Acts, passed 1845—1853, authorized the Fitchburg company to subscribe \$400,000 to the stock of the Vermont and Massachusetts Railroad; (which subscription, however, was never made,) to succeed to all the powers &c., of the Charlestown Branch Railroad Company; to accept the charter of the Watertown Branch Railroad; to locate and construct the Lancaster and Sterling Branch; to purchase the Harvard Branch; to accept and hold the franchise and property of the Waltham and Newton Branch; to accept the charter and build the road of the Waltham and Watertown Branch Railroad Company; to extend the same into Boston; and for these and other purposes, to increase the amount of their capital stock, to the sum of four millions of dollars.

CONSTRUCTION.

The building of the road was commenced May 20th, 1843. It was opened to Waltham, 10 miles, Dec. 20th, 1843; to Concord, 20 miles, June 17th, 1844; to Acton, 27 miles, Oct. 1st, 1844; to Shirley Village, 39¼ miles, from Boston, Dec. 30th, 1844; to Fitchburg, March 5th, 1845; the length of the road from Block Island in West Cambridge to Fitchburg being 44 23-100 miles.

According to contract, and before the purchase thereof in 1846, the Fitchburg company used the track or the road-bed of the Charlestown Branch Railroad. Until 1848 the eastern terminus, stations &c., were near the Warren Bridge in Charlestown. In 1848 the road was extended into Boston; the freight depots, engine houses &c., remain-

ing at Charlestown. The laying of a double track was commenced in the year 1845, and completed the entire length of the main road in November, 1849.

PHYSICAL FEATURES OF THE ROAD.

The Fitchburg Railroad runs in a western and North-western direction towards the northern boundary of Massachusetts through some of the most flourishing towns in the State and in a direction to obtain by its connection with other roads, travel and business from Western New Hampshire, Southern Vermont, and the Valley of the Connecticut. It is thoroughly built, with T rail and amply equipped. Its principal characteristics are as follows:

Length of double main track.... 50 93-100 miles.
Length of branches owned by the company—single track..... 16 85-100 "
Aggregate length of sidings and other tracks..... 17 4-10 "
Weight of rail, per yard, main road 56 to 60 lbs.
" " " " in branch roads (Lancaster and Sterling Branch excepted which is 49 lbs. 56 lbs.)

Maximum grade in main road upon four different planes 40 ft. — 5 12-100 miles in the aggregate.

Total rise in the road going West, 739½. Do. going East 313¼ feet.

Length of shortest radius 818 feet. Length of shortest curve 500 feet.

Total degrees of curvature in main road..... 1 694½°

Total length of straight line in main road..... 34 67-100 miles

Wooden truss bridges..... 490 feet.

Other wooden bridges..... 7 376 "

Way stations on main road and Branches..... 27

Flag stations on main road and Branches..... 20

The branches owned or leased and operated by the Fitchburg Company are:

	Miles.	Cost.
Watertown branch (including Waltham and Watertown and ice tracks).....	7	85-100—\$208,243 66
Lancaster and Sterling, (to Feltonville).....	9	— 142,839 30
Lexington and West Cambridge—leased.....	6½—	
Peterboro and Shirley, (to Mason Village)—leased..	23	

CHARACTER OF BUSINESS &c.

The Fitchburg Road is a trunk road receiving passengers and freight from several other roads that enter it at Fitchburg; it also enjoys a large way business, and has in Charleston, direct access to tide water and the Harbor, where ships of the largest size can float at low water. Of the kinds of freight transported, are large quantities of ice, from Fresh, Spy and other ponds, bricks, woods en ware, wood, cattle, and all kinds of western produce. The connections of this Road are very broad, reaching north to the Canadas, and West to the great lakes. It draws freight also from the whole line of northern Massachusetts, from the entire length of Vermont, and from all the South western portion of New Hampshire.

THE FINANCIAL CONDITION.

According to report for the year ending Nov. 30, 1853, the capital and debt were as follows: Capital Stock paid in \$3,540,000—with the right to issue 4,600 additional shares; making the authorized capital \$4,000,000. Funded debt \$100,000. Floating debt \$91,500. Total dividend (6 per

cent.) \$212,400 00. Total surplus \$159,836 74, up to Aug. 1854.

EQUIPMENT, 1853.

Locomotives... 27.
Passenger cars 30.
Freight cars... 176 eight-wheel, 218 four wheel = 394
Baggage cars. 3 " " " " = 11
Gravel cars... 36.

LEASED ROADS.

The Fitchburg Company, in their lease of the Peterboro and Shirley Road agree to pay 7 per cent. annually upon its cost. For operating the Lexington and West Cambridge Railroad, the Fitchburg receives \$10,000 per annum 30 per cent. and balance of the receipts of the former.

Statement showing the Cost; Mileage; Cost per mile; Gross Receipts; current expenses; net receipts; rate of Dividend; Receipts from Passengers; Receipts from Freight; Miscellaneous; Earnings per mile; per centage of Gross Earnings; Do. of net Earnings, of the Fitchburg Railroad from the date of its completion to the present time.

	1853	1852	1851	1850	1849	1848	1847	1846	1845
Cost of Road and Equipment.	\$1,477,477	\$1,875,318	\$2,406,723	\$2,945,630	\$3,445,791	\$3,662,282	\$3,612,486	\$3,633,673	\$3,716,870
Length in Miles.	61	61	64	69	69	69	69	69	69
Cost &c., per Mile.	\$24,388	\$30,743	\$37,448	\$42,835	\$50,113	\$53,076	\$52,356	\$52,658	\$53,861
Gross Receipts.	\$208,996	\$286,645	\$390,736	\$486,265	\$498,060	\$516,607	\$516,012	\$516,574	\$526,659
Current Expenses.	\$78,333	\$117,447	\$161,433	\$200,219	\$256,160	\$257,083	\$310,376	\$341,787	\$412,026
Net Receipts.	\$129,662	\$169,197	\$229,303	\$286,046	\$241,900	\$259,524	\$205,636	\$274,787	\$214,633
Dividend.	4	10	10	9½	8	8	8	6	6
Receipts from Passengers.	\$100,817	\$128,737	\$156,090	\$208,627	\$220,198	\$218,067	\$262,858	\$240,713	\$253,370
Receipts from Freight.	\$99,996	\$151,806	\$196,627	\$260,666	\$262,161	\$262,161	\$262,161	\$311,778	\$336,798
Miscellaneous.	\$3,182	\$6,101	\$7,368	\$5,999	\$8,366	\$8,366	\$8,366	\$8,480	\$7,977
Earnings per Miles.	\$3,999	\$5,620	\$7,368	\$8,241	\$8,366	\$8,366	\$8,366	\$8,480	\$9,249
Per cent. Gross Earnings.	13	16½	16½	16½	16½	16½	16½	16½	17
Per cent. Net Earnings.	8½	9	9½	9½	9½	9½	9½	9½	9½

The increase of construction account for nine years has been equal to 150 per cent.; gross earnings over 300 per cent.; expenses, 500 per cent.

net receipts, 75 per cent. The total earnings have been 67 per cent.; dividends, 69½ per cent.; average rate of dividends 7 72-100 per. cent.; average earnings 7 44-100.

*The returns this year are for 11 months only.

NOTE.—The entire road was not open during the whole of 1845. In the dividends, interest paid on assessments (\$60,615) in 1845, on new stock (\$10,094) in 1847, interest paid (\$11,008) in 1848, interest paid (\$25,700) in 1849, are not included.

ABSTRACT FROM THE ANNUAL REPORT FOR THE YEAR ENDING NOV. 30th, 1853.

The earnings of the company, \$626,659 73 were derived from the following sources viz:

From passengers on the main road and branches owned or leased.—\$192,670 36; from passengers to and from other roads \$89,212 85; from freight on main road and branches, owned by the company \$141,380 43; from freight to and from other connecting roads \$195,418 14; from mails \$5,478 66; from rents &c., \$2,499 29. Total income \$626,659 73.

The expenditures for working and repairing the road and other expenses were:

1st *Maintenance of way*.—for repairs of road \$44,532 86; repairs of bridges \$7,277 78; renewals and laying down of iron \$17,743 26; removal of ice and snow \$782,17; repairs of gates, fences for signal men &c., \$1,799 26; wages of switch, signal and watchmen \$15,148 72. Total \$87,284 05.

2d *Motive power &c.*—For repairs of locomotives \$20,834 06; new locomotives \$15,305 66; repairs of passenger cars \$8,877 08; new passenger cars \$4,596 84; repairs of merchandize cars \$7,979 94; new merchandize cars \$14,204 56; repairs of gravel and other cars \$499,35. Total \$72,247 49.

3d *Miscellaneous*.—For wood for engines \$77,112 92; coal \$3,296 70; oil 98,020 98; waste &c. for cleaning \$1,323 54; salaries wages and incidentals in passenger department \$46,287 79; ditto in freight department \$65,188 23; gratuities and damages \$3,030 29; taxes and insurance \$8,106-32; repairs, fixtures and furniture of buildings &c. \$6,603 46; interest \$3,911 97; rent of Peterboro and Shirley Road \$19,047 82; salaries of President &c. and other expenses not included in above items \$9,514 51. Total expenditures \$412,026 07.

The number of miles run was: by passenger trains 286,523; by freight trains 155,119; by other trains 19,957. Total 461,599.

Number of passengers carried 1,269,675: number ditto one mile, 17,314,206. Number of tons of merchandize carried 430,606; do. do. one mile 12,180,140. Number of passengers carried one mile, to and from other roads 6,711,912; number of tons ditto 8,124,446.

The proportion of receipts from local traffic to that derived from other roads was as follows:—Passengers on main road and branches \$192,670-36; to and from other roads viz: Vt. and Mass. Cheshire, Worcester and Nashua, Stony Brook, Harvard Branch, Peterboro and Shirley \$89,212-85. Freight on main road and branches \$141,380-43; to and from other roads viz: those just mentioned (with exception of Harvard Branch) and Fitchburg and Worcester \$195,418 14.

The amounts expended in the several departments of construction are as follows, viz:

Graduation and masonry \$741,048 35; wooden bridges \$173,682 64; superstructure, including iron, \$1,064,405 74; stations buildings and fixtures \$542,109 30; land, land damages, and fences \$716,871 15; engineering \$49,188 28. Total \$3,287,305 46. Equipment; locomotives \$205,268 12; passenger and baggage cars \$52,150 20; merchandise cars \$169,149 32. Total \$429,564 64. DR.

Trial Balance. Nov. 30th, 1854.

Graduation and Masonry.....	741,048 35
Wooden Bridges.....	173,682 64
Superstructure.....	1,064,405 74
Stations, Buildings and Fixtures...	542,109 30
Land, Land Damages &c.....	716,871 15
Locomotives.....	205,268 12
Passenger and Baggage Cars.....	52,150 20
Merchandise Cars.....	169,149 32
Engineering.....	49,188 28
Real Estate.....	27,669 66
Notes Receivable.....	72,976 93
Freight due and uncollected.....	20,547 01
Stock "materials for repairs".....	28,893 89
Wood.....	26,440 00
Cash.....	20,372 86
Sundry Accounts.....	4,129 41

\$3,917,899 83

CR.

Capital Stock.....	3,540,000 00
Notes Payable.....	191,500 00
Contingent Fund.....	51,510 56
Profit and Loss.....	107,908 66
Unclaimed Dividends.....	2,757 00
Due Connecting Roads.....	24,223 61

\$3,917,899 83

Erie Railroad.

Subjoined, our readers will find a communication addressed to the Directors of the Erie Railroad to which we solicit attention.

We are happy to state our conviction that the Erie Railroad Company has passed its weakest point, and that its course for the future will be one of improvement in the management of the road and its finances, as well as in popular estimation. In the latter particular we are satisfied that the road was never so strong as at the present instant. As its merits were originally taken for granted, so when it began to lose popularity, people became impressed with an idea of its worthlessness with almost equal facility. The recent crisis consequently forced our leading men, almost for the first time, to make the road, its condition, management and prospects, a subject of careful inquiry and investigation. The result has been that a well grounded conviction of the merits of the road has taken place of a mere assumption of success which led our people to embark in it in the outset, and of distrust, when its merits began to be doubted. The Erie consequently never occupied so strong a ground, nor had so many true friends as at the present moment, and really never had so bright a future before it.

With a firm conviction of its value there appears to be a disposition to place such men in its direction as will bring to it the greatest amount of strength, both financial and administrative. We hope to see a board at the ensuing election that shall secure the confidence of every person holding a share of its stock, or a bond, wherever such holder may be. As a large amount of bonds are held in Europe, we suggest such bondholders should be properly represented in the direction. We are satisfied that this may be so constituted as to se-

cure to the company confidence in its management. A road, the earnings of which are 15 per cent. gross upon its cost, and which are increasing at the rate of 20 per cent. annually, has in it abundant elements of success. We do not think that in England, where the earnings of their leading lines hardly equal eight per cent., such a road as the Erie would be despaired of; nor in this country, in fact, as soon as our people come to their senses.

There have been some unusual causes for the extraordinary decline which has been recently suffered. In the first place nearly the whole floating debt owned by the company fell due in August and September; a blunder for which the present directors are not chiefly censurable. In providing for this debt, the company were driven to seek the help of parties whose real object, as subsequently disclosed, was to cripple and embarrass the company, instead of aiding it. There is no doubt we presume the person who endorsed the company's paper to the largest amount, and to whom a chattel mortgage was executed, did what he could to weaken public confidence in the road, and even boasted that only a few months would elapse before "he and the first mortgagers would have the road!" Such is an evidence of the public spirit which actuates one of our richest citizens. Thank Heaven, a basis of confidence is secured in public estimation which will place the Erie Road beyond the reach, or influence, of such sordid and grasping *Shylocks*.

We urge upon the company to take advantage of the favorable state of feeling which prevails, by adopting some measures for the liquidation of the Income bonds, or for meeting the future liabilities of the company as shall render impossible the recurrence of a crisis similar to what the company has just gone through. A permanent improvement either in the stocks or bonds cannot be relied upon till this is accomplished. With a competent system for the management of the road and its finances, Erie bonds might immediately be made one of the most popular securities in the country.

(For the American Railroad Journal.)

Erie Railroad.

To the President and Board of Directors of the }
New York and Erie R. R. Co. }

GENTLEMEN—We have such a vivid perception of the rocks and shoals amid which it is your heavy task to pilot the Company's valuable freight, and so strong and clear an opinion not only of the dangerous scheme of navigation which has brought the Company where it is, but of the principles by which alone with any reasonable certainty the ship is to be put in trim for foul weather as well as fine, and to be absolutely insured against shipwreck, that we cannot forbear, at all risk of being deemed intrusive or importunate, to press upon you our views of the present evils, and our notions of the proper remedy. We have no interest to serve, but what is yours also, so that we hope we may not be deemed intrusive; we have no objection to be thought importunate, as we feel strongly that something wants doing very much more vigorous than we can see to be even thought of, and we are therefore very earnest and urgent indeed.

The principle adopted by railway companies is general, both here and in America of keeping per-

manently on foot a considerable bonded debt, is a very delicate one in application, and, as you must have already found out, will not bear overstraining. There is a class of investors who either from necessity (as trustees, &c.), or from choice (as quiet, wary unenterprising people) desire two things in their security, 1st, safe interest,—2nd, a return of their specific principal at a future day; but there is a second and much larger class who are content with that which the great bulk of investments *must be*, viz: annual income, be it safe or be it speculative, without any right to a specific return of principal.

Of this latter sort are nearly all the national debts of Europe (if they engaged to repay the principal the Governments would just smart for it, and at last be bankrupt). Of this latter class is made up the great substratum of all the works of public companies. It is not very difficult to prove in theory that a company having actually sunk its money in works and having no source except from revenue from which to pay off loans, ought not to have any loans except what are arranged to be so paid, but in practice it may be found safe and advantageous to keep on foot a moderate debt, but the *safety* and *advantage* are indispensable elements. The amount of debt ought to be kept so low as to avoid all chance of embarrassment, and the terms given ought to be such a moderation in the rate of interest as to recompense the company for its responsibility in undertaking, on a given day, at all risk of the money market, to reimburse a specific principal. Now let us ask how the Erie Company have kept these two principles in view. The indebtedness is to the capital stock as 5 to 2, in England the invariable rule is not to exceed 1 to 3. The consequence is that though the revenue is ample to cover the interest, it is public gossip and scandal that the Company is always in hot water—acceptances pressing on the market—temporary debts falling due, masses of bonded debt looming at various dates, some near, some far off—heavy interest paid on the former, and ruinous discounts submitted to on the latter—the evil day is always being staved off—the pressure is got over only to come on again. It is a mere question of time when the accumulated bribes and penalties required by such a system will eat up the \$10,000,000 of capital stock and make the indebtedness equal to the whole actual *bona fide* cost of the company's property. A very giant of a company must sink under twenty years of such process unless he rouse himself and say "It is enough—I will grapple with this bloodsucking system. I have a handsome income and will husband it till the money lenders become my suppliants instead of worrying me and bullying me while a clique of speculators make footballs of my bonds and pour contempt on my property."

As to the advantage of the heavy debt system it needs little arguing. No doubt some small advantage is at least generally secured by the sale of a bond for say \$1,000 at seven per cent. over the sale of a perpetual annuity of \$70, *provided the bond be of the first order*. In England this difference may be on an average equal to one-quarter per cent. per annum; but in times of tight money, it is just the reverse, the well secured annuity (or preference stock) will sell to pay 4½ per cent. when the Company are giving 5 per

cent. and a commission for money on bonds. In fact our preference stocks, standing in order between the bonds and the common or ordinary share capital, have become a very popular and favorite security; and so most distinctly they would become in America, if the companies would have the energy to adopt and gradually work into practice the following system: 1st, a bonded debt of not more than one-third of the whole outlay of the Company, (say in the proportion of 1 of debt to 2 of preference stock and ordinary stock together); 2nd, preference stock not exceeding another third part; 3d, ordinary stock.

If the Erie Company could attain this position, such bonds would be first class, and would require no bribes nor discounts for their renewal, the preference stock would become very popular in England and we think at home also; and the ordinary stock would assume a very different standing by being set free from the fear of embarrassment and bankruptcy from the pressure of inferior bonds, floating debt, &c., &c., and by the energies of the Directors being left free to the one great duty of developing the revenue of the Company instead of being ever on the rack with the duties of complex financiering, duties which, we dare say, they discharge with great diligence and much anxiety, and in many cases with personal responsibility. What we want to urge is that with a little vigour all this may be put an end to entirely.

We, therefore, urge you, gentlemen, to lay all this state of affairs explicitly and candidly before your stockholders. Lay before them some scheme for getting rid of all that debt which now keeps the Company in hot water, and depresses both bonds and shares in the market, and makes the income of the shares entirely unreliable. Call them together and get their sanction to such a scheme: go for legislative authority if needful, and put the scheme to work. Our plan is as follows. It is the result of long deliberation, with as full a knowledge of the Company's affairs as we can get on this side the water.

Procure legislative authority to issue a seven per cent. preference capital, equal to your ordinary stock, say \$10,500,000 and power to pay it in lieu of cash as dividends on ordinary stock. The proceeds of this preference stock to be applied solely in paying off debts or buying up bonds in the market. This stock not to be sold under par, and the interest to be paid with sacred regularity.

The permanent ultimate debt of the Company to be fixed at \$13,000,000, the total of the mortgages; the total capital would thus be \$34,000,000, or you might have it \$36,000,000 by enlarging the ordinary shares and preference stock to \$11,000,000 each. Any debt beyond this to be extinguished, and any extra outlay needed, to be provided out of revenue.

We suppose new the bonds debts &c. are about \$25,000,000, interest \$1,750,000; the clear revenue even now cannot be less than \$2,500,000, and we cannot be wrong in saying that if the board could coolly attend to it, it would be immediately \$2,750,000, per annum. This leaves \$1,000,000 annually clear to get the company out of its difficulties, but say \$900,000. Set aside \$150,000 as a reserve fund for extra works extinguishing debts, &c., &c., and then systematically for a series of years use the balance in redeeming the company's debt and non-mortgage bonds, call these at

present \$11,000,000, and even assume that the net revenue will not further increase, and without touching the \$150,000. annual reserve fund, the whole would be redeemed in fifteen years; but taking into account the discounts at which bonds might be picked up at suitable opportunities of selling the preference stock at par and the probable large increase of net revenue, possibly the whole thing might be done in ten or a dozen years; during the whole of which time the only privation of the old shareholders would be a very regular, full and close division of profits in the shape of a prime security (instead of irregular unreliable dividends in cash) but with abundant compensation and advantages on every other ground.

At present we cannot recommend the shares to our friends, but with such a change as this, and the certainty that time would clear off old embarrassments we could recommend them very cordially, and no doubt should buy very largely.

Let this plan be vigorously put in force, and we will guarantee that all Erie Railroad securities will at once take a much higher stand and you will set a high example of reform for all other companies to follow; and a seat at the Erie Board will be a pleasant place for a right minded man of business to sit at, instead of being what you must find it now a place of harassing and tormenting anxiety.

We are, Gentlemen

Your most obedient servants
(signed) HESELTINE & POWELL.

LONDON, September 1st, 1854.

Sunbury and Erie Railroad.

This company appears to have got into trouble with the City Council of Philadelphia, which threatens to embarrass its operation and to postpone the construction of its road.

The Sunbury and Erie Railroad has been a prominent scheme in Pennsylvania almost from the date of the earliest railroad, but without being able to command the means for its construction. There being no strength upon its route, the assumed importance of the road to the trade of Philadelphia has never been sufficiently felt to induce her citizens to undertake its construction. It consequently remained in abeyance till the recent railroad mania caught hold of that city, under the influence of which her council voted to subscribe \$2,000,000 to the stock of the road, provided an equal amount of other subscriptions could be procured. These were nominally obtained, and upon the faith of them the city subscriptions were made.

The conditions precedent to the city subscription were as stated, with an additional one, that upon the outside stock, 10 per cent. in cash should be paid. These conditions were virtually complied with. It was of course supposed, that the payments upon the city subscription, and those made by other parties, would proceed *pari passu*. But as usual in such cases, the subscriptions made to secure that of the city, turn out to have been made (with one or two exceptions, which were subsequently released by the company,) by parties unable to respond; and the company, pressed for money, have succeeded in obtaining about \$1,250,000 from the city, while only one instalment has been paid by the other stock-

holders. These facts coming to light, the City Council took the matter in hand, and report among other thing, the facts stated. This report and the proceedings of the company have given rise to a great deal of angry newspaper and personal controversy in Philadelphia, and threatens as stated, to upset the road altogether.

The result is a necessary consequence of the unnatural alliance that had been formed. Private enterprise refused to take up the project. It could not see its way clear to save the money to be put into it. But the people of Philadelphia were persuaded to do collectively, what they would not do individually. They voted to lend their credit to the road while as individuals they would not take a penny of its stock.

To make up the necessary balance, resort was consequently had to parties who had nothing to invest; operators, who subscribed the requisite amount, not as an investment but as a means of making money out of the city and the company. With much ado they pay up the first instalment which gave the company the keys to the city treasury, since which not a penny has been received from any other source.

We are not surprised at the result. A different one was hardly possible. If a city like Philadelphia expects to find itself a match for such men as Mr. Crane and his associates, they are much mistaken. The result shows that they were no match. It is always so. This is the reason why we object to having such a city as Philadelphia subscribe in her corporate capacity to railroads. We lay it down as a cardinal principle that no road which does not promise to pay on its cost should be built, and when the citizens of a town of 500,000 people see no inducement in a proposed road, neither in the income nor business to be derived from it, it is conclusive evidence to our minds that the city should not undertake to do what private enterprise, and private interest will not. We are opposed to all such sneaking ways of avoiding responsibility. There is a plenty of money in Philadelphia. If her merchants believe the road would give her the trade of the Lake, they would not hesitate an instant to build it; or if believing so, they will not build it, they ought not to have it.

The untoward result created not a little indignation on the part of the city press through which alone the public sentiment of the city is audible to us; but without good cause we think. The City Council voted and paid away its securities willingly and freely. It consented to go into copartnership with Mr. Crane and his associates, a man whom the report referred states had not credit for a dollar. Such men never expect to pay a dollar in such transactions. They expect to make through a contract for construction, or by some slight of hand, a sum equal to that which they are called upon to pay; so that let a city like Philadelphia agree to furnish one-half of the cost of a road, and ten to one, it will furnish the whole. Operators who are up to sharp practice, would not only secure such a result with ease, but will often do better. When a city goes into copartnership with such men, they must not complain at being overreached; neither have they a right to turn savagely upon the company's officers, as we see they have upon Mr. Cooper, the President, for not doing things in that regular and

formal manner expected from a person when his pockets are stuffed with cash. The company expected to get the road by giving \$2,000,000. That was for a problem set Mr. Cooper to solve. He could not build it for that sum though he appears to have tried hard to do so; and in his efforts may have done some indiscrete things, and exposed himself to censure.

Perhaps there is not much wisdom in telling the Philadelphia people that nobody so much to blame in the transaction as themselves. If they will not put their own money into the road, we should like to know upon what ground they expect *strangers* to do so. The very fact that they had to go out of the State for subscriptions by which to attach the liability of the city shows the object with which such subscriptions were made, which was to make money *out* of the road instead of building it. Men of sense will not put themselves on a par with a professed and unscrupulous "operator," and that a city should do so, shows it to be as much wanting in *sense*, as such corporations we supposed to be in *conscience*.

Another evidence of the profound wisdom of municipal bodies is to be found in the motive that led to a cancelling of the lease of the lower part of the Sunbury and Erie Railroad to the Catawissa Company. The former being in want of money before the city subscriptions could be reached, applied to the Catawissa Company for aid by an endorsement of the bonds of the former, and as a consideration therefor, executed a lease of a portion of its road as before stated. But the Catawissa Road has an ugly look toward *New York*, where we believe it is controlled. In the opinion of the sage legislators of Philadelphia it was not safe to leave commerce to determine its own routes to market. Almost the first thing done therefore after the city espoused the project, was to cancel the aforesaid lease, by taking up the endorsed bonds, which was done by issuing an equal number of Philadelphia *sizes*, or a *par* security, for one we should say to be dear at 75. It strikes us that this specimen of financiering is about on a par with a policy which takes the most effectual step to render a road unprofitable by damming up its best outlet. After such a step would any person take stock in the road as an investment? Certainly not. The city must now build the road, if built at all. If it apparently receives aid from others, it will be only offered as a means of making money out of the city, which is certain to bear the load, as it has done.

After all that has been done and said in reference to this road, we should be sorry to see it abandoned. It will be remembered that the Legislature of the State at its last session compelled the Lake Shore Railroad to subscribe \$500,000 to the Sunbury and Erie as the price of a peaceful right of way through the State. We should be sorry to see a course taken which would render this stock valueless. We should like to see it built as the means of developing the resources of a rich but unsettled portion of the country. We should also like to see an additional avenue between the Laken and tide water. In fact we do not well see how Philadelphia is to get along without this road, if she presumes, as she proposes, to run with New York a race for commercial supremacy. It is the trade of the Lakes to which New York owes her greatness. It is not

difficult to see that every year, the trade of the interior is tending still more strongly toward their shores, upon which are springing up the seats of commerce and manufactory in the great valley. That great water line may be regarded as the axis of the commercial system of this country. For Philadelphia, therefore, to give up her Lake communication is to retire from the race before it is commenced; and to abandon to her rival with a struggle the field where the battle is really to be fought.

Mississippi Central and Tennessee Railroad.

The celebration at Bolivar on breaking ground on the Mississippi Central and Tennessee Railroad, connecting that place with Jackson, came off on Thursday of last week. About three thousand persons were said to be present. Speeches were made by Judge Milton Brown, Dr. A. Jackson, John V. Wright, and Mr. McCrary, after which the large assembly partook of a sumptuous barbecue.

The depot at Jackson has also been located, in the western portion of the city, not far from the residence of Mr. James Caruthers, and on his land—which event was celebrated there by a brilliant illumination.

Boston and New York Central Railroad.

The work of laying the rails on the Boston and New York Central Railroad, between Dedham and Summer street, has been commenced. The road is all in condition for the work from the junction at South Dedham to a point near the Boston line, some eight miles. The rail to be used is the compound rail, called also the male and female rail. It makes a continuous bearing, and is capable of being run at greater speed than any other pattern. This is the only rail of this kind in New England. Its weight is seventy pounds to the yard, of American iron, rolled expressly for this line by the Bay State Iron Company. The compound rail is in use on some twenty miles of the New York Central Road, and one-half of their second track is being aid with it.—*Boston Courier*.

Indianapolis and Peru Railroad.

At the meeting of the stockholders of this road, held at Noblesville on the 12th inst. the following gentlemen were elected Directors for the ensuing year:

Samuel N. Strader, Nathan Powell, Madison. John Wooley, Willis W. Wright, John Burke, David Macy, Indianapolis. E. Nottingham, H. G. Finch, Noblesville. E. M. Sharp, Shaysville. C. D. Murray, John Bohum, Kokomo. A. A. Cole, Ira Mendenhall, Peru.

At a subsequent meeting of the Directors the following gentlemen were elected officers:

President—Samuel M. Strader.

Secretary—Theo. P. Haughey.

Treasurer—John Wooley.

Superintendent—E. G. Barney.

Alabama and Tennessee Railroad.

We observe by the *Selma Reporter* that this company are endeavoring to dispose of their bonds among the stockholders of their road, and the planters on the line. Although by reason of the comparative shortness of the crops of Alabama, these classes of people may not be able or disposed to take up the required amount of the company's securities, yet, the effort reflects creditably on the substantial character of the enterprise. The commanding position of the Alabama and Tennessee road, with the large local interest identified with the work, are, together, good guarantees of the ultimate profit of its stock and the permanent safety of its bonds.

Orange and Alexandria Railroad Extension.

It was reported yesterday that the grading on the whole line of the Orange & Alexandria Railroad extension, from Charlottesville to this city, had been let to energetic and responsible contractors. We trust the report may be true and that the opening of this splendid connection for Northern and Southern travel will, as a consequence, speedily be made.

The books for subscription to the stock of the Alexandria and Washington Railroad were opened 1st Tuesday, at the Mayor's office in Washington, in Georgetown, and in Alexandria. The capital stock required is \$300,000, two-thirds of which must be subscribed before a company can be organized; and two dollars per share of \$100 each must be paid at the time to the commissioners.

Manchester and Lawrence Railroad of New Hampshire.

The earnings of the Manchester and Lawrence Railroad for the four months ending July 31, were \$51,816, an increase of \$12,062 over the earnings of the corresponding months of last year. The Manchester Mirror states that the company commence operations in the new repair shop at Manchester this week. They have built in connection with the Concord road, a commodious freight house, and are also building a fine station house to be owned in common. The capital stock of the company is \$900,000.

No More Lands to be Reserved for Railroads.

The following letter from the Secretary of the Interior, addressed to the Hon. Alfred Iverson, gives the conclusion to which the Department has come in reference to public lands reserved for railroads. We find it in the Columbus Times of August 30.

DEPARTMENT OF THE INTERIOR, August 25, 1854.

Sir: In reply to yours of the 21st, requesting that the President will withdraw from sale, or private entry, the land within a belt of twelve miles on each side of the proposed Mobile and Girard Railroad, I have to state, that the whole subject of the withdrawal of lands for railroad purposes has recently been fully examined and considered, and that it has been determined, with the approbation of the President, to bring into market, with as little delay as practicable, all lands heretofore withdrawn for such roads as have not been favorably acted upon by Congress, and to decline hereafter to withdraw lands for such purposes, until after the grant shall have been actually made.

I am, sir, very respectfully, your obedient servant.

R. McCLELLAND, Secretary.

Hon. A. IVERSON, Columbus Ga.

SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER

OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF ERIE CANAL—EASTERN DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Utica, until Monday, the 9th day of October next, at 10 o'clock, A. M., for the following described work:—

Description of Work.	Amount of Penalty in Bond.	Time of Completion.
Section No. 16.....	\$7,500.....	1st April, 1856.
" 36.....	3,300.....	"
" 37.....	5,200.....	"
" 57.....	7,000.....	" 1857.
" 58.....	9,500.....	"
" 59.....	6,000.....	"
" 60.....	6,000.....	"
" 61.....	6,000.....	"
" 62.....	12,400.....	"
" 75.....	5,100.....	" 1856.
" 78.....	5,800.....	"
" 131.....	5,800.....	" 1857.
" 132.....	5,800.....	"
" 133.....	6,000.....	"
Lock No. 34.....	5,600.....	1st July, 1856.
" 38.....	6,000.....	"
" 40.....	6,200.....	"
" 42.....	6,200.....	"
Waste Weir on Sec. 120.	1,200.....	1st April, 1855.
Bridge Abutments on Sections 15, 16 and 17.....	2,500.....	1st July, 1855.
Bridge Abutments on Sections 36 and 37....	1,300.....	"
Bridge Abutments on Sections 57, 58 and 59 and Main street Bridge at Fultonville.	3,000.....	" 1855.
Bridge Abutments on Sections 60, 61 and 62.....	2,000.....	"
Bridge Abutments on Sections 75 and 78....	1,500.....	" 1855.
Bridge Abutments on Sections 111, 116, 121 and 122.....	2,000.....	"
Bridge Abutments on Sections 132 and 133.	900.....	" 1856.
Culverts on Sections 59 and 60.....	1,200.....	"
Culverts on Section 75.	600.....	1st April, 1856.
Culvert at Van Vranken's on Section 18..	300.....	1st July, 1855.
Culverts on Sections 112 and 121.....	1,100.....	1st April, 1856.
Culverts on Sections 131, 132 and 133....	1,200.....	1st July, 1856.
Completion of Phillips' Aqueduct.....	1,300.....	1st April, 1855.

BLACK RIVER CANAL.

Sealed proposals will be received at the Engineer's Office at Lyons Falls until Thursday, the 12th day of October next, at 10 o'clock A. M., for the following described work:—

Reservoir at Wood Hull Lake.....	\$3,700.....	1st Oct., 1855.
Reserv'r at N'rth Br'ch Lake.....	5,500.....	"
11 Lock Houses from Boonville to Lyons Falls.....	1,000.....	"
Sluices around Locks No's. 34 to 69 inclus.	2,900.....	1st Aug. 1855.

MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse until Saturday, the 14th day of October next at 10 o'clock in the forenoon for the following described work:—

Section No. 195.....	\$6,400.....	1st April, 1857.
" 196.....	4,300.....	"
" 197.....	7,200.....	"
Centre Port Aqueduct..	3,400.....	"
Port Byron do.....	7,000.....	"

OSWEGO CANAL.

Sealed proposals will be received at the En-

gineer's Office in the village of Fulton until Monday, the 16th day of October next, at 10 o'clock A. M., for the following described work:—

Section No. 3 below Salina.....	\$4,000.....	Ap' 115th, 1857.
Section No. 4 below Salina.....	7,400.....	"
Part of Sections 14 and 15, Gascon Rapids....	12,700.....	"
Part of Sections 16 and 17, above Phoenix....	6,400.....	"
Part of Sections 17 and 18, above Phoenix...	7,700.....	"
Part of Sections 22 and 23, Morseman level..	6,500.....	"
Section 27 at Fulton...	6,000.....	"

CAYUGA AND SENECA CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Seneca Falls until Tuesday, the 17th day of October next, at 10 o'clock A. M., for the following described work:—

Section No. 9.....	\$7,200.....	1st April, 1856.
" 10.....	8,500.....	"
Dam and Guard Gate on Section 10.....	5,600.....	"
Culverts on Sections 1 to 5 inclusive.....	2,200.....	"
Road and Farm Bridge Abutments on Sections 1, 4 and 10.....	2,300.....	"

ENLARGEMENT OF ERIE CANAL—WESTERN DIVISION.

Sealed proposals will be received at the Engineer's Office, in the village of Albion until Wednesday, the 18th day of October next, at 10 o'clock A. M. for the following described work, between Lockport and Rochester:—

Section 276, with penalty in bond of....	\$9,000.
" 277, " " " " " " " " " "	6,700.
" 278, " " " " " " " " " "	7,000.
" 279, " " " " " " " " " "	7,600.
" 280, " " " " " " " " " "	8,400.
" 281, " " " " " " " " " "	9,200.
" 282, " " " " " " " " " "	5,700.
" 283, " " " " " " " " " "	4,100.
" 316, " " " " " " " " " "	6,600.
" 317, " " " " " " " " " "	6,500.
" 318, " " " " " " " " " "	9,400.
" 319, " " " " " " " " " "	9,300.
" 320, " " " " " " " " " "	9,200.
" 322, " " " " " " " " " "	10,100.
" 323, " " " " " " " " " "	8,000.
" 324, " " " " " " " " " "	7,700.
" 325, " " " " " " " " " "	7,100.
" 326, " " " " " " " " " "	9,400.
" 327, " " " " " " " " " "	7,600.
" 328, " " " " " " " " " "	8,800.
" 329, " " " " " " " " " "	9,700.
" 330, " " " " " " " " " "	13,000.
" 331, " " " " " " " " " "	8,500.
" 332, " " " " " " " " " "	8,500.
" 333, " " " " " " " " " "	12,200.
" 334, " " " " " " " " " "	13,000.
" 335, " " " " " " " " " "	8,000.
" 336, " " " " " " " " " "	6,000.
Bridge Abutments on Sections 276 to 283, inclusive.....	3,600.
Bridge Abutments on Sections 316 to 329, inclusive.....	7,300.
Bridge Abutments on Sections 330 to 336, inclusive.....	5,400.
Culverts on Sections 276 to 283 inclusive..	6,200.
" " 316 to 320 " " " "	5,500.
" " 322 to 329 " " " "	8,000.
" " 330 to 336 " " " "	4,000.
" " 306 " " " "	1,000.
Waste Weir on Section 330.....	500.
Iron superstructure of Genesee st. Bridge, Buff.....	1,500.

The superstructure of Genesee street Bridge and the Culvert on Section 306 to be completed by the 1st day of April, 1855, and the remainder of the above work by April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and

every kind of work; and no proposition not thus defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner, until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, Sept. 13th, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT,
CORNELIUS GARDINIER,) Canal Comm'rs
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

ZERAH COLBURN, ENGINEER AND AGENT

FOR the Design, Construction, Valuation and Purchase of Locomotives and Railroad Machinery.

Offers his services to Railroad Companies in either of these departments, having long experience and the best facilities for all.

As CONSULTING ENGINEER he will advise as to the value or adaptation of any system of motive power, and furnish drawings, estimates and specifications for any arrangement of engine.

As ACTING ENGINEER he will superintend the construction, survey, or reconstruction of any railroad machinery, and guarantee satisfactory results.

As CONTRACTING ENGINEER, having connection with the most reliable and successful manufacturers, he will negotiate for the purchase of Locomotives of the very best construction and proportions. Also Wheels, Tires and Repair Shop Machinery.

Having much experience in Patent Business he will undertake the preparation of Drawings, Specifications, Applications for Patent or Caveat and other papers necessary for inventors. He is able to give material assistance in bringing inventions and improvements in Railroad Machinery into favorable notice.

CHILLED TIRES FOR LOCOMOTIVE DRIVING WHEELS.

Zerah Colburn retains the principal agency for the sale and right of use of this valuable improvement, and will furnish the most substantial guarantees of its Safety, Durability, Adhesion and great ECONOMY.

Office, 3d floor American Railroad Journal Building,
No. 9 Spruce street,
New York.

REFERENCES.

The New Jersey Locomotive and Machine Co.
James Jackson, Pres't., Paterson, N. J.
Chas. W. Elliott, Vice Pres't., 69 Beaver str., N. Y.
Henry V. Poor, Esq., Editor Railroad Journal, New York.
Geo. D. Phelps, Pres't. Del., Lack and Western Railroad.
Geo. W. Whistler, Vice Pres't. New York & New Haven R.R.
William Raymond Lee, Esq., Boston.
Bush & Lobdell, Wilmington, Del.
Oliver M. Hyde, Esq., Mayor City of Detroit.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,

Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

New York and Erie R. R.

On and after Wednesday, Sept. 20th, and until further notice
PASSENGER TRAINS
will leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo.
DUNKIRK EXPRESS, at 6 a. m. for Dunkirk.
MAIL, at 8 1/2 a. m. for Dunkirk and Buffalo, and intermediate stations.
ROCKLAND PASSENGER, at 3 1/2 p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.
NIGHT EXPRESS, at 5 1/2 p. m. for Dunkirk and Buffalo.
RESTAURANT, at 6 p. m., for Dunkirk and Buffalo and intermediate Stations.
On Sundays only one Express Train—at 5 1/2 p. m.
These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, &c.
D. C. McCALLUM, General Supt.

For Sale.

A STATIONARY Engine, having cylinders 18 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
jul.14 29 tf.] or 74 Broadway, New York.

Rensselaer Polytechnic Institute.

DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS, including Railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the Annual Register, giving full information respecting the Institute, apply to

R. FRANKLIN GREENE, Director, R. P. I.
32 3m] Troy, New York.

500 TONS No.1 Gtengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.

90 and 101 John st.
N. B.—The above Iron constantly imported. [32 tf

Buffalo Machinery Depot. BUFFALO, N. Y.

H. C. BROWN, Supt. J. W. HOOKER, Proprietor
I AM prepared to furnish and will keep constantly on hand from the best manufacturers a full stock of Machinery Tools for railroad and other shops; such as Engine and Hand Laths, Large Driver Lathes, Car Wheel Boring Mills, Power and Hand Planers, Drill Presses, Punch and Shears, Axle Lathes, Power Wheel Presses, Bolt Cutters, &c.
J. W. HOOKER, Buffalo, N. Y.

Fire! Fire! Fire!

Preserve your books in one of Duryee & Forsyth's celebrated Fire King safes. They are perfectly secure and excel in finish.
J. W. HOOKER, Agent, Buffalo.

Railroad Track, Suspension, and Depot Scales, Dormant, and Portable Warehouse Scales, Trucks, Baggage Barrows, and Manifest Presses.

Buffalo Machinery Depot,

General Agency for Rochester Scale Works.

H. C. BROWN, Supt. J. W. HOOKER.

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per linear yard. For sale by

THEODORE DEHON,

26 1/2 Broadway,

New York.

Contracts made as above for Rails deliverable at English or American ports at lowest rates. 36 8t.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Columbus Ga., Sept. 5th 1854.

SEALED PROPOSALS, will be received by the undersigned at this office until the 1st day of December, for the clearing, Graduation, Track Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 130 miles. The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate Proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work 5 1/2 miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two Rivers will be crossed with the common pile bridging, with Truss Pivot Draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The Country is healthy, with no swamps after leaving the Tensas River; from Mobile to the River (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third (1/3) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common Stock of the Road, and relying upon the earnings of the same, for dividends; the balance (1/3) to be paid in the (.08) per cent. Convertible Bonds of the company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus Ga. Mobile, Ala. or in N. Y. at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding (1/4) the amount of the contract, for the timely and faithful completion of the same.

22 1/2 miles of the Road from Girard west will be open for business the first of November, and 52 miles (9) months thereafter. It is the intention to have the entire line of (245 miles) open for business at 1st 1855.

8t.37

GEO. S. RUNEY.

Port Morris Manufactory. WESTCHESTER COUNTY, N. Y.

ARE prepared to execute orders for all kinds railroad work and have on hand the approved Railroad Box with the raised Journal also Car Couplings (Lewis' Patent) and Rat-chet Wrenches from \$5 to \$10 each.

All orders punctually attended to by addressing the above.

M. C. BAKER.

N.B. Long Iron Planing done on reasonable terms.

37 6m.

108 Front st., up stairs. [3

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,

RICHARD W. TYSON,

No. 25 South Charles str.

Baltimore, July 1st, 1854.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,

RICHARD W. TYSON.

Baltimore, July 1st, 1854.

[33 3m

Notice of Copartnership.

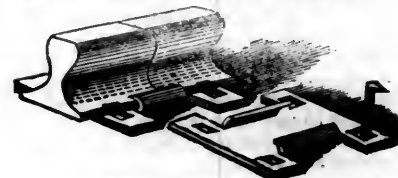
MR. PETER MARIE, heretofore of the firm of DECOUPET & CO., has this day formed a copartnership with Mr. RUDOLPH KANZ, (for many years with the banking house of Messrs. L. Von Hoffman & Co.) under the firm of MARIE & KANZ, at No. 27 William street.

Their attention will be devoted to the purchase and sale on Commission of Stocks, Bonds and Foreign Exchange, and to the negotiation of Business Paper.

New York, 1st September, 1854.

36 8t.

RAILROAD SPIKES.



WROUGHT IRON

Chairs and Fastenings.

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.

The best quality of Refined Iron is used, and all orders filled with despatch.

J. HOPKINSON SMITH,

No. 26 South Charles st.

Please direct the name in full.

Baltimore, July 1st, 1854.

[33 tf

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to

EDW. BECH & KUNHARDT, 62 Beaver St.,
20r, A. TOWAR, Agent Pokeepsie Iron Works,
23tf Pokeepsie, N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to Railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

Or BRIDGES & BBO,

64 Courtland st., New York,

19 tr

Machinists' Tools. SHRIVER & BROTHERS, Cumberland, Maryland.

(on Baltimore & Ohio R. R. midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools.

These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others requiring first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address

SHRIVER & BROTHERS, Fulton Works,

Cumberland, Maryland.

August 19th, 1854

[32 6m

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 40]

SATURDAY, OCTOBER 7, 1854.

[WHOLE No. 964, VOL. XXVII.]

FREDERICK ALGAR, No. 11 Clements Lane, Lombard St., LONDON, is the authorised European AGENT for the Journal.

PRINCIPAL CONTENTS.

History of the New York and Erie R. R.	625
Demoin Navigation and Railroad Co.	628
Sinking Fund for Erie R. R.	629
Working of Railroads by Contract.	630
New Jersey Locomotive Works.	631
Virginia and Tennessee R. R.	631
Stock and Money Market.	632
New Haven Railroad Meeting.	632
Evansville and Crawfordville R. R.	633
Madison, Indianapolis and Peru R. R.	634
North Missouri R. R.	635
Journal of R. R. Law.	636
Railway Accounts.	636
Productiveness of Railroads in the U. S.	637

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

Saturday, October 7, 1854.

We continue our notices of railroads, by giving this week, that of the New York and Erie R. R.

New York and Erie Railroad. HISTORICAL NOTICE.

The New York and Erie Railroad Company was chartered in 1832, with authority to construct and maintain a railroad from New York City to Lake Erie; "to commence at said city, or such other point in its vicinity as should be most convenient and eligible therefor, and continue said railroad through the southern tier of counties, by way of Owego, in the county of Tioga, to the shore of Lake Erie at some eligible point between Cattaraugus Creek, and the Pennsylvania State Line." The duration of the charter was limited to 50 years. It provided that unless the company to be formed under it, should within four years from its passage, commence the construction of their road and expend at least \$200,000 within one year thereafter, and within ten years from the date of the charter, should construct and put in operation one-fourth part of their railroad; and within fifteen years should construct and put in operation one-half of their road; and within twenty years should complete and put in operation their entire road, the charter should be null and void.

The time for commencing the work was subsequently extended by an amendment of the charter. The capital stock was limited to \$10,000,000 divided into shares of \$100 each. Before the company could be organized the subscription of the entire capital stock was required. This provision was afterwards amended, and the sum necessary to be subscribed prior to the organization was reduced to \$1,000,000. By a further provision of the charter, the company were prohibited from connecting with any railroad of the State of Pennsylvania or New Jersey, or leading into either of these States, on pain of forfeiture of their charter. No restrictions were imposed upon the company as to the amount of tolls or profits.

The necessary subscription of 1,000,000 of dollars having been made, the company was organized in August 1833. The work of construction, however, was not commenced till November 1835. In the mean time the legislature at the session of 1834 appropriated \$15,000 for a survey of the route, which was made during the summer of that year. In this survey the total cost of the road was estimated at \$6,000,000. In April 1835 books for subscription to the capital stock of the company were opened and the amount of stock increased to \$2,362,100. In November of that year, that portion of the Delaware Division from Deposit, (now Delaware) to Callicoon Creek, a distance of 41 miles, was put under contract, and work was also commenced on the location at Piermont. But before the close of the year the great fire in New York occurred, which, with financial troubles that followed, terminating in the disastrous crisis of 1837, impoverished so many of the stockholders, that the company became crippled for means, which led to a suspension of the work of construction, in 1837.

In 1836 the Legislature granted a loan of the credit of the State, to the company, to the amount of \$3,000,000 but coupled it with such terms as to render it unavailable. In 1838 the loan law was amended, authorizing the issue of the loan in sums of \$100,000, provided equal amounts be first collected from the stockholders and expended upon the road. Before any issue of the State loan was to be made, the company were required to locate and place under contract ten

miles of the road extending west from Piermont, and an equal distance eastward from Dunkirk. Considerable time was required to make these locations, and as instalments on the stock were slowly collected, only \$300,000 had been received from the State up to September 1839, which realized the company only \$245,225; the loan bearing only 4½ per cent. interest. The total discount at which the State loan was sold, amounted to \$400,000, or 13½ per cent.

In 1839, a contract was completed for the construction of 36 miles of road between Goshen and the ten miles previously commenced at Piermont. In February 1840, that portion of the Susquehanna Division lying between Binghamton and Hornellsville, was put under contract; and subsequently in the same year, the portion of the line between Hornellsville to the ten miles already under contract, next to Dunkirk.

At the session of 1840 the Loan Bill was further amended by which the company were allowed to draw from the State \$100,000 for every \$50,000 raised and expended by the company. Under this arrangement the work was prosecuted upon the Susquehanna, Western, and a portion of the Delaware Division, equal in all to a length of line of 300 miles.

In September 1841, the first section of the road from Piermont to Goshen, a distance of 46 miles was opened for business at a cost, (including 7 miles completed in 1843) of \$1,788,523 11.

In April of 1842 the State loan having been exhausted, and it being impossible to meet the demands upon the company for private subscriptions, the company made an assignment of its whole property for the benefit of its creditors. The courts of law subsequently decided the assignment to be invalid, and ordered a reconveyance of the property. The failure of the company, of course, put an end to all its active operations in the field, which were not resumed with energy till the early part of 1847. (In the mean time, a few individuals, with their own means, extended the road from Goshen to Middletown, a distance of seven miles, which was afterwards assumed and paid for, by the company.)

In the latter part of 1843, a renewed effort was made to raise the means for the resumption of the

work. A new direction was chosen, which submitted, in a report under date of Feb'y, 8th, 1841, the following statement showing the financial condition of the company; viz:

Received from capital stock.....	\$1,501,830	14
Proceeds of State loan.....	2,599,514	00
Interest on hypothecated stock.....	39,942	40
Rents.....	2,928	6
Donations.....	361	00
Earnings of road prior to assignment.....	18,559	00
Indebtedness of the Company.....	578,814	09

Total receipts.....\$4,736,949 09

Total expenditure up to the same period amounted to \$4,734,872 66, of which only about \$2,000,000 became subsequently available to the company. The balance was paid for interest, or expended in work, the greater part of which was abandoned; a portion of this being the *putting* on the Susquehanna Division.

The report was accompanied by a statement from the company's engineer, who estimated the total amount necessary to complete and equip the road, at \$7,000,000; making the total cost \$1,734,872 66; or deducting the State loan, and stock subsequently surrendered by individuals, \$7,967 59. Nothing material, however, was accomplished during the year. A small subscription was obtained near its close, and a short section of 20 miles west from Middletown to Otisville, was put under contract in Feb'y 1845.

On the 14th day of May 1845, the Legislature agreed to relinquish the lien created by the State loan, and discharge the same, provided the company should open their entire line to Lake Erie, within six years therefrom. As an encouragement to a renewed effort to obtain further subscriptions, the old stockholders agreed to surrender *one-half* the amounts of stock held by them, *provided* new stock to the amount of 3,000,000, a sum believed to be sufficient, with \$3,000,000 to be raised by a sale of an equal amount of mortgage bonds to complete the road, were obtained, the Legislature, in 1843 having given authority to make such issue, which was to take preference of the State lien. The prescribed amount was obtained. The road being completed within the time specified, the claim of the State was discharged. The amount saved by the company by the above provision in their favor, was \$3,807,671 29, as shown by the following statement, of the amount of expenditure on the road prior to the reorganization in 1845; viz:

State loan.....	\$3,000,000	00
Forfeited stock.....	65,571	29
Six per cent. certificates.....	265,515	42
Seven " ".....	163,146	44
Stock surrendered.....	742,100	00
New stock given for old.....	917,600	43
Bills payable.....	2,955	91
Old stock not surrendered.....	12,400	00
	\$5,168,281	49

The surrenders made by the State and individuals reduced this liability to \$1,361,613 18, as follows:

New stock.....	\$742,000	00
Seven per cent. certificates.....	503,868	90
Old outstanding liabilities.....	14,211	51
Cash paid on old account.....	101,432	72

\$1,361,613 18

The total liabilities of the company at the commencement of the last organization in 1845 were

reduced to the above amount, and the nominal sum effected to the company, \$3,807,671 26.

Although the company were in the manner stated relieved from pecuniary embarrassment put in possession, as then supposed, of sufficient means to complete their road, a question of location prevented the immediate commencement of work west of Otisville, the point of divergence between what was termed the *interior*, and the Delaware routes. The surveys which had been made, shewed it to be necessary to get the *best*, and in fact a *favorable* line, to enter the State of Pennsylvania, which was forbidden by the charter. A commission was consequently appointed by the Legislature of 1846, for the purpose of examining the comparative merits of the two routes, which reported to the Legislature of 1847, in favor of the *Delaware* route, and of allowing the line to enter the territory of Pennsylvania both in the Delaware and Susquehanna valleys; the Legislature of that State having granted the authority to do so, upon the agreement to pay *annually* into its treasury, \$10,000. Upon the acceptance of this report by the Legislature the work of construction was immediately and vigorously resumed and continued without interruption till the completion of the road to Lake Erie.

The dates of the completion of the several divisions were as follows: From Piermont to Goshen, 46 miles, in the fall of 1841; from Goshen to Middletown, 7 miles, in 1843; from Middletown to Otisville, 7½ miles, in October 1846; from Otisville to the Delaware River, at the Delaware Station, at the close of 1847; from Delaware to Binghampton, 127 miles, in December 1848; from Binghampton to Owego, 22 miles, in June 1849; from Owego to Elmira, 36½ miles, in October 1849; from Elmira to Corning, 18 miles, on the 1st day of Jan'y 1850; from Corning to Hornellsville, 41 miles, in September 1850; and to Dunkirk, 127 miles, on the 14 of May 1851. The Newburgh Branch, 19 miles long, was opened in Jan'y 1850.

The road is a first class work in every particular. Its structures are well built, and in good condition. It has an ample and efficient equipment. With a double track through the practicable portions of the Delaware Valley, we see no reason for an increase of the construction account that should not be met from *earnings*.

The road and all its branches and tributaries have a gauge of 6 feet.

ROUTE.

The general direction of the Erie Railroad is the most favorable that could have been chosen, from the fact that it connects by the shortest route, the metropolis of the country with the *Lakes*, which are the great theatre of the internal commerce of the country, and traverses for the greater part of its distance a fertile region, the whole trade of which seeks the New York market. For this local trade it is the only avenue. Its great length, freedom from competition, and the dependence of the country it traverses upon New York, give it an immense local traffic. Its connection with the Lakes will always secure to it a supply of *through* freight fully up to its capacity, while it must continue one of the most convenient and favorite avenues for travel between the Eastern and Western States.

The route of the road is on the whole a very favorable one, though presenting extremely varied

features. The greater portion of it is comparatively level, though crossing in its course, five distinct and somewhat elevated spurs of the Alleghany Mountains: the *first*, at an elevation of 896 feet above the sea, at the Shawangunk Summit between the Hudson and the Delaware; the *second*, at an elevation of 1,366 feet, between the Delaware and the Susquehanna; the *third*, between the Susquehanna and the Genessee, at an elevation of 1760 feet; the *fourth*, between the Genessee and Alleghany, at an elevation of 1,677 feet; the *fifth* between the Alleghany River and Lake Erie, at an elevation of 1,596 feet. At the Delaware Station on the Delaware River, the road is 436 feet above tide. At Deposit, 89 miles from Delaware and at the foot of the ridge which separates the Susquehanna from the Delaware, 997 feet. The crest of this ridge is 369 feet above the Delaware Valley where the road leaves it, and 490 feet above the station at Susquehanna. Hornellsville, 140 miles west, in the valley of the Susquehanna, is only 232 feet higher, and 1,189 feet above tide water. Lake Erie is 580 feet above the sea.

The following table will show the lengths of the several divisions, (commencing at Piermont,) the total ascent and descent upon each, and average grade per mile.

Division.	Length in Miles.	Ascent West, in feet.	Descent West, in feet.	Total.	Average per Mile, in feet.
Eastern.....	74	1,625	1,189	2,814	38
Delaware.....	104	930	459	1,389	13
Susquehanna.....	139	486	244	730	5
Western.....	128	1,282	1,840	3,123	24
Totals..	445	4,323	3,732	8,056	18

The total curvature and the proportion of curved to straight line is as follows:

Division.	Whole No. of Degrees.	Average Miles per Degree.	Curved, in feet.	Straight, in feet.
Eastern.....	4,490	60	138,870	250,530
Delaware.....	9,244	88	296,840	248,522
Susquehanna.....	4,317	35	221,095	512,620
Western.....	4,201	32	193,750	487,051
Total..	22,252	50	850,555	1,498,723

It is the possession of the valleys of the Susquehanna and of the Delaware, particularly the latter, which constitutes the commercial value and importance of the Erie Road. This valley occupies a deep gorge running between lofty mountains in the direction of New York, for nearly one hundred miles. The only practicable line through it is occupied by the Erie Road. Through it, the whole of Southern New York, and Northern Pennsylvania must have their outlet, while it is the shortest, and with the exception of that occupied by the Central Road, the most favorable route that can be found between New York and Lake Erie.

On leaving the narrow valley of the Delaware which the road traverses for nearly 100 miles, the possession of which is the key to the country beyond, the road enters the broader valley of the Susquehanna, which is not only one of the best portions of the State, but which unlike the former,

is accessible from every direction, and naturally forms the base of roads entering it on either side. For such the Erie forms the trunk to New York. No less than five important completed roads, having an aggregate mileage of 472 miles enter it upon the north, all of which are connected either with Lake Erie or Ontario; viz: the Syracuse and Binghamton, 80 miles long; the Cayuga and Susquehanna, 33 miles, connecting Cayuga Lake with the Erie Road, and soon to be extended to Lake Ontario by the Lake Ontario, Auburn and Southern Railroad; the Chemung, Canandagua and Niagara Falls Railroad, connecting the Erie Road both with Lake Erie and Lake Ontario, 168 miles; the Buffalo, Corning and New York Railroad already opened to Batavia, to be extended to Buffalo, 100 miles, and the Buffalo and New York City Railroad, 91 miles. In addition to these, there are in progress, the Albany and Susquehanna, 143 miles long; and the Utica and Binghamton, 85 miles. On the south the tributaries completed are the Lackawanna and Western, 50 miles, the Corning and Blossburgh, 40 miles, the Williamsport and Elmira, 75 miles. The roads in progress are the Alleghany Valley, to Pittsburg, 186 miles; the Little Valley and Erie, 85 miles. Most of the branch roads have important connections and ramifications. Within the Susquehanna Valley the tributaries entering the Erie Road, and which must use its eastern portion as their outlet to market, equal 1,000 miles, or twice the length of the main stem, while at Buffalo and Dunkirk it connects with roads which unite both with the railroad systems of the West, and Canada. The vast volume of business collected by all these connecting roads, as well as their main stem of the Erie, must be poured through the narrow gorge of the Delaware Valley and pass over the latter an average distance of 275 miles, so that the distance over which its local freight will be carried on the Erie Road, will nearly equal the entire length of the main stem of the *Central*, from Albany to Buffalo.

We have seen how the Erie Road on reaching the Valley of the Susquehanna, by means of its numerous branches, spreads out like a fan covering an area of country fully equal to 25,000 square miles. On approaching tide water after leaving the Delaware Valley it separates into three distinct lines, having their termini upon the Hudson at Newburgh, Piermont and Jersey City, for the purpose of enabling it to discharge with greater ease and facility, and at reduced expense, its freights upon that river. All these termini are upon the harbor of New York. Freight as fast as received, is immediately transferred to barges, which are taken to any part of the city, and which serve as the best and cheapest kind of warehouse till their cargoes are discharged. No Railroad in the world commands the trade of so large an area of country, none possesses in an equal degree the means of drawing such trade. It possesses an equal superiority to others in the means provided for discharging its freight at its eastern terminus. Upon most roads freight, after arriving at the principal station has to be broken into and removed by carts and drays; which not only limits the capacity of the roads to the ability of moving the freight in the manner stated, but adds largely to the charge for transportation. The Erie Road

discharges its immense business without the intervention of horses or drays, directly upon the broad surface of the Hudson, which is immediately put on ship board or taken to the city warehouses. These advantages not only indefinitely increase the capacity of the Erie Road, but should reduce the cost of operating it much below the ordinary average.

NOTE.—As the annual report of the company for 1854 was made up for the Legislature on the 30. ult., and as it will seasonably come to hand, we omit abstract of the previous report; also a statement showing the financial condition of the company, amount of equipment, &c. The cost of the road in the tables for 1854 is estimated.

CHARACTER OF BUSINESS.

The freight of the Erie Railroad is composed chiefly of "products of the soil," and the heavy movement is toward tide water. The freight moved west, is chiefly the lighter kinds of merchandise forwarded to the Western States. The following statement will show the relative amount of receipts from through, and local, business between termini, for 1853.

Through passengers.....	\$474,291
Way do.....	418,478
Passengers between termini.....	738,157

Total.....\$1,630,924

Through freight.....	\$916,669
Way do.....	587,010
Freight between termini.....	956,064

Total.....\$2,459,743

Passenger receipts.....	1,630,669
-------------------------	-----------

Total.....\$4,090,412

FUNDED DEBT.

The total funded debt of the company amounts to \$24,500,000 as follows:

1st mortgage bonds issued May 1st, 1846, and payable May 1st, 1866.....	\$3,000,000
2nd mortgage bonds issued March 1st, 1849, and payable March 1st, 1859..	4,000,000
3d mortgage bonds issued Jan'y 1st, 1853, and payable Jan'y 1st, 1883...	6,000,000
Convertible bonds issued February 1st, 1851, and payable Feb'y 1st, 1871...	4,351,000
Convertible bonds issued Jan'y 1st, 1852, and payable Jan'y 1st, 1862...	3,500,000
Income bonds issued Feb'y 1st, 1850, and payable Feb'y 1st, 1855.....	2,649,000

Total amount of funded debt.....	\$24,500,000
(Estimated) amount of floating debt.....	\$1,500,000

Amount of capital stock.....	10,000,000
	11,500,000

Total estimated cost of road.....\$36,000,000

The certificates of indebtedness amounting to \$508,868 90 maturing the present year have been paid.

The third mortgage is nominally for the sum of \$10,000,000, but \$4,000,000 are reserved for the payment of the second mortgage due in 1859.

The amount of original issue of the Income bonds was \$3,500,000. At the time of their issue the surplus earnings of the road were pledged till the gross income of the road should reach the sum of 1,200,000. This amount having been exceeded they have no preference over any *unsecured* debt of the company. They carry the privilege of conversion into the class of *convertibles* of 1871, for which \$851,000 have already been exchanged.

Statement showing the Cost; Mileage; Cost per mile; Gross Receipts; Current Expenses; Net Receipts; rate of Dividend; Receipts from Passengers; Receipts from Freight; Miscellaneous; Earnings per mile; per centage of Gross Earnings; Do. of net Earnings, of the Erie Railroad, since the opening of the first division of the Erie Road to the present time.

1842..	\$473,487	46	Cost of Road and Equipment.	Length in Miles.	Cost &c., per Mllo.	Gross Receipts.	Current Expenses.	Net Receipts.	Dividend.	Receipts from Passengers.	Receipts from Freight.	Miscellaneous.	Earnings per Miles.	Per cent. Gross Earnings.	Per cent. Net Earnings.
1843..	473,487	53				\$90,968	\$71,809			\$47,991	\$42,976		\$1,977		
1844..	473,487	53				170,470	126,021			69,125	101,834		2,144		
1845..	473,487	53				160,693	116,992			60,776	100,930		3,161		
1846..	*1,861,616	63				126,345	70,218			44,175	82,169		2,284		
1847..	1,869,533	62				183,516	123,174			64,759	120,762		2,391		
1848..	3,666,006	62				204,819	172,971			100,991	153,129		2,486		
1849..	3,666,006	74				310,913	195,508			125,723	185,190		4,202		
1850..	18,133,718	281				810,144	488,926			363,210	446,934		3,952		
1851..	18,133,718	281				1,231,660	623,948			674,680	664,879		4,059		
1852..	23,413,504	464				1,277,680	623,948			1,190,281	1,091,888		4,917		
1853..	27,093,918	464				3,318,725	1,601,623			1,299,792	1,869,407		7,152		
1854..	32,858,986	464				4,318,962	2,407,373			1,601,209	2,537,214		9,308		
1854..	36,500,000	464				5,500,000	3,000,000						11,853		

The total length of single track is 464; or embracing the Union Railroad, 497 miles. The total length of double track, 180 miles, viz: 79 in the Eastern Division, 86 in the Susquehanna. Considering the several outlets to the Hudson on double tracks, the whole road has a double track to Corning, a distance of 291 miles from New York, with the exception of 90 miles on the Delaware division.

In addition to the double track, the road has 80 miles of sidings, distributed as follows: Eastern Division 20 miles; Delaware, 15; Susquehanna, 26, and western division 25 miles.

The total number of miles of road and sidings are 757, Number of tons of rails laid, 69,283; number of feet of wooden bridges, 25,837.

*State loan and one-half of individual stock deducted.

Statement of the President of the Des Moines Navigation and Railroad Company to the Directors.

GENTLEMEN—In pursuance of your instructions, I entered into negotiation with the Commissioner and Assistant Commissioners of the Des Moines Improvement in the State of Iowa, to perfect such a contract as was, in general terms, suggested at your meeting of the Board. This negotiation has been entirely successful, and a contract in due form executed by the Commissioners on the part of the State, and by our company.

Its terms are, briefly, that our company shall, within four years from the first of July, 1854, complete the dams and locks, so as to ensure navigation of the Des Moines River, from the Mississippi to Fort Des Moines, a distance of about two hundred and four miles. This will require about twenty-eight locks, and about thirty dams.

The State Engineer of Iowa, who has fully surveyed the River, and made the examinations and estimates, and under whose charge the work has so far progressed, estimates that it will cost to complete this improvement, about one million five hundred thousand dollars.

Mr. Blackwell, our Engineer, however, thinks that the enlarging to locks of two hundred feet, instead of one hundred and seventy-five, and the necessity of making the work more substantial, (as the company are now to own the work when completed, for seventy-five years,) will probably increase the cost to two millions five hundred thousand dollars; in which opinion, I fully concur.

To make this work, the State of Iowa assigns to our company the locks now completed, and in progress, and all materials on hand, with all tools and property connected with the work; and also conveys all the unsold lands granted by the General Government to the Territory of Iowa, for this purpose, being now over one million of acres.—This land lies in alternate sections, on each side of the Des Moines River, for five miles in width, from the mouth to the source of the River. The lands on the River below Fort Des Moines, excepting about seventy thousand acres, had been by the State of Iowa, (in the prosecution of work,) so far conveyed, before our contract with them. This seventy thousand acres belongs to our company. The balance of the lands are in the Des Moines Valley, above Fort Des Moines.

With several members of our company, I have examined a large portion of these lands. We find them uniformly of the best quality for cultivation, well watered, and in a genial and healthy climate, in a rolling beautiful country. The Government sections, as high up as Fort Dodge, are generally occupied. The lands produce from thirty to forty bushels of wheat, and from seventy to one hundred bushels of corn per acre. The company's lands are now worth from seven to ten dollars per acre, and must soon be worth from fifteen to twenty-five dollars—that being the general price of farms partly cultivated, throughout the State.—These lands are to be conveyed to the company, or to their assigns, from time to time, at the rate of one dollar and twenty-five cents per acre, as often as the company shall expend thirty thousand dollars; until one million three hundred thousand dollars is expended, when all the lands will be subject to be conveyed, on the request of the company.

As a further inducement to the building a permanent and valuable work, the State has also conveyed to the company, the whole work, its franchises, water-rents, tolls and advantages, for the term of seventy-five years, from the first day of July, 1854. There are other valuable benefits conveyed to the company, which you will readily see by reference to the contract.

That this work, running its entire length through one of the richest agricultural districts of the Union, and the shores of the River abounding in coal of a good quality, lime stone, water-cement and gypsum; with a navigation for steamboats of a large class, that can deliver freight from any point on the Des Moines, to any point on the Mississippi River, the Ohio, and to any of our Atlantic Ports,

without breaking bulk; must be a richly paying work, I believe that no one can doubt, that has had any acquaintance with the country.

The incorporation of the company was duly perfected on the sixth day of May, 1854, under the laws of Iowa, and will continue for fifty years more, by filing with the Secretary of State a certificate of such intention. The capital is limited to three millions of dollars; to be represented by shares of stock, of one hundred dollars each.

No debts can be legally contracted beyond two thirds of the capital.

Two millions one hundred thousand dollars of this stock has been subscribed and issued, leaving a reserved fund of nine hundred thousand dollars of the stock belonging to the company, to be issued or not, as shall be deemed best by the Board of Directors.

The tolls are, by the contract and by the charter, not to exceed, in proportion, those chargeable by law on the Monongahela slack-water navigation, in February, 1851; but in my judgment, a much lower tariff of tolls will be found abundantly sufficient, and probably more beneficial to the company.

The Chief Engineer, with a competent force, is now re-surveying, and preparing for immediate occupation, all the points for locks and dams, and other works; and will soon make you a full detailed report of the work, with his estimates and views in relation thereto.

ORVILLE CLARK,

Pres't Des Moines Navigation & R. R. Co.
New York, September 25, 1854.

Exhibit of the Condition of the Evansville and Crawfordsville Railroad.

That portion of this railroad from Evansville to Princeton, in Gibson county, a distance of 27½ miles, was constructed under a charter incorporating a company to construct a railroad from Evansville, on the Ohio river, to connect with the Ohio and Mississippi railroad at, or near, Olney, in the State of Illinois, *via* Princeton, Indiana, and Mt. Carmel, Illinois,—approved January 2d, 1849.

By virtue of an amendment to said charter, entitled, "an Act to amend the charter of the Evansville and Illinois Railroad Company,"—approved January 21st, 1850, the said road was authorized to be extended from Princeton to Vincennes, and so much of the charter as authorized or required the construction of a railroad from Princeton to the Illinois State Line, at or near Mt. Carmel, was repealed.

Under the charter and amendment thereto, the said road has been completed from Evansville to Vincennes, a distance of 51 miles, and in operation, since January last.

By virtue of an act of the Legislature of the State of Indiana, entitled, "an Act to incorporate the Wabash Railroad Company," approved February 6, 1851, authorizing the construction and maintenance of a railroad from Vincennes, north, through the county of Sullivan, to Terre Haute, in the county of Vigo; and at the pleasure of the company north-east from thence through the county of Parke to Crawfordsville, in the county of Montgomery, the Wabash Railroad Company was organized.

(On the 18th day of November, 1852, the Evansville and Illinois, and the Wabash Railroad Companies, by resolutions duly passed by both of said companies, under and by virtue of the 27th section of the charter of the said Wabash Railroad Company, were consolidated, and become one company, adopting the name of the "Evansville and Illinois Railroad Company.")

Afterwards, by an act of the Legislature of the State of Indiana, entitled, "an Act to amend the charter of the Evansville and Illinois Railroad Company,"—approved March 4th, 1853, the acts and doings of said several companies, whereby their consolidation into one united company became consummated, was confirmed and made valid and effectual to all intents and purposes; and the corporate name and seal of the "Evansville

and Illinois Railroad Company" adopted at consolidation was changed, and the name of the "Evansville and Crawfordsville Railroad Company" substituted in place thereof, with powers and liabilities under that name, to sue and to be sued, plead and be impleaded, and do all acts and things, and in and by that name the said company to be held liable for all contracts and engagements; all of which acts of the Legislature were, on the second day of September, 1853, approved, accepted and adopted by the Directors of said company, whereby the said consolidated company came to be and is now known by the name of the "Evansville and Crawfordsville Railroad Company."

The first division of this road extends from Evansville to Vincennes, 51 miles. This division was completed so as to let trains pass over it in January last. Including its equipments, temporary depots, engine houses and shops for repairs of machinery, has cost up to the present time \$847,191.

On this division is a mortgage to secure the payment of 350 bonds of one thousand dollars each, payable on the first of January 1862, which is the only lien or encumbrance on any part of the entire road or property of the company, *except* the mortgage executed on the 22d day of March, 1854, to secure the payment of the seven hundred and forty bonds bearing date April 1st, 1854, and issued to provide means to pay for the iron, chairs, spikes and equipment for the road.

The second division of the road extends from Vincennes to Terre Haute, 58 miles, on which the grading and bridging is all finished. The rails, chairs, and spikes for this division, are all purchased and mostly delivered on the road, and the balance in course of transportation from New York. The cross ties are all delivered along the line, and 19 miles of track is laid. There can be no reasonable doubt but the whole line from Evansville to Terre Haute (109 miles) will be completed, and trains running over it by the first of December next.

The third division of the road extends from Terre Haute to Crawfordsville, 51 miles, making the whole length 160 miles. On this division the portion from Terre Haute to Rockville, 25 miles, has been permanently located, and the heavy earth work is nearly completed, and paid for by a local stock subscription, belonging to that division.

It is contemplated by the company to extend the road to Crawfordsville so soon as the stock subscription will justify. It will then connect with a line of road now in progress, *eastwardly*, to Fort Wayne, where it will connect with the roads to Crestline and Cleveland; and also with a road in progress north-east through Logansport, and the Ellettsville Valley, to Detroit. Also with the New Albany and Salem road, now running north through Lafayette, (where it intersects the Wabash Valley road, now constructing to Toledo) to Michigan City and thence to Chicago. At Terre Haute it will connect with the Terre Haute and Richmond, the Terre Haute and Alton and the Atlantic and Mississippi roads. At Vincennes it will cross the Ohio and Mississippi road, the western division of which extending from Vincennes to St. Louis, is expected to be finished in March next. This connection will give to this road a large amount of the travel to and from St. Louis. There has also been a road located from Nashville, Tennessee, to Henderson, Kentucky, and a point on the Ohio river, opposite Evansville, a part of which is now in progress of construction, and when completed will secure to the Evansville and Crawfordsville road a large amount of southern travel, as no road can be constructed from Evansville to Indianapolis at any admissible cost, that can compete with this in speed, or low rates of fare, for the travel between those points, connecting as it does with the Terre Haute and Richmond road. These roads run through a very level country, making the curvature easy and grades light. The greater part of the road is substantially level: none exceeds 40 feet to the mile, and

little 30 feet. It can therefore be run with great speed, carrying passengers from Evansville to Cincinnati in the sunlight of a single day, and can put them on any road running eastward from Indianapolis, that they could possibly reach by any other line which may ever be built from Evansville to that place.

This line of road runs through a wide belt of productive soil, forming the Valley of the Wabash now settled with an active and thriving population, and is constantly increasing in numbers, and the multiplied fruits of industry.

The inhabitants of this valley, for a hundred miles in width, have always had, and still have a natural intercourse and commerce with the Southern States, and especially with the city of New Orleans. The business between those sections has been as certain and as much a matter of course, as the business between New York and Buffalo.—This whole region has been, and doubtless, ever will be, supplied with groceries from that source.

The transportation of the sugar, molasses and coffee, yearly consumed in the Wabash Valley, would nearly defray the expenses of a railroad so cheaply operated as this.

But this road completed, is not the Wabash Valley only which is to be supplied with these commodities transported over it. A large part of Central and Northern Indiana and Eastern Illinois, will be more economically furnished with Southern productions through this than any other medium.

A few miles south of Terre Haute this road traverses for several miles the border of an extensive coal field, where coal exists in inexhaustible quantities, and of a quality believed to be superior to any other in the State, and convenient of access by short switches from the line. As the road shall be extended to Crawfordsville, it will in like manner, traverse inexhaustible beds of coal of good quality. There being no extensive beds in the valley North or South of these points which are so easy of access, the transportation of this article over the road must add largely to its receipts.

It is almost superfluous to relate in detail, its importance as a freight road; the productiveness of the Wabash valley is well known throughout the country. Its immense surplus of grain and provisions has for many years been felt in distant markets, and particularly in New Orleans.

As a passenger road we think there are but very few in the Western States that can excel it, and in view of the important connections this road will have, the productiveness of the country through which it passes, and the coal trade which it must command, it is not unreasonable to anticipate that the Evansville and Crawfordsville Railroad is destined to become one of the most important and profitable roads in the West.

The charter of the Terre Haute and Richmond Railroad, and the value of its capital stock is well known; therefore a comparison of the receipts of said road for the first six months after it was opened, with the receipts of the Evansville and Crawfordsville road for the same period of time after it was opened to Vincennes, may be appropriate, as it furnishes a demonstration in favor of the latter.

The receipts of the Terre Haute and Richmond road during that period being \$42,768 85, equal to \$594 per mile on 72 miles.

The receipts of the Evansville and Crawfordsville road during the same period of time was \$32,798 88, equal to \$643 per mile on 51 miles, or \$49 per mile in favor of the latter road.

All the rolling stock, work, and material on the road, except the iron rails, chairs and spikes, have been paid for, and the floating debt of the company, except for the three last named articles, does not exceed sixty-five thousand dollars, which is more than covered by stock subscriptions not yet due, and other valuable assets not yet realized.

The company have 7 locomotives, and two or three will be in readiness by the time the road is completed to Terre Haute, and have a sufficient number of cars on hand or constructing, to meet

the business demands of the company for the ensuing winter.

The subscribed Capital Stock of the company belonging to the portion of the road between Evansville and Terre Haute is \$838,400; this amount is being increased from time to time, by additional subscriptions, and it is believed that it will soon reach a sum equal to full one half the cost of that part of the line.

The estimated cost of the road when completed in perfect order as a first class road, with all the necessary lands, side tracks, depots, and other buildings, and fully equipped is \$2,205,051, or \$20,229 33-100.

Upon this basis the company have issued 740 seven per cent. Coupon bonds of one thousand dollars each, convertible into stock of the company at the pleasure of the holder, at par.

The mortgage is upon the whole of that portion of the road and equipments, between Evansville and Terre Haute, 109 miles and is the first and only incumbrance on that part between Vincennes and Terre Haute, 58 miles; but that part of the road and equipments between Evansville and Vincennes, 51 miles, is subject to a prior mortgage to secure the payment of 350 bonds, of one thousand dollars each, payable on the first day of January, 1862, making the whole encumbrance \$1,090,000, or ten thousand dollars per mile, being less than one half the estimated cost of the road and equipments, and must prove an ample and undoubted security.

The charter makes the President and Directors individually liable for all debts contracted by them in the name of the company beyond the amount of good and solvent stock subscribed.

The mortgage or Deed of Trust to secure the payment of the bonds, is made to the Farmers' Loan and Trust Company of New York as Trustees. They bear 7 per cent. interest payable semi annually, at the office of said Trust Company, on the first day of November next, and on the first day of May and November of each ensuing year, and the principal thereof will be paid on the first day of May, 1869, at the office of said Farmers' Loan or Trust company.

The law authorizes the company to pay any rate of interest, and to sell their bonds at any rate of discount agreed upon between the parties.

It is now proposed to sell 600 of the bonds to enable us to meet the payments for iron and machinery purchased for the road.

SAMUEL HALL, President,
September 15, 1854.

(For the American Railroad Journal.)

Sinking Fund for the Erie Railroad.

In the R. R. JOURNAL of the 16th ult. I pointed out what I believed to be the proper policy for the Erie Railroad Company to adopt in reference to the payment of its Income bonds; and as to the general management of its funded debt. I will now proceed to show some of the comparative results of paying of a funded debt by the creation of a sinking fund, or by the creation of a new one at a discount.

For the purpose of instituting this comparison I will assume the following as the position of the Erie Railroad Company. I use round figures only to facilitate computations.

Stock	.....	\$10,000,000
1st Mortgage Bonds, 1866	.....	\$3,000,000
2nd " " 1859	.....	4,000,000
3d " " 1883	.....	6,000,000
Income " 1855	.....	2,700,000
Convertibles " 1871	.....	4,300,000
" " 1862	.....	3,500,000
		<hr/>
		\$23,500,000

Annual Interest, 7 per cent. \$1,645,000

I assume further, that the road will earn \$700,000 applicable yearly to dividends, sinking fund

or improvements, after paying interests, running expenses, &c., &c.; which, considering the amount of net earnings, \$616,000 in 9 months, cannot be considered extravagant.

If a short Bond, secured by a sinking fund of \$310,000 semi-annually be adopted, the result will be as follows:

Yearly net income	.....	\$700,000
Less sinking fund	.....	620,000

Leaves 1st Feb'y, 1856, a surplus of..	\$80,000
Interest, 7 per cent., to 1st Feb'y, 1857..	5,600

	\$85,600
Surplus 1st Feb'y, 1857.....	80,000

	\$165,600
Interest 7 per cent., to 1st Feb'y 1858...	11,592

	\$177,192
Surplus 1st Feb'y, 1858.....	80,000

	\$257,192
Interest to 1st Feb'y, 1859.....	18,006

	\$275,196
Surplus 1st Feb'y, 1859.....	80,000

	\$355,196
--	-----------

Add surplus of sinking fund not required for liquidation of Income Bonds. (See R. R. JOURNAL, pag. 586.)	85,884
--	--------

Surplus applicable to dividend 1st Feb'y, 1859.....	\$441,080
---	-----------

Thus, with large sinking fund, the Income Bonds would be paid off entirely and the company stand ready to give 4 per cent. dividend 1st Feb'y 1859. I have stated the Income Bonds at \$2,700,000, though by the last statement of the company they amount to only \$2,649,000, which would leave the company so much more available means, on the 1st February, 1859. The debt of the company would be reduced \$2,700,000, and the annual interest thereon from 1st Feb'y, 1859, \$189,000, would be available for dividends or other purposes; and if set apart for sinking fund to liquidate bonds next due, it would produce \$94,500 semi-annually:

Say upon the 1st of August, 1859.....	\$94,500
3½ per cent. interest	2,885
Feb'y 1860.....	94,500

Total Feb'y 1st 1860.....	\$191,885
---------------------------	-----------

Interest to Feb'y 1st, 1861.....	13,423
Amount for 1861.....	191,885

Total Feb'y 1st, 1861.....	\$407,098
----------------------------	-----------

Interest to Feb'y 1st, 1862.....	28,447
----------------------------------	--------

Total for Feb'y 1st, 1862.....	\$535,545
--------------------------------	-----------

Payment and interest, semi-annually for 1862.....	191,835
---	---------

Total Feb'y 1st, 1862.....	\$727,380
----------------------------	-----------

Thus, Feb'y 1st, 1862, \$727,380 of the company's Bonds could be absorbed, reducing the \$3,500,000 due 1862, to \$2,872,620.

Do the stockholders in reality lose by such operation? They sacrifice, it is true, 4 years dividends; but in so doing they pay off an equal amount of debt, and add to the value of the stock in exact proportion to the amount of debt paid.

The very payment of debt makes them richer. Instead of a net income of \$700,000, assumed above, the net income is increased by interest saved, say from 1862 forward, 7 per cent. on \$3,427,880; equal to 239,917; so that without allowing for in-

creased business, the income from Feb'y 1st, 1862, will be \$939,917 available for dividends, and the debt reduced from \$23,500,000 to \$20,072,620.

If the debt can be reduced to 20 million, there is no doubt that the stockholders, with increase of business, can realize 10 per cent. dividends and have a handsome surplus to set aside for a sinking fund, to reduce the debt still further. As the debt is reduced, the Bonds advance in value, and, probably in 10 years, a six p. cent. loan can be sold at, or over *par*, to liquidate all the 7 per cent. Bonds, allowing *one* per cent. saved by the process, to be set aside as sinking fund. The stockholders may then find road yielding them 10 or 15 per cent. dividends, increasing as debt is reduced.

If the Income Bonds are paid off by 1st Feb'y, 1859, and company in addition shows, as above stated, a surplus of \$441,000, the 3d Mortgage Bonds will sell at a high price; at all events much better than they would if a new 25 year loan had been resorted to and sold at large discount.

If, further, the interest saved on the \$2,700,000 Income Bonds be set apart for sinking fund to extinguish \$727,380 of the Convertible Bonds due in 1862, there will be no difficulty in negotiating a new loan to settle what may not have been converted of the \$2,872,620 Convertible Bonds not provided for; with the chance of 10 per cent. dividends as shown above, in and after 1862. The probabilities are that most if not all the Convertible Bonds would be converted, and no new loan required for them.

Adopt the 25 year loan with $\frac{3}{4}$ per cent. semi-annual, or $1\frac{1}{2}$ per cent. annual, sinking fund; it will work as follows:

To pay off \$2,700,000 Income Bonds, \$3,000,000, 25 year 7 per cent. Bonds at least must be issued. Assume, to be liberal, that they sell at 90 per cent.

The debt is thus increased to \$23,800,000, annual interest 7 per cent. to \$1,666,000; the net income instead of \$700,000 reduced to \$679,000. In 1859 the 2nd Mortgage of \$4,000,000 fall due, to pay which the \$4,000,000 3d Mortgage set apart for them are to furnish means.

I assume these also to sell at 90 per cent. producing only \$3,600,000. The company have to take \$400,000 out of earnings to settle 2d Mortgage Bonds, and lose this amount entirely. It is not a temporary loss or sacrifice, it is a direct total loss, on which stockholders forever lose interest, and results, to settle \$4,000,000 2nd Mortgage, as if \$4,400,000 Bonds had been issued, making debt equal to \$24,200,000; interest on the same \$1,694,000, and reducing net income to \$651,000.

In 1862, \$3,500,000 Convertibles fall due. Assuming these again paid by new loan sold at 10 per cent. discount, \$350,000 are again sunk. The debt is thus increased to \$24,550,000, interest to \$1,718,500; and income reduced to \$626,500. Thus, where in 1854 net income is 7 per cent. on stock, it falls in 1862 to $6\frac{1}{4}$ per cent., with the debt largely increased. Is such a course likely to maintain confidence, the value of stock or shares, or to facilitate new loans for what falls due in 1867 and 1871?

It will be seen from above, that while a large sinking fund sacrifices four years dividends, these after 4 years will be amply repaid in shape of increased value of stock, holding out fair prospect

of 10, 12 or 15 per cent. dividends, and leaving a surplus for sinking fund; while a long loan, by reducing income, reduces value of stock by sacrifices incurred, and leaves in 4 years a chance for only $6\frac{1}{4}$ per cent. dividend; in 8 years a chance for only $6\frac{1}{4}$ per cent. dividend, and that without considering $1\frac{1}{2}$ per cent. sinking fund on \$3,000,000, equal \$45,000 per year, which reduces the income at once to \$634,000, or $6\frac{1}{2}$ per cent. for dividend; and in 1862 to \$581,500; or 5 8-10th per cent. dividend. As the debt increases, it will become more and more difficult to pay off what is maturing by new loans, and the stock and bonds will fall under bad management, and reduced income.

In 10 years on the above plan, the stock may be worth 120 per cent., or more, and yield 10 or 12 per cent. dividend. In the same period on the plan of long bonds the dividends may be reduced to below 4 per cent.; and bonds that must be negotiated within next 10 years, sell much below 90 per cent.

I have frequently seen it stated that the increased cost of roads did not produce corresponding increase in net income. Above is solution of the problem.

If the Erie Railroad has earned \$616,000 in 9 months as lately stated by the directors, then can my plan be carried out, and in 1862 the road be made to pay 10 per cent. dividends per annum. Will such a result depreciate stock or bonds?

If in 1855, 1859, 1862, and so on, as loans fall due, new loans are negotiated at discount to pay old debts, the value of stock, and chance of dividends will surely be reduced.

I have assumed that the loans can be negotiated at 90 per cent., which is a liberal price. They may not be saleable at 85 or 80 per cent.

At 80 per cent. the loss would be double, and chance of dividend in 1862 reduced to $4\frac{3}{4}$ per cent. per annum. Is that likely to increase value of shares and bonds? If such is result for 8 years, what will it be in 25 years?

If new long loans with small sinking funds be made to pay old debts, and sell at 80 per cent., the debt in 1855 will have grown to.....\$24,175,000

Interest	\$1,692,250
----------------	-------------

Income reduced from \$700,000 to	\$652,750
Less $1\frac{1}{2}$ per cent. sinking fund	45,000

\$607,750

Leaving 6 per cent. for dividend in 1855.

In 1859 the debt is increased to....\$25,175,000

Interest	\$1,762,250;
----------------	--------------

reducing income from \$700,000 to	\$582,750
Less sinking fund	45,000

\$537,750

Leaving for dividend in 1859 $5\frac{3}{4}$ per cent.

In 1862 again \$3,500,000 due, and paid by new loans sold at 80 per cent., increases the debt to.....\$26,050,000

Interest	\$1,822,500
----------------	-------------

Net income reduced from \$700,000 to	\$521,500
Less sinking fund	45,000

\$476,500

Leaving for dividend 1862 $4\frac{3}{4}$ per cent. yearly; or perhaps with increase of business 6 or 7 per cent. per annum, instead of 12, or 15 per cent. M.

(To the Editor of the American Railroad Journal.)

Working of Railroads by Contract.

Sir: In the *Journal* of July 8th, is an article on the subject of working railroads by contract, in which you express a favorable opinion as to the saving to be effected by the introduction of that system into this country; and as the plan is fast gaining ground in the Old, and especially on the Continent, the benefits derived from it cannot be too soon canvassed, and its advantages brought to bear on some of the depreciated stocks of the New World.

There are several ways for contracting for the rolling stock, involving different financial arrangements between the company and the contractors; the general rule being that the less outlay required from the latter, the cheaper the work is done. The best arrangement for a company, is to find all the stock, with necessary machinery for repairs, and pay only for the work done at a mileage rate, retaining a certain per centage of the amount, generally 10 per cent for depreciation of the stock and security; and at the expiration of the contract returning the difference between the actual depreciation by valuation, and the amount thus kept in hand. For a line whose means may be limited, a better arrangement is for the contractor to find every thing, the company being bound to take the stock at a valuation at the end of the term, but as the capital required for this is generally beyond the means of private individuals, some arrangement for bonds or debentures is usually agreed upon. In America, where more than anywhere else, many otherwise good lines, are borne down and hampered with heavy floating liabilities requiring great attention on the part of the managers, and loss and risk on the part of the proprietors, by continually contracting loans, and renewing mortgages, so much time is taken up in financiering, that the little details of management are apt to be neglected. The contract system tells upon the prosperity of the company in two ways; relieving the mortgage account, and doing the work cheaper.

Nothing would so soon bring about the prosperity of some of the roads as to make a good arrangement with a contractor to take the whole of the rolling stock off the hands of the companies, paying for it, say in certain annual or semi-annual instalments, and working the traffic at a mileage rate. Irrespective of the saving in the actual cost of the trains per mile, the fact that the work can be done and would be done at 25 per cent. on an average, less than it is now costing, the greater punctuality, safety, and certainty that would be introduced, the relief offered to the present financial condition of companies, would alone justify the experiment. Take for example the Erie Railroad, a line which with excellent prospects otherwise is on great financial difficulty from its disproportionately heavy liabilities. The capital of the company is about \$10,000,000, and the rolling stock is possibly worth half that sum; whilst it has the enormous debt of \$25,000,000, the interest of which must be sapping the energies and destroying the prospects of the whole affair. Could that stock be turned over to responsible contractors and probably \$5,000,000 of bonds put to rest, the residue would be more manageable, and time afforded to make the necessary provision for them. If no other advantage should accrue, and the work were

done no cheaper, and no better, this reduction of the company's debt, would alone put a different aspect on their affairs. There is one more consideration affecting the interest of a railroad by thus disposing of the rolling stock, and having the work done by a fixed sum per mile. To the public this is the mysterious item that is rarely understood, and seldom sufficiently allowed for. Common observation gives generally a pretty correct idea of the amount of a railroad's revenue, and periodical statements of the gross receipts keep the public informed of the business that is doing: but the working expenses, the depreciation of engines, the wear and tear of carriages, the cost of accidents, and the necessary provision against "contingencies," those unpleasant subjects to those not behind the scenes, baffle all calculation, disappoint all expectation and contradict the most elaborate estimates. Where there is uncertainty there will always be uneasiness, and the prices of shares depend more upon confidence than appearances.—In the depression that passed over all railways a few years ago, the only line in England whose shares were not unduly depreciated, and which retained their position in the market, were the Lancaster and Carlisle, without debt, and without preference shares, owning neither engine nor carriage, and with the work well done by contract patent to every proprietor. The public felt that on this line at least there was no room for roguery, and nothing to be divulged.

There are plenty of roads in the States short of traffic and not paying in consequence; because the companies are not charging so low as to induce that traffic to come to their line: believing that low rates would not pay them. Permit me to refer you to the article in your No. for August 26th on the Vermont Central. Freight pays generally as well as passengers, if it be properly managed.—The best paying railroad in the world was the Stockton and Darlington before it carried many passengers, and when the locomotives were worked by contract at $\frac{1}{4}$ d. ($\frac{1}{2}$ cent) per ton per mile. With plenty of freight even at such a rate as will bring the quantity on the line, the Vermont Central need not prove such a bad concern after all. There is plenty of work in that direction for more than the three lines now competing for the traffic between Boston and the St. Lawrence and the line that pays the best will be the one which is worked in the cheapest way, and secures the largest traffic.

An experience of 12 years in the working of locomotives both by contract and otherwise, leads me to the deliberate opinion that $\frac{1}{2}$ of the total cost of locomotive power depends upon the management of an engine on the road, and this is the first great point where contractors make a profit over the present system. In America, no check is kept for instance over the fuel. The tender is replenished at any of the wooding stations, no one knowing, or caring how much is used, and how far it goes. No advantage is held out for economy, and as it requires more skill and exertion to be saving than to earn, and no inducement being offered as a premium for that extra exertion, of course it is seldom applied. In Germany a cord of wood costs perhaps a dollar and carries an engine 80 miles. Here sawn and carried into the tender, the price is seldom under \$3, and the average of all America, would scarcely come up to 30 miles for its consumption. Every now and then "crack"

trip are run which show that American engines may be care, run just as cheaply as any others, but the average remains as low as ever. In 1848 the Eastern Counties Railway, a line nearly as long as the Erie, and with three times the capital, let their locomotives by contract, and in 6 months the consumption fell from 68 lbs. of coke per mile to 22. There are other items besides fuel, the amount of which is dependent on the management of the engine driver on the road, and perhaps the heaviest of these repairs might in some cases be reduced 50 per cent., by giving the men a better interest in their work, and making their earnings and their engines in some measure correspond. On the Great North of France, one-third less engines are used for the same work than were necessary before the contracting system, and better arrangements were introduced.

In conclusion I would urge on every company the propriety of keeping a separate account against every engine. Let every stick of wood and every gallon of oil be accounted for by *some one*. It gives a little more trouble in the office, but it saves immensely out of doors. It introduces a spirit of emulation and rivalry amongst the men, highly beneficial to the company, and if, in addition to this, premiums were given to the drivers for economizing wood, oil, tallow and other materials, it would be a great encouragement for good work, and the expense would be utterly disproportionate to the saving effected. A man will soon tire of making exertions to economize materials if he gets no advantage over his neighbor, who refuses to put himself out of the way, and any system that pays a man in proportion to the work he does and the skill he manifests, must in the long run, have the effect of bringing the best and steadiest men to the place where their qualifications are the best appreciated.

Apologizing for the length of these observations

I remain Sir,

Yours truly,

VERNON SMITH.

Welleville, C. W.

New Jersey Locomotive and Machine Co. Large Locomotive.

The large locomotive, lately noticed by us as building at the above work, has been since completed and placed upon the Delaware, Lackawanna and Western Railroad of Pennsylvania. The heavy prospective coal traffic of this road has induced its managers to contract for locomotives of extraordinary power, and most of which, with some modifications necessary for burning *Anthracite Coal*, will be based upon the general design of the engine under notice.

The "Tobyhanna," a name selected, as those for all the company's engines, from the local names upon the route of their road, was designed by, and built under the immediate direction of Mr. ZERAH COLBURN, the Engineer of the New Jersey Locomotive Company. The engine is outside connected, and has six driving wheels of 48 inches diameter, all placed forward of the fire-box. The cylinders are of 18 inches bore, and 24 inches stroke. The cylinders being laid horizontally, are placed at the distance of 8 feet 1 inch between centers, in order to allow room for the coupling rods of the forward pairs of drivers to work behind the slides. Each cylinder, besides being bolted by seven bolts, $1\frac{1}{4}$ inches in diameter, to the

frame, is held by twenty one-inch bolts to a central bed, or square cast iron box, beneath the smoke-box. The vertical flanges of the cylinders, planned to fit to the planed sides of this box, are 30 inches long and 26 inches high. The central casting is cast open at the bottom, and with a closed top, or curved flange, fitting and bolted by 32 bolts to the under side of the round smoke box. By this mode of fastening, the cylinders and central box become nearly as rigid as a single casting, while the fastening to the frames and the smoke box is of the most secure kind. The weight of each cylinder "in the rough" was 2175 lbs.; of the center casting, 1570 lbs.

The frame is of the "slab" kind, 12 inches deep and 2 inches thick, with pedestals forged on solid. The entire frame weighs three tons.

The boiler has a large fire box, 146 iron tubes, $2\frac{1}{4}$ inches in diameter and 14 feet long. The tube surface is 1203 square feet. Having two steam domes with a large amount of steam room, and with such a large opening through the tubes for draught, this boiler is enabled to make any required amount of dry steam. The area of fire grate is 19 square feet.

The valve motion is that of the shifting link, the valve stem being placed behind the front driving wheel to obtain a proper length of eccentric rod. The slides, crank pins, connecting rods, etc. are all of appropriate strength. The wheels are 11 feet between the extreme centers, and are heavily balanced to insure steady running. The engine "tracks" well in short curves when running at 20 miles an hour; the speed for which she is intended with loaded trains, being from 12 to 14 miles per hour.

The whole weight of the engine with wood and water is 68,100 lbs, or 34 tons, 100 lbs.

It will be remembered that the gauge of the Lackawanna road is six-feet, which accounts for the distance between the centers of the cylinders.

The New Jersey Locomotive Co. are now engaged in constructing at their New Jersey Works, another engine upon nearly the same plan and for the same road. The new engine, however, will be adapted for burning Anthracite. The boiler is prolonged at the furnace end, so as to place the firebox entirely behind the rims of the driving wheels. The grate will be 4 feet long in the direction of the length of the engine, and 7 feet 6 inches wide across the track, giving 30 square feet of grate area. The tubes which will be of iron, are to be 3 inches in diameter and 15 feet 6 inches in length. The large size and great stiffness of these tubes will remove any danger of their leaking when once properly set.

Virginia and Tennessee Railroad.

We learn from a statement prepared by the Chief Engineer of this road, that the entire debt of the company, when the road shall have been completed, will be 1st; \$1,000,000 to the State payable in thirty years with interest, payable semi-annually. Second; \$500,000 to individuals. These two classes of debts are secured by a first mortgage on all the property and revenue of the company. Third, \$500,000 of bonds secured by a second mortgage—making altogether a total indebtedness of \$2,000,000. Mr. Garnett states that the whole cost of the road, 204 miles in length will be \$5,000,000, or any \$25,000 per mile, when completed and equipped with a large supply of cars and locomotives. One hundred and six miles of it are now opened, being an addition of 33 miles

since the 1st of January. The receipts for July amounted to \$15,000, and he estimates those for August and September at \$20,000 per month, or more. By the 1st of October, or within a few days thereafter, the road will be extended to Wytheville, 135 miles from Lynchburg.

American Railroad Journal.

Saturday, October 7, 1854.

We notice that Mr. ZERAH COLBURN, in a printed circular styles himself "late associate Editor of the American Railroad Journal." Mr. COLBURN was formerly employed in the office of the JOURNAL, at a stipulated salary, with specific duties, without authority or discretion in its management, and was no more "associate" Editor, than are the reporters of the "City items" to the Times, and Tribune, "associate" Editors of those papers. His statement is a mere assumption for which there is no foundation in the relation he ever sustained to the JOURNAL.

Share and Money Market.

The share market has remained in a very quiet state for two or three weeks past, with less than ordinary fluctuation. Although there has been no great improvement in prices, a much more cheerful tone of feeling prevails, and the money market is gradually working into an easy state. There is a moderate, though steady sale of securities, both for the domestic and foreign market, which, with the general curtailment in expenditure will soon produce an easy money market.

The earnings of railroads for September as far as received, show a most favorable result, and are fully up to expectation.

New Haven Railroad Meeting.

The meeting of this company held in this city on the 3d instant, to take action in reference to the over-issues of stock by its late President, ended in an adjournment to meet in New Haven on the second Wednesday of November. The meeting was numerously attended, and the proceeding of an excited and stormy character, but no action taken, showing the final determination of the stockholders.

Central Ohio Railroad.

We learn from the Zanesville *Aurora* that the Stockholders of the Central Ohio Railroad, on Monday last, elected the following gentlemen as Directors of said company for the ensuing year:

John H. Sullivan, Chancy Brooks, N. L. Whittlemore, N. Wright, John Davenport, J. W. Hall, George James, S. R. Hosmer, William Galligher, Samuel Clarke, George B. Wright, D. W. Dreshler, and Samuel Brush.

The Corn Crop of the United States.

The Indian corn crop is one of the most important crops of the country—hence the anxiety produced by the long drought. According to the census of 1850, the total amount of corn produced in the United States was 592,071,104 bushels.—The principal corn growing States produced as follows:

Ohio	50,078,695	Alabama	28,753,048
Indiana	52,964,363	Georgia	30,080,090
Illinois	57,646,984	N. Carolina	27,941,051
Missouri	36,214,537	Virginia	35,254,349
Kentucky	58,672,591	Pennsylvania	19,835,214
Tennessee	52,276,223	New York	17,858,400
Mississippi	22,446,552	S. Carolina	16,271,454

A full crop for 1854 is estimated at 700,000,000 bushels.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Debt.	Tot. cost of road and equipm't.	Gross Earnings for last official year.	Net Earnings for last official yr.	Dividend for do.	Price of Shares.
Atlantic and St. Lawrence... Maine.	150	1,538,100	2,973,700	5,973,700	254,743	113,520	none	86
Androscoggin and Kennebec.. "	55	824,363	1,043,540	2,036,140	177,003	80,053	none	32
Kennebec and Portland..... "	72	1,073,673	1,439,694	2,520,981	168,114	100,552	none	42
Port, Saco and Portsmouth.. "	51	1,355,500	123,884	1,459,384	208,669	.....	6	94
York and Cumberland..... "	20	285,747	341,100	713,605	23,946	11,256	none	24
Boston, Concord and Montreal. N. H.	93	1,649,278	622,200	2,540,217	150,538	79,659	none	17
Concord	35	1,485,000	none.	1,485,000	305,805	141,836	8	105
Cheshire	54	2,078,625	720,900	3,002,094	287,768	55,266	5	35
Northern	82	3,016,634	.....	.....	328,782	163,075	5	42
Manchester and Lawrence.... "	24	717,543	.....	.....	.....	.....	6	70
Nashua and Lowell..... "	15	600,000	none.	651,214	132,545	51,513	8	104
Portsmouth and Concord.... "	47	.....	.....	1,400,000	.....	.....	none	.....
Sullivan..... "	26	.....	.....	673,500	.....	.....	none	16
Connecticut and Passumpsic.. Vt.	61	1,097,600	550,000	1,745,516	.....	.....	none	20
Rutland	120	2,486,000	2,429,100	5,577,467	495,397	266,539	none	9
Vermont Central..... "	117	8,500,000	3,500,000	12,000,000	.....	.....	.....	41
Vermont and Canada..... "	47	1,500,000	.....	1,500,000	Leased to the Vt. C.	.....	cent.	78
Western Vermont..... "	51	392,000	700,000	.....	Recently opened.	.....	none	.....
Vermont Valley	24	.....	.....	.....	.....	.....	none	.....
Boston and Lowell..... Mass.	28	1,830,000	206,190	2,044,536	434,599	114,098	6	81
Boston and Maine..... "	83	4,076,974	150,000	4,111,345	863,024	418,358	8	100
Boston and Providence..... "	55	3,160,000	402,326	3,579,041	509,326	226,639	6	77
Boston and Worcester..... "	69	4,500,000	590,541	4,850,754	887,219	413,289	7	95
Cape Cod branch..... "	29	421,950	180,000	633,906	68,942	26,412	5	40
Connecticut River..... "	52	1,591,110	286,363	1,802,244	258,220	102,098	4	52
Eastern..... "	58	2,850,000	1,192,975	3,120,391	620,810	310,875	6	61
Fall River..... "	42	1,050,000	6,208	1,050,000	294,183	126,589	8	93
Fitchburg..... "	67	3,540,000	191,500	3,716,870	626,659	214,633	6	87
New Bedford and Taunton... "	20	500,000	none.	529,964	188,442	46,839	7	117
Boston and New York Central	74	1,159,228	953,370	2,221,068	90,315	35,214	none	50
Old Colony..... "	45	1,964,070	295,038	2,293,534	374,939	122,866	none	99
Taunton Branch..... "	11	250,000	none.	307,136	159,738	21,490	8	.....
Vermont and Massachusetts.. "	77	2,233,939	1,139,615	3,207,818	244,323	13,144	none	11
Worcester and Nashua..... "	46	1,140,000	194,445	1,342,593	182,398	81,807	5	52
Western..... "	155	5,150,000	5,319,520	9,953,258	1,525,224	746,736	7	93
Stonington..... R. I.	50	.....	467,700	.....	240,572	110,892	6	65
Providence and Worcester... "	40	1,457,500	300,000	1,791,999	291,417	120,892	6	80
Canal..... Conn.	45	922,500	500,000	1,400,000	.....	.....	4	65
Hartford and New Haven... "	72	2,350,000	800,000	3,150,000	639,529	294,269	10	119
Housatonic..... "	110	.....	.....	2,500,000	329,041	168,902	none	.....
Hartford, Prov. and Fishkill. "	50	.....	.....	In progres	69,629	.....	none	.....
New London, Wil. and Palmer	66	558,861	800,000	1,511,111	114,410	.....	.....	.....
New York and New Haven... "	61	3,000,000	1,641,000	4,978,487	806,713	428,173	7	.....
Naugatuck	62	926,000	440,000	.....	.....	.....	8	.....
New London and New Haven.	55	750,500	650,000	1,380,610	Recently opened.	.....	none	40
Norwich and Worcester..... "	54	2,121,110	701,600	2,596,488	267,561	116,965	4	45
Buffalo and New York City... N. Y.	91	900,000	1,550,000	2,550,500	Recently opened.	.....	none	.....
Buffalo, Corning and N. York.	132	.....	.....	In progres	.....	.....	none	.....
Buffalo and State Line..... "	69	879,636	872,000	1,921,270	Recently opened.	.....	.....	130
Canandaigua and Niagara F... "	50	.....	.....	In progres	.....	.....	.....	.....
Canandaigua and Elmira..... "	47	425,509	582,400	987,627	76,760	39,360	none	.....
Cayuga and Susquehanna.... "	35	687,000	400,000	1,070,786	74,241	23,496	none	.....
Eric, (New York and Erie).... "	464	10,000,000	24,003,865	33,070,863	4,318,962	1,800,181	7	44
Hudson River..... "	144	3,740,515	7,046,395	10,527,654	1,063,659	338,783	none	44
Harlem	130	4,725,250	977,463	6,102,935	681,445	324,494	4	33
Long Island..... "	95	1,875,148	516,246	2,446,391	205,068	44,070	none	22
New York Central	504	23,085,600	10,773,823	33,859,423	.....	.....	.....	90
Ogdensburg (Northern).... "	118	1,579,969	2,969,760	5,133,834	480,137	195,847	.....	11
Oswego and Syracuse..... "	35	350,000	203,000	553,598	92,353	46,072	.....	.....
Plattsburg and Montreal.... "	23	174,042	131,000	359,775	Recently opened.	.....	none	.....
Rensselaer and Saratoga.... "	25	610,000	25,000	774,350	213,078	96,737	.....	.....
Rutland and Washington.... "	60	850,000	400,000	1,250,000	Recently opened.	.....	.....	.....
Saratoga and Washington.... "	41	899,800	940,000	1,832,945	173,545	135,017	none	30
Troy and Rutland..... "	32	237,690	100,000	329,577	Recently opened.	.....	.....	33
Troy and Boston..... "	39	430,936	700,000	1,043,367	Recently opened.	.....	none	.....
Watertown and Rome..... "	96	1,011,940	650,000	1,693,711	225,152	116,706	8	92
Camden and Amboy..... N. J.	65	1,500,000	.....	4,327,493	1,388,385	478,413	10	120
Morris and Essex..... "	45	1,022,420	128,000	1,220,320	149,941	79,252	7	.....
New Jersey..... "	31	2,197,840	476,000	3,245,720	603,942	316,259	10	181
New Jersey Central..... "	63	1,679,935	1,500,000	3,195,222	365,833	179,210	7	95
Cumberland Valley..... Penn.	56	1,184,500	13,000	1,265,143	118,617	76,890	5	.....
Erie and North East..... "	20	600,000	.....	750,000	Recently opened.	.....	.....	125
Harrisburgh and Lancaster... "	36	830,100	713,227	1,702,523	265,327	106,320	8	55
Philadelphia and Reading.... "	95	6,656,332	10,427,800	17,141,987	2,480,626	1,251,987	7	73
Philad., Wilmington and Balt.	98	5,000,000	2,899,166	8,067,285	868,038	541,769	5	69

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Miles open.	Capital paid in.	Funded debt.	Total cost of road and equipment.	Gross Earnings for last official year.	Net earnings for last official yr.	Dividend for do.	Price of shares.
Pennsylvania Central..... Penn.	250	9,768,155	5,000,000	13,600,000	1,943,827	617,625	....	85
Philadelphia and Trenton.... "	30	.....	.....	.....	.....	.....	.....	.....
Pennsylvania Coal Co..... "	47	.....	.....	.....	.....	.....	.....	.....
Baltimore and Ohio..... Md.	381	13,118,902	5,677,103	22,254,338	2,033,420	798,193	7	49 1/2
Washington branch..... "	38	1,650,000	.....	1,650,000	348,622	216,237	8	.....
Baltimore and Susquehanna.. "	57	.....	.....	.....	413,673	152,536	.....	.....
Alexandria and Orange..... Va.	65	.....	.....	In prog.	.....	.....	.....	.....
Manassas Gap..... "	27	.....	.....	In prog.	.....	.....	.....	.....
Petersburgh..... "	64	769,000	173,867	1,163,928	227,593	72,370	7	77
Richmond and Danville..... "	73	1,372,324	200,000	In prog.	.....	.....	.....	70
Richmond and Petersburg.. "	22	685,000	.....	1,100,000	122,861	74,113	none	40
Rich., Fred. and Potomac.... "	76	1,000,000	503,006	1,531,238	254,376	113,256	7	100
South Side..... "	62	1,357,778	640,000	2,106,467	62,762	.....	.....	.....
Virginia Central..... "	107	1,673,684	469,150	2,392,215	210,052	99,077	10	50
Virginia and Tennessee..... "	73	2,650,091	707,958	3,545,256	109,268	42,736	none	98
Winchester and Potomac.... "	32	180,000	120,000	416,532	89,776	.....	12	.....
Wilmington and Raleigh... N. C.	161	1,338,878	1,134,698	2,965,574	510,038	153,898	6	.....
Charlotte and South Carolina. S. C.	110	.....	.....	.....	.....	.....	.....	.....
Greenville and Columbia.... "	140	1,004,231	500,000	In prog.	.....	.....	.....	.....
South Carolina..... "	242	3,858,840	3,000,000	7,002,396	1,000,717	609,711	7	125
Wilmington and Manchester. "	.....	.....	.....	In prog.	.....	.....	.....	.....
Georgia Central..... Ga.	191	3,500,000	418,187	3,465,879	986,074	535,608	8	116
Georgia..... "	211	4,000,000	1,214	.....	931,424	456,468	7 1/2	.....
Macon and Western..... "	101	1,013,088	163,000	1,277,334	278,739	149,960	9	101
Muscogee..... "	71	.....	.....	In prog.	59,590	21,731	.....	.....
South Western..... "	50	586,887	150,000	743,525	129,395	71,535	8	.....
Alabama and Tennessee River Ala.	55	.....	.....	In prog.	.....	.....	.....	.....
Memphis and Charleston.... "	93	776,259	400,000	In prog.	.....	.....	.....	.....
Mobile and Ohio..... "	33	879,868	.....	In prog.	.....	.....	.....	.....
Montgomery and West Point. "	88	688,611	.....	1,330,960	173,542	76,079	8	.....
Southern..... Miss.	60	.....	.....	.....	.....	.....	.....	.....
East Tennessee and Georgia. Tenn.	80	835,000	541,000	In prog.	.....	.....	.....	.....
Nashville and Chattanooga... "	125	2,093,814	850,000	In prog.	.....	.....	.....	.....
Covington and Lexington.... Ky.	73	1,430,150	900,000	In prog.	.....	.....	.....	63
Frankfort and Lexington.... "	29	357,218	.....	584,902	87,421	44,250	.....	80
Louisville and Frankfort.... "	65	.....	.....	.....	.....	.....	.....	.....
Maysville and Lexington.... "	.....	.....	.....	In prog.	.....	.....	.....	45
Cleveland and Pittsburgh.... Ohio.	100	1,979,100	1,142,200	3,279,908	432,682	267,278	10	50
Cleveland and Toledo.... "	147	2,000,000	1,600,000	.....	.....	.....	.....	70
Cleveland, and Erie..... "	95	.....	.....	.....	.....	.....	.....	.....
Cleveland and Columbus.... "	135	3,027,000	408,200	3,655,000	777,793	483,454	12	104
Columbus, Piqua and Indiana. "	46	.....	.....	2,000,000	.....	.....	.....	.....
Columbus and Lake Erie.... "	61	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ham. and Dayton "	60	2,100,000	500,000	2,659,653	321,793	200,967	.....	.....
Cincinnati and Marietta.... "	.....	.....	.....	In prog.	.....	.....	.....	62
Dayton and Western..... "	40	310,000	550,000	925,000	Recently opened.	.....	.....	75
Dayton and Michigan..... "	20	.....	.....	In prog.	.....	.....	.....	.....
Eaton and Hamilton..... "	36	.....	.....	.....	.....	.....	.....	56
Greenville and Miami..... "	31	.....	.....	.....	.....	.....	.....	.....
Hillsboro..... "	37	.....	.....	In prog.	.....	.....	.....	.....
Little Miami..... "	84	2,668,402	482,000	3,169,733	667,559	352,133	10	.....
Mansfield and Sandusky.... "	.....	900,000	1,000,000	1,855,000	.....	.....	.....	.....
Mad River and Lake Erie.... "	167	2,387,200	1,767,000	4,110,148	540,518	113,401	.....	77 1/2
Ohio Central..... "	57	.....	.....	In prog.	.....	.....	.....	79
Ohio and Mississippi..... "	.....	.....	.....	.....	.....	.....	.....	.....
Ohio and Pennsylvania..... "	187	1,750,700	2,450,000	.....	Recently opened.	.....	.....	.....
Ohio and Indiana..... "	.....	.....	.....	In prog.	.....	.....	.....	.....
Scioto and Hocking Valley... "	44	750,000	300,000	.....	Recently opened.	.....	.....	.....
Columbus and Xenia..... "	54	1,291,700	26,000	1,310,062	314,434	168,612	10	.....
Evansville and Illinois..... Ind.	31	.....	.....	In prog.	237,506	.....	.....	.....
Indiana Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Indiana Northern..... "	131	.....	.....	.....	.....	.....	.....	.....
Indianapolis and Bellefontaine "	83	.....	.....	.....	Recently opened.	.....	.....	90
Indianapolis and Cincinnati. "	90	1,128,486	1,289,000	1,869,932	Recently opened.	.....	.....	.....
Lafayette and Indianapolis.... "	62	.....	.....	.....	.....	.....	.....	.....
Madison, Indianapolis & Peru "	159	2,647,700	1,241,300	2,409,000	516,414	268,075	10	.....
Terre Haute and Indianapolis "	72	632,387	663,100	1,858,019	106,944	71,446	4	.....
Rock Island and Chicago.... Ill.	.....	.....	.....	.....	.....	.....	.....	.....
Chicago and Mississippi.... "	135	2,400,000	4,000,000	4,600,000	.....	.....	.....	.....
Illinois Central..... "	.....	.....	.....	.....	.....	.....	.....	.....
Galena and Chicago..... "	92	.....	500,000	In prog.	473,548	286,152	.....	.....
Michigan Southern and Ind. N. Mich.	315	.....	3,741,564	7,276,616	1,200,922	586,929	17	90
Michigan Central..... "	282	.....	3,977,563	8,618,505	1,145,598	582,816	8	83
Pacific..... Mo.	88	.....	non	In progress	Recently opened.	.....	.....	.....

Evansville and Crawfordville Railroad.

We give in another column a recent exhibit showing the financial condition and plans of this company.

The road might perhaps be more properly called the Wabash Valley Railroad, as it lies for the greater part of its distance upon the bank of that river. It is this fact which constitutes in a very considerable degree its value. The course of this great river indicates both the natural and convenient route of business and travel of the country it drains. Unfortunately, while it waters a valley whose productiveness is not exceeded, probably, by any portion of the continent, it is almost entirely useless for purposes of navigation; so much so, that a railroad upon its bank could compete with it at a very large profit, and at rates much under the charge for insurance and transportation by water. Such a road is only wanted to supercede the use of steamboats for the few weeks, yearly, in which they can be run.

The business relations of the Wabash Valley are either north or south, between the Gulf of Mexico on the one hand, and the Lakes upon the other. In one of these directions all the exports and imports of the valley are forwarded and received. The points for forwarding the former and distributing the latter, are the leading towns upon the river, at which concentrates the trade of the adjacent country which embraces the eastern half of Illinois, with nearly an equal portion of western Indiana.

By way of the Mississippi River, are received most of the groceries consumed in the Wabash Valley, such as sugar, molasses, salt, fish, &c., &c.; also iron, and foreign and domestic merchandise shipped via New Orleans from the Eastern States and Europe. Through the same channel will continue to be sent, probably, the produce of the valley below Terre Haute; and as the road traverses, as before stated, a very rich and productive country, both its local and through traffic must, we think, be fully equal to that of first class western railroads.

In taking general views of the course of travel in the West, we have often expressed an opinion, that between Lake Michigan, for instance, and the Gulf Ports, travel will take the valley of the Wabash, for the reason that this route will be as short, probably, as any other, and because it presents not only far greater attractions than any other, but coincides with the route of convenience. A tourist in going from Chicago to New Orleans, or Mobile, would naturally be attracted to the Wabash Valley, where he would see some of the best specimens of soil and culture in the West; and to Nashville, Tennessee, which would give an opportunity of seeing the capital and the better part of the State, as well as an interesting portion of Kentucky. From Nashville he will be able to take a choice of routes either to New Orleans or Mobile. The traveller on business, will of necessity take the same route for the purpose of passing through the leading depots of trade lying between the Lake and the Gulf; such as Lafayette, Terre Haute, Evansville, Nashville &c., &c. The roads which will form the connections referred, are in an advanced stage of progress, and will soon be completed.

The Evansville and Illinois Railroad will un-

doubtedly take a large portion of the passengers arriving at Evansville in the boat, as by it they can gain 24 hours in the trip to Cincinnati, Indianapolis and the Lakes. Evansville is already a place of large trade, and will probably become the most important commercial town in the State. It is already the point of distribution of merchandise for south-western Indiana, and of a very considerable portion of Kentucky.

That portion of the above road from Evansville to Vincennes has been in operation for nearly a year past, and its receipts from local traffic alone, for the first six months, without any railroad connections whatever, were for a corresponding period, equally up to those of the Terre Haute and Richmond, which is one of the highest priced and best paying roads in the West. The completion of that division of the road now in progress to Vincennes, will at once bring it into use as a *through* route for passengers ascending or descending the Ohio, while the early opening of the Illinois division of the Ohio and Mississippi Railroad will constitute it a link of the great route of travel between Southern and Central Illinois and Missouri, and the East.

The route is remarkably favorable for the construction of a railroad at low cost, which will not exceed much if any, \$20,000 per mile. With such a cost, with a local and through traffic which it appears to us must be equal to the average of the best western roads, we believe it will prove to be one of the most profitable.

By a provision of the charter directors are made personally liable for any excess of debt over the amount of solvent stock subscriptions; a provision of very great importance to the creditors of the company and which must secure a careful and economical administration of its affairs.

The road has the efficient support of a number of influential gentlemen, among whom we may name Chauncey Rose, Esq., of Terre Haute, formerly Pres't of the Terre Haute and Richmond R. R., who is a very large and by far the largest individual stockholder in it, and is entrusted with the principal share of its financial management.

Belleville and Illinois Railroads

This road was opened on the 22d inst., giving railroad communication, from opposite St. Louis, to Belleville, some 16 miles distant. It will be ultimately extended to the Illinois Central road, giving a communication south.

Madison, Indianapolis and Peru Railroad

We have the first annual report of this company from which we extract the following account of the operation of the road for the first six months of the present year, with a statement of its financial condition.

The receipts for the first six months ending June 30th, were as follows:

ON MADISON ROAD.	
The freight and passengers.....	\$115,687 27
From other sources.....	30,133 77
Total.....	\$145,821 04

ON PERU ROAD.	
For freight and passengers.....	\$28,057 98
From other sources.....	4,798 95
Total.....	\$32,856 93

Making a total of receipts on the entire road of \$178,677 97, being \$21,389 86 less than the receipts of the Madison road alone, for the corresponding period in 1853.

This large diminution is attributable to various causes, chiefly, however, to the competition consequent upon the competition of the Bellefontaine, Central, Lawrenceburg, and Jeffersonville Railroads, nearly the entire business of which formerly passed over the Madison and Indianapolis road. With competition has also become a great reduction in the tariff for freight and passage. For most of this period freights were carried at irregular rates by the several roads; often at figures yielding a very inadequate compensation, a policy ruinous in the extreme, and which has been partially remedied, by the adoption of a uniform tariff for freights, by all the roads centering at Indianapolis.

The freights and travel have also been unusually light for the season, the products of the country, under the stimulus of liberal prices, having been drawn out to a great extent in the fall of 1853, and the prevalent sickness throughout the country deterring many from leaving home.

The expenditures for the same period have been as follows:

On Madison road.....	\$94,649 85
On Peru road.....	82,299 80
Total.....	\$176,949 65

The ordinary or current expenses for this period amounted to the sum of \$114,986 41; extraordinary \$70,963 24.

The ordinary expenses included the unusually large items of \$26,064 75, for repairs of road, and \$10,035 10 for wood purchased in 1853.

The extraordinary repairs made during this period, have been as follows:

On the Madison road some four or five miles of the old worn out bars have been taken up, the track relaid with new rail and ballasted.

On the Peru road some 30 miles have been ballasted at an expense from \$800 to \$1,000 per mile besides the construction of side tracks, switches, turn-tables, water stations, machine shop at Peru, work shop with engine and other machinery repairs of depot building, repairs of bridges and flat-bar track.

INDEBTEDNESS, FUNDED AND UNFUNDED.

ON MADISON ROAD.

Mortgage bonds 7 per cent.....	\$600,000 00
Income bonds 7 per cent., sold.....	316,000 00
Domestic bonds.....	2,300 00
Due S. Crooks for iron, for C. & S. road.....	20,095 63
Due John Magee for do. do.....	40,723 34
Bills payable for do. do.....	32,000 01
Other liabilities for do. estimated.....	30,000 00
Bills payable for sundries.....	47,946 00
Accounts unadjusted, estimated.....	15,000 00
Scrip dividend due Jan. '57.....	131,816 00
Indebtedness to State.....	354,000 00
Total.....	\$1,589,880 97

Of the Mortgage Bonds \$350,000 were applied to construction and equipment of road &c., and \$250,000 to the new terminus.

The income bonds have been secured by a second mortgage upon the entire line of the road.—The issue amounted to \$600,000, which were disposed of as follows:

Sold by Messrs. Winslow, Lanier & Co., applied upon indebtedness for Columbus and Shelby road, and for interest as per account rendered.....	\$239,000
Paid G. W. Cass on steamer Alvin Adams.....	26,000
Paid city of Madison for Col. & Shelby road.....	50,000
Paid for Babbet's patent.....	1,000
Deposit as collateral.....	123,000
Balance on hand.....	161,000
Total.....	\$600,000

Aside from the liabilities for the Columbus and Shelby road, the floating debt of the company amounts to something over \$60,000, as near as can be at present approximated. To this should be added the scrip dividend of \$131,816, declared on Jan'y 18th, '54, payable in three years from said date, bearing six per cent. interest, and convertible into the stock of the company at the pleasure of the holder.

OF PERU ROAD.

To bonds issued at 6 per cent., dated Aug. 1, 1850, due in 10 years, interest payable semi-annually, on the 1st August and February, at the Madison Branch of the State Bank of Indiana.....	\$12,000 00
To 600 bonds, each \$1,000 at 7 per cent dated July 1, 1852, payable July 1, 1864; interest payable semi-annually, on the 1st of July and January, at the Merchants' Bank in the city of New York.....	\$600,000 00
To 20 Hamilton county bonds, for \$1,000 each, dated September 1, 1851, due September 1, 1861, at 10 per cent. interest payable annually on the 1st day of September, at the office of Winslow, Lanier & Co., New York.....	\$20,000 00
To 20 Miami County Bonds, for \$1,000 each, dated September 1, 1851, due September 1, 1861, at 10 per cent.; interest payable annually, on the 1st day of September at the office of Winslow Lanier & Co., of New York.....	20,000 00
To 10 Howard county bonds, for \$1,000 each, dated September 1, 1851, due September 1st 1861, at 10 per cent., interest payable annually, on the 1st day of September, at the office of Winslow, Lanier & Co., New York.....	10,000 00
Estimated floating debt.....	150,000 00
Estimated amount due contractors....	25,000 00
Total.....	\$837,000 00

This branch of the road has personal assets probably of the value of \$75,000, and available real estate, estimated at near \$400,000.

OF THE CONSOLIDATED COMPANY.

The ascertained indebtedness of the consolidated company is nearly as follows:

Miscellaneous debts.....	\$12,153 77
Purchase of steamers White and Adams.....	56,000 00
Expenses of do. do. do.....	10,000 00
Assumed for Peru Company, over and above its estimated debt, say.....	20,000 00
Total.....	\$98,153 77

RECAPITULATION.

Total debt of Madison road.....	\$1,589,880 97
Same of Peru road.....	837,000 00
Same of M. I. and P. road.....	98,153 77
Total.....	\$2,525,034 74
Of which amount is funded the sum of.....	\$1,712,116 00
Debt to State.....	354,000 30
Total.....	\$2,066,116 00

Leaving a floating debt of \$458,918 74 chargeable as follows:

Upon Madison road proper.....	\$62,946 00
Upon Peru road.....	175,000 00
Upon consolidated road.....	98,153 77
For Columbus and Shelby road.....	122,818 97
Total.....	\$458,918 74

No portion of the debt to the State has yet been paid, but it is confidently believed that an equitable adjustment of it can be made at the ensuing session of the Legislature. The Executive officers of the State have taken a proper view of the matter, and extended every indulgence, consistent with a proper discharge of their duty, and with the interest of the State.

NEW TERMINUS AT MADISON.

The total expenditures on this work to the 1st of January, 1854, amounted to.....	\$293,331 26
Payments since made.....	3,322 26
Estimated amount still due.....	5,000 00
Total.....	\$301,633 53

Whatever may have been the wisdom or the policy of this undertaking, it is now evident that the interests of the road require its indefinite suspension. A small amount may be saved from the materials furnished for this work.

COLUMBUS AND SHELBY ROAD.

This road, 23 miles in length, extending from Columbus to Shelbyville, was commenced in June, and completed in December, 1853. It was constructed with the means and credit of the Madison and Indianapolis road, with the exception of a subscription of \$50,000, made by the city of Madison, and paid in 6 per cent. bonds of the city at par.—The cost of the road has been in round numbers about \$400,000, of which about \$122,818 97 remain unpaid. To enable this company to control the operations of the C. and S. road absolutely, an arrangement was made with the city of Madison for the purchase of the city stock in said road, with a like amount of the income bonds, bearing 6 per cent. interest.

The business of this branch has disappointed the expectation of its projectors, the daily cost of operating it actually exceeding its receipts. It is even questionable whether the branch does not abstract more business from than it conveys to the main line. Unless some favorable change in the business of the road, not now anticipated, should occur, it will probably be the policy of this company, to take up the material, and replace with the same the flat-bar now used between Indianapolis and Noblesville, or such portions of the Madison road as require new metal. This can be accomplished at a moderate expense, and enable the company to realize thereby about \$200,000 from the material.

LINE OF STEAMERS.

At the January session of the Board, the want of a direct river connection with the road, running to and from its trains, having been fully considered, it was determined to purchase five-eighths, or the controlling interest in the steamers David White and Alvin Adams. This was accordingly done for the sum of \$78,125, of which \$22,100 was paid in the income bonds of the company at 85 per cent., and the paper of the company executed for the balance, due in four half yearly payments. These boats constituted the lightning line, and plied daily between Cincinnati and Louisville, until about the 1st of July, and undoubtedly added much to the business and receipts of the road. They were, however, run at a considerable loss, and have consequently been permanently withdrawn, and an arrangement made with the U. S. Mail Line for a running connection with the road. The investment proved from various unforeseen causes an unfortunate one, and was abandoned as soon as circumstances would warrant. The boats are held in market, and will be sold with as little loss to the company as possible.

The running arrangements with the Jeffersonville and Martinsville roads, are continued, and prove quite as satisfactory as was anticipated.

A connection has also recently been opened with Cincinnati via the Ohio and Mississippi Road, at North Vernon, 25 miles north of Madison, which promises to be of great value to the respective roads.

New connections will also within the year ensuing be opened with the city of Louisville, by the road constructing from North Vernon to Jeffersonville, and at the north with Logansport from Kokomo with Chicago, via Peru and Laporte, and with Toledo via the Wabash Valley Road.

PROSPECTIVE BUSINESS, REPAIRS, &c.

The prospective business of the road is subject to so many contingencies as to render it extremely difficult to form an accurate estimate. Throughout the line, however, it has its peculiar local business, which no competition can interfere with, and which must gradually and certainly increase with the growth and improvement of the country. The stone and lime at the South, and the lumber at the North are comparatively inexhaustible, and will furnish a constant and reliable business, while with the improvement of the country, the

agricultural products seeking an outlet over the road, will add year by year to its receipts. The travel on the Northern portion of the road is increasing rapidly, and the Southern part will always compete successfully for its portion of the river traffic, and the through transportation to and from Cincinnati and Louisville.

The July dividend was passed, the earnings having been expended as heretofore stated; and this policy will be steadily adhered to as long as there are repairs to make, or debts to liquidate. It will be impossible to anticipate when dividends will be paid to the stockholders, if the road is left to its own earnings to extricate itself from debt—certainly not within the year to come.

The repairs needed on the Madison end of the road, consist in the relaying of several miles of track, with the iron now on hand, relaying the plane and re-constructing the bridge at Madison, and re-building several smaller bridges, at a total expense of perhaps \$60,000.

On the Peru road, from defect of plan and workmanship nearly all the bridges, except the Wabash, will require re-building, at an expenditure probably of \$25,000. The company holds the contractors responsible for these defects, but may or may not recover the amount. Ten miles of the road require ballasting, at an expense say of \$8,000. The 22 miles of flat bar between Indianapolis and Noblesville, are becoming unsafe, and insufficient for the business of the road, and will require to be relaid with T rail at as early a day as practicable, at an expense of about \$200,000; depot buildings at Noblesville, Tipton, Kokomo, Miamitown, and Peru, say \$8,000 making a total of repairs required on the Peru road of \$241,000. Some of these expenditures may for a while be delayed, but all are needed. Should the iron for this relaying be taken from the Columbus and Shelby road, it will enable the work to be done without incurring additional liabilities. But this, of course, will not be attempted until the question of consolidation is settled.

The consolidation of the two companies has given dissatisfaction to a portion of the stockholders of the Peru and Indianapolis Railroad, and legal proceedings have been instituted at their instance for the purpose of testing its validity. A decision may be expected during the present year.

The report has the merit of entire frankness, if it does not present the affairs of the company in such favorable a light as might be desired. While the Madison and Indianapolis was the sole line of Railroad from Indianapolis to the Ohio, it had an immense business and was a very profitable work. The opening of other lines has thrown it upon the resources of its route. The receipts from this source are very satisfactory, and we have no doubt may be steadily increased. With economy and good management which it is undoubtedly receiving the road may yet be made to yield a moderate income. The Peru Division has been too recently opened to allow its past receipts to be taken as any criterion for the future. We believe it to be a good line for business.

Keokuk, Mt. Pleasant and Muscatine Railroad of Iowa.

The citizens of the counties of Lee, Henry, Louisa, and Muscatine are organizing a company to build a railroad from Keokuk through M. Pleasant to Muscatine.

The subject of the construction of this road, has for some time past, occupied attention. Commencing at Keokuk, below the rapids in the Mississippi where the river is generally free from ice, while obstructed above, it will afford the people of this part of Iowa almost uninterrupted access to Southern markets during the whole year, while its Northern terminus will at the same time afford an outlet to trade North, by thoroughfares already in

operation to the eastern cities. It will thus furnish a choice of markets, East and South, to the people of four of the oldest, most wealthy, and most populous counties in the State, through the heart of which it will be located. It will also cross at right angles all the railroads now in process of construction, or in completion, across the southern part of the State—the Fort Madison and Missouri, the Burlington and Missouri, the Air Line, the Muscatine and Missouri roads—thus extending the same advantage to the inhabitants of the Valleys of the Iowa and Cedar, the Skunk and Des Moines rivers, and the immense country watered by their innumerable tributaries. It will have the rare advantage of being the only road of the kind in Iowa. It thus becomes the most important link in one of the most important unoccupied lines of railroad in the country; and this importance will be augmented as this line is extended through the northern counties of Iowa, and ultimately through the entire length, from north to south, of Minnesota, tapping all the roads running east and west, that are destined to traverse these two States, giving the future millions of their inhabitants, a market south as well as north and east.

It is expected that some 40 miles of the Keokuk and Fort Des Moines Railroad, will be completed this fall. If this should be the case, it will not leave more than 50 miles to build.—*Mt. Pleasant (Iowa) Observer.*

North Missouri Railroad.

The St. Louis *Intelligencer* gives the following statement of the objects and resources of this important work.

The North Missouri Railroad, starting in the city of St. Louis, is intended, running North, to pass through Iowa, and ultimately to connect the city of St. Louis with that of St. Paul, or whatever town further north may spring into importance in the course of time, and the spread of emigration. What immediately concerns us, is to carry the road to the Iowa line, or first, to the line of the Hannibal and St. Joseph Railroad which will intersect the northern portion of our State from East to West.

To prosecute this work, the State of Missouri grants to the North Missouri Railroad Company two millions of her credit, in the following way—She gives her twenty years' bonds to the Company, bearing six per cent. interest, on these conditions: When the company has expended fifty thousand dollars of its own means and has certified to the fact of this expenditure by the sworn depositions of at least two of the Directors, then the State issues to the company fifty thousand dollars of her bonds, to secure the payment of which, a lien is retained by the State on the whole property of the road, including road bed, cars, and fixtures or moveables of every sort belonging to the road, whether acquired by money or realized from the sale of State bonds or from the individual means of the company. Then, when the Company actually expends the fifty thousand dollars got of the State, in the further prosecution of this work on the railroad, and spends fifty thousand dollars more of its own means in the same way, it gets fifty thousand dollars more State credit on the same terms, as long as the company has means to furnish her with another like amount in her bonds.

The means at the command of the company are such as give it a reasonable expectation, indeed a moral certainty, of exhausting in this way the promised credit of the State. The company has one million dollars in city and county subscriptions, five thousand in each, payable in bonds which the contractors take at par, and which are, therefore, as good as cash; more than one hundred thousand of individual subscriptions in St. Louis county, also as good as cash; three hundred thousand subscribed by contractors; one hundred thousand subscribed by St. Charles county; fifty thousand by Warren county, besides other subscriptions which will make the means of the company one million seven hundred thousand dollars; the remaining three hundred thousand it is believed

it will not be difficult to raise by subscription amongst those to whom the road will be an immediate and incalculable benefit, and thus the two millions, required to entitle the company to the whole of the State credit will be made up.

The estimated cost of the road from St. Louis to the Hannibal and St. Joseph Railroad is seven million dollars including every cost for locomotives, road bed, and every thing needed to make the road complete. It is evident then, that further help will be needed from the State and from other sources. One million more of State credit, and one million five hundred thousand more of subscriptions, would, it is supposed, so far complete the road to the Iowa State line, as to enable the company to raise the means without trouble on the company's bonds to do the balance of the work.

The road is under contract to be completed from here to St. Charles by 17th May 1855, and in two and a half years, from 17th of last May, to the Hannibal and St. Joseph line of railroad. There are now over 300 men at work on the road from St. Louis to St. Charles, and in three weeks the contractors will be at work with a large force on the first forty miles beyond St. Charles, and it is expected the last work will be ready nearly as soon as that between St. Louis and St. Charles.

American Railways.

The Schuyler Disclosures.

A Mr. Schuyler, the ruling genius of several important American railways, an American railway king, has lately been discovered, according to the accounts in the American papers, to have over-issued the stock and loans of one of his companies—the New Haven—to the tune of about three millions of dollars, rendering the capital of that company 8½ millions of dollars instead of 5½; and the "American Railroad Journal" maintains that the sum of 5½ millions of dollars is double as much as the railway ought to have cost.

Mr. Schuyler appears to have bagged out only 3 millions of dollars, but part of the profits arising from contracts to construct the line.

The scale, therefore, on which Mr. Schuyler has operated for his own benefit, and to the ruin of the Shareholders who trusted him, is gigantic.—We have seen nothing in the whole railway world before like it.

Mr. Schuyler is more than railway king; he should be dignified with a title not less than emperor.

Of course he is to high for the law to reach.

He is said to have quite ruined the New Haven line—a line which, from its revenue and what it ought to have cost in constructing, should have been a fine property. The fate of his other lines we believe is not yet known.

Like most men who have succeeded in grasping an enormous fortune for themselves by ruining others, Mr. Schuyler was "President," invested with absolute power, enjoying the implicit confidence of his Shareholders, having a reputation for great ability—which he undoubtedly possessed—as well as for integrity more than ordinarily firm.

The American is another and striking instance of the folly of treating a mortal as more than mortal. We do not mean that any and every man placed in a position of great temptation would be unable to withstand it; but that as the motives of men are unknown, and as age, appearance, reputation, and conduct, are no safeguards against imposture, blind and unlimited confidence in any man is a dangerous folly. In nine cases out of ten there may be no betrayal of it; but in the tenth and exceptional case a frightfully great mistake might be made.

If it be desirable to place all power in the hands of one man managing the property of others, let there be good checks on his conduct. Let his accounts be promptly, fully, and clearly rendered; and let there be others in a position to gain as much knowledge as he can, associated with him, to inspect and control his proceedings.

The crash on the New York market in the price

of American railway property which the discovery of Mr. Schuyler's proceedings has produced is described to be awful. In New York there is now no confidence in the value of railway property.

The above is from Herpath's Journal, the leading English Railway publication. It is mainly correct, though the amount of the defaultations is somewhat exaggerated, it being only about \$2,000,000. After this test of their quality, we think, as *Republicans*, we have seen the last of "Railway Kings." The whole tribe will hereafter be dethroned by general consent. The experience we have had is a bitter pill, but perhaps the only remedy that could be administered with effect.

We are happy in being able to state that confidence in Railroad property so severely shaken by Mr. Schuyler's frauds, is steadily recovering its tone. A system is not to be judged by a single fact, nor can the acts of one individual exert any lasting influence upon the value and reputation of so vast an interest as are our Railroads.

Journal of Railroad Law.

RAILROAD APPRAISEMENTS.

The case of *Hill vs. Aldrich*, decided in the Court of Appeals and just reported on the 3d inst. by Selden, shows how judiciously our Courts are disposed to enforce the enactment which was designed to prevent railroad companies in taking land for the purpose of construction from improving people out of their property, and which is expressed in the following terms.

"The appraisers shall assess the value of the land so proposed to be taken, and the damages the owners thereof may sustain by taking their lands, by injury to building, and on the construction of such road, without any deduction on account of any net or supposed benefit which such owner may derive from the construction of such roads."

The award of the appraisers in the case above mentioned secured to the land owners the sum of \$1,800 as the value of their land and also contained the following statement.

"This award is based on the supposition and is made on the condition and with the understanding that Hill and Aldrich, the owners are to be liberty at any time to lay out and open a street on the north side of their lot across said road, and to remove any fences or obstruction to said street, and also to drain under such road, provided that the grade of said railroad is not affected thereby, the running or operation of said road interfered with or impeded in any way."

Did this award conform to the requisitions of Law, or did it not?

The Supreme Court with the dissent of Judge P. Whittlesey vacated the award.

It was urged upon the one hand that the amount of damages arising from the taking of land by Railroad companies may depend in a great degree on the manner in which the road is to be constructed, and upon the extent to which it deprives the owner of the advantageous use and enjoyment of his adjacent lands. The appraisers cannot adjust the amount of compensation to the extent of the injury, without first knowing the plan on which the road is to be made, and the rights and privileges which are to be reserved to the owner to entitle him to continue in the beneficial enjoyment of his

adjoining property. The assessment of damages in this case may have been made without any deduction on account of real or supposed benefits which the land owners might derive from the construction of the road, although the award conceded the privilege of laying out a street. Land-owners have no right to oppose that mode of constructing the road as will do them the least harm.

As to the objection that the Railroad company cannot compel the land owner to accept the benefit of the privileges thus proffered, it is equally true that if they built an arched way under the road, he might or might not avail himself of it, and yet his claim to damage would be thereby diminished. In effect the plaintiff claims damages for injuries not sustained, and the defendants by their stipulations forbear to do any unnecessary damage as they had a right to do.

But to this it was replied that the appraisers transcended their powers in attempting to reserve privileges to the owner by way of easement in the land they were about to appraise. It is true that the appraisers certificate does not show that they made any deductions from the plaintiff's damages on account of benefits, yet they may have made deductions on account of easements reserved to him. The advantage attempted to be conferred upon the plaintiffs in the case was not incidental to the plan of constructing the road, but entirely collateral to it. It was a right to open the street and to drain under the road. Rights which the owners must render available, but which they are at liberty to exercise or not at their pleasure.

The decision of the Supreme Court annulling the appraisement conformed.

Railway Accounts.

Below we give a copy of a letter from a gentleman in London, in influential position, and largely interested in American securities. The company complained of has one of the leading roads in the country, and the parties in its management ought to be of the highest respectability: yet we do not well see how they can escape the suspicion of having been party to some improvidence or mismanagement which they are unwilling to have exposed.

The complaint as to the unsatisfactory manner in which our companies state their affairs will apply to a great many others, than the one referred to.

London, August 4th, 1854.

Dear Sir:—"I must say that the loose way of doing business on your side of the water, disclosed by the Schuyler affair and others, must have its effect on every mind. More than a year ago I pointed out to you the very meagre and unsatisfactory way in which Railway accounts are universally made up in the United States. Companies seem to adopt the principle of giving as little information as possible; and as long as your proprietors are content to let such accounts pass without observation and enquiry, you will have to blame yourselves if anything goes wrong. Every account ought to explain itself; but as your people state them, they may cover any sort of jobbing.—Take for instance the last report of the—
—which I received from you this week. The capital stock appears to have increased within a year about \$1,450,000. The only explanation of this, and of its appropriation, is a few words in the Treasurer's report, (page 7) on which he states

that "the increase has grown out of a sale of \$1,202,500 stock." How, and by what authority was it created? How was it sold, and at what price? He states that of that sum, \$728,000 have been appropriated in payment to construction account No. 2, but not a word is said in explanation of how this sum was spent, or for what purpose. The road has been opened throughout for several years, and in one year there is the above large addition to the expenditure in "construction account," and not an item of information given of the why or the wherefore. It may be all right, or it may be all wrong—but it appears as if care were specially taken that the facts should not be given to enable the public to judge. All honest men are pressing for an alteration of this unsatisfactory state of things, and I should be glad to hear that yourself, and all others interested would take up the subject and bring about a change. I wish you would talk to Mr. R. H. Winslow about it. Nothing would serve so much as to establish American credit in Europe as a reasonable certainty that Railway accounts may be confidently relied on. There is no reasonable certainty; there is in fact no evidence that the accounts are ever examined before they are published: except by the Treasurer—no auditors signature, and nothing whatever to give assurance that all is right. It is not creditable to the business men of New York that they quietly submit to such a state of things. They ought to rebel as people here have done, and insist upon having full and intelligible accounts audited by known and respectable men, appointed by the proprietors who shall attach their signature to the accounts with every affirmation of their correctness.

Saratoga and Washington Railroad.

The total length of the road between Saratoga Springs and Lake Champlain, the length of the main line is . 40 91-100 miles. Between its southern connection at Whitehall with the main line, and the State line of Vermont, the Rutland branch is 6 82-100 " Aggregate length of turnouts is about 4 " Total length of track 51 73-100 "

The capital account of the company is as follows:

8,998 shares of stock	\$899,800 00
250 1st mortgage bonds, due 1st March, 1858	250,000 00
250 2d mortgage bonds, due 1st Jan'y, 1855	250,000 00
100 only mortgage on branch, 1st Sept., 1856	100,000 00
340 bonds not secured by mort., 1st Jan., 1862	340,000 00
Stock capital	\$899,800 00
Bond "	940,000 00
	\$1,839,800 00

In addition to the above, the company have a lease of the Rutland and Whitehall Railroad, in Vermont, extending from the State line to Castleton, being 6 85-100 miles, for which they pay quarterly interest, at the rate of 7 per cent. on \$255,700, which is virtually an increase of capital to that amount.

In addition to the cost of the road the company have a floating debt of 178,610, to meet which the company have securities to the amount of \$5,978.

The earnings of the road for a series of years have been as follows:

January, 1849, to October 1st, 1849 . . .	\$63,756 91
October 1st, 1849, " 1st, 1850 . . .	116,264 89
" 1850, " 1st, 1851 . . .	165,516 75
" 1851, " 1st, 1852 . . .	177,588 09
" 1852, " 1st, 1853 . . .	169,289 25
" 1853, " 1st, 1854 . . .	180,586 94

Shipment of Gold from California.

The following table exhibits the total amount of gold shipped from San Francisco from the first of January, 1854, to the 16th of August, inclusive:

Total amount shipped the first quarter of the present year, ending March 15, inclusive	\$10,679,170 28
Total from April 1 to June 16, inclusive	14,248,025 12
Excess of second quarter over the first of the present year	3,568,854 89
Total from July 1 to August 16	8,189,040 97
Total from Jan. 1, 1854, to August 16, inclusive	33,116,236 32

From the above table it will be seen that the shipments of treasure during the present year are nearly equal to the aggregate of the shipments in 1853, which was \$34,492,000. The shipments to China, Sandwich Islands, etc., which amount to a pretty considerable sum annually, are not included in the above.

ANNUAL SHIPMENTS.

Total in 1851	\$34,492,000 00
Total in 1852	43,799,000 00
Total in 1853	54,905,000 00
First seven and a half months of 1854	33,096,236 32

Total in 3 years and 7½ months \$168,272,236 32

Productiveness of Railroads in the United States.

There are no enterprises in which money can be invested with so much safety and with such certainty of income, as in economically built and well managed railroads in the United States. The rationale of this proposition may be stated as follows. The markets of the country are either upon the seaboard or in Europe; consequently the whole, or nearly the whole surplus production of the country is moved to the sea coast. In the interior by far the greater portion of the population is employed in agriculture; so that all articles of consumption not produced on the farm, or plantation, are imported. As the outward and inward movements correspond, either in quantity or value, it follows that the freight carried by our railroads is equal to nearly twice the surplus produced. The distance over which merchandise and produce is transported in this country too, is much greater than in any other. Rock Island for instance, on the Mississippi River, maintains a constant communication with New York. All the produce of the surrounding country comes to this market, which in turn supplies the farmer with whatever articles of use the farm does not produce. The distance by railroad, between the places named, is 1150 miles, and the business between them, pays transportation on such an extent of railroad. Again, to come nearer home, the average distance over which the freight of the Erie Railroad is carried is equal to 300 miles. From these facts it will be seen that the business of the country presents two conditions most favorable to the success; a very large business, and great distance over which it has to be transported.

There is no other country possessing the peculiarities described in the same degree. In other

States the various interests exist in greater harmony. Time has allowed the development of agriculture, manufactures and commerce, in proper harmony. In such States it is easy to see that the productions of a particular district may be distributed to the consumer without the intervention of a railroad, although the aggregate of such may far exceed those of an equal area in the United States.

There is no other country in which the same amount of labor produces so much bulk for transportation. If a railroad traverses a forest, the carriage of lumber cut off for the purpose of clearing the soil is a very profitable source of income. If on the other hands the road traverse prairies, as in Illinois and Wisconsin, the transportation of lumber, to supply the lack of a natural growth, is an equally lucrative source of revenue. Throughout the greater portion of the country, the richness of the virgin soil will allow the culture of the same crop for years, without dressing or rotation, leaving the undivided attention of the agriculturalist devoted to production only. In parts of the country adapted to Indian corn, a man entirely unassisted, may raise many thousand bushels of this article annually. So with the article of wheat, and to a certain extent, with cotton. For these reasons, labor in this country produces more, and from the kind of products, furnishes a much larger amount of business to a railroad, than labor in any other.

The ascertained movement in this country fully sustains the estimates that would be inferred from what has been stated. The weight of the article of cotton sent to market equals nearly one million of tons. The amount of produce forwarded through the Erie Canal for 1853, from the Western States exceeded one million two hundred thousand tons; the total movement on the New York Canals being nearly 4,500,000 tons. The average distance over which the 1,200,000 tons of western produce received through the above canals, was transported, probably exceeded 1,000 miles.

We state these facts for the purpose of illustrating the basis upon which the business of our railroads rests. We may perhaps appreciate this fact more fully by imagining the country entirely without these works. A great portion of its commerce would instantly be swept out of existence. Lands which are now selling from 30 to 50 dollars per acre, would fall to \$10 or \$15. Production would cease for want of a market, which the railroads alone can give. Our people would become impoverished; enterprise and energy would die out and the appearance of the country would no more correspond to the features it now presents, than it did thirty years ago. The Railroad opens Manchester and Birmingham to the western and southern farmers and planters, as well as New York Philadelphia and Boston. They create a market by furnishing an outlet to one; and without markets what would the grains and provisions of the West, and the cotton of the South be worth.—a large portion of all of which articles have to be moved thousands of miles before reaching the consumers? Railroads are the great agent in promoting wealth, and in advancing the prosperity of our people and are certain to continue such. So long as the products of the soil are moved from the spot of their production, the business they are called on to perform will equal the extent of such

production. There is what may be termed a *natural* adoption of Railroad to the wants of this country, and commerce must cease, and man forego the gratification of his wants, before our Railroad can fail for lack of business.

From the fact stated, investments in works which bear such intimate relations to the business of the country; works upon which all other interest are built, and of which they are *corollaries*, must be profitable. It is a maxim "that the greater must include the less;" and railroads should certainly be profitable, as well as commercial and manufacturing pursuits, which in this country is based upon the existence of the former.

If our Railroads prove *unproductive* it will not be for the want of business, as this is secured to them by the condition and necessities of the people. Another reason why they should prove productive, is the low cost at which they can be built. Upon American roads, right of way, and lands for stations, etc., are given gratuitously, or sold at a low price. Material is cheap and abundant, with the exception of iron, which for a single track road, at present rates, will not cost over \$5,000 to the mile. In most cases there are no *vested* rights to disturb at enormous cost; no Legislative, or legal expenses to eat up capital as well as profits; no taxes upon them in a great majority of the States. The conditions for cheap construction therefore, are as favorable as for profitable employment.—Neither is there so much danger from *competition* as has usually been feared. Railroads as a general rule have not, and cannot be made where they are not needed. The roads that are already constructed are not too numerous for the wants of the country. Such projects as have a *rival* look have not, and will not be able to command the means for the construction, however clamorous those who have them in hand, for money, or however much the more cautions may be frightened at their being put forth.

If our roads *fail*, it must be from *bad* management. The ill success of such as have proved unproductive may almost invariably be attributed to this cause. That the entire interest is suffering more less from bad and unintelligent management we presume no one familiar with the working of Railroads will dispute. A different result was hardly to be expected when we consider the haste with which our works have been constructed, and consequent necessity of entrusting them to inexperienced parties. Our people have hardly gone through the rudiments of that instruction which experience alone can give. They are entrusted to "*joint stock*" companies which have an inherent incapacity to manage and superintend large operations with the economy and efficiency of the *individual* mind coupled with a direct personal interest. Upon the Railroad the most complicate and delicate of machines, exerting a power in their ordinary operations only a little below the capacity of the strongest material known in the arts to resist, are used. By the slightest imprudence or inattention the boundary line may be crossed, as it is constantly crossed upon *all* roads, as rails ground to fibre, or an engine torn to pieces by its own lawless action, too constantly attest.

Whatever may have been the result both in this country or in Europe, and however much our Railroad may have suffered for the want of more intelligent managers, we cannot regard such management,

as a vice inherent in the *system*, we have suffered, because we have not come to a proper appreciation of our mistakes, and have not discovered the appropriate remedies. That faults of management cannot and will not be corrected we will not for an instant admit. In no branch of mechanical or commercial science, can the application of a principle follow immediately upon its announcement. It requires time to adopt its operation to the numerous conditions that must be respected; and the necessary experiments involves the expenditure of a certain amount of capital. It was not to be expected that Railroads in the outset would be exempt from the operation of a *general law*. After a work whose construction taxes the energies of a whole community, is built, it is natural that those who had it in charge should feel their work to be accomplished, and cease to take further interest or care in the matter, although by far the most difficult thing to ensure success remains to be done. While the work is in progress, the novelty of the thing, and the public sentiment which is certain to be thoroughly excited in favor of the road renders labor in its service a pleasant task. On its completion, the interest excited naturally flags. Service loses the charm of novelty, or imposing results. Care and patient attention, if the road be well managed, has to take the place of bold experiment and invention. The process of building a railroad therefore may be the very experience that unfit a person to manage them; though we do not allow such should be the case.

To render our railroads entirely successful our people must be roused from the torpid indifference they manifest and feel, towards their management. The vigilance and importunity of the stockholders must secure a faithful discharge of duties on the part of directors. A rigid system of accountability should be enforced in every department. Engineers, Superintendents, and every one in the employ of the road, should be made responsible not for their acts but for their estimates and opinions. Companies should at once demand, and should take measures to secure a higher standard of qualification among all their *employees*, particularly the engine driver. Persons filling responsible stations should be made to profit by the results of good conduct. If one Railroad are to continue, in the hand of *joint stock companies*, their employees should be made to feel a direct interest in the roads they have in charge, by being allowed a portion of the saving due to faithful service.—Some way can be devised, we are confident, in which every person employed by a railroad company can be made to labor with the zeal, faithfulness and assiduity, as if the whole property were his own. Let such a state of things be secured and our Railroad, as they are capable of being, will become the most profitable investments in the country. As already stated, the work, to secure in our Railroad the highest efficiency and profitableness, remains to be done. That our companies, as soon as they can be made to realize what is necessary to be done to secure a competent management of their roads, will enter the new duties before them, with the zeal and energy displayed in the construction, we do not entertain a doubt.

We do not believe the capacity of our people to be limited to the simple task of building railroads.

The needed reforms will follow. The present depression of railroad property will have one good effect in turning attention to the means by which the reforms are to be effected.

Vermont Central Railroad

At the recent meeting of the Stockholders of this company, held at Montpelier, the over issues of stock, made by Edward Crane, were assumed by a large stock vote.

The Trustees report expresses disappointment at the smallness of the net income; states that some portions of the motive power have depreciated beyond renewal; that 2,500 tons of iron are now required to insure safety and economy in working the road. The freight cars have also greatly deteriorated. The cost of locomotive repairs was 15.6 cts per mile, being double the ordinary expense, owing to the bad state of the track.

The Trustees intimate that they shall, if necessary, withhold dividends on all the bonds, in order to keep the road in serviceable order. They further state that they will not pay the interest on the 2d mortgage bonds or stock, however ample their means, until a legal decision authorizes them to do so.

The report then alludes to the increase of the tariff, and says that hereafter the cultivation of the local traffic will be the permanent object of the trustees. In conclusion they say that no material reduction in the expenses, compared with last year, can be expected as the track remains in its present defective condition. On the contrary its rapid deteriorations will tend to increase the cost of maintaining the motive power of the road. In our judgement, unless a prompt remedy be applied, the safe and serviceable use of the rails will terminate with the present winter.

The Directors of the road report the earnings of the road for the year to be \$820,119 60. Expenses, \$605, 326 48, of which \$83,161 is set down as extraordinary expenditures. The total liabilities are \$3,697,298: assets, \$289,322 18; liabilities over assets, \$3,457,972 02. The funded debt is \$3,338,700.

The Directors elected by the company for the ensuing year, are J. C. Howe, Wm. Thomas, C. O. Whitmore, G. M. Dexter, Onslow Stearns, B. P. Cheney and E. P. Walton, Jr.

Sunbury and Erie Railroad.

The city counsel of Philadelphia have appointed P. A. Keyser, Hinman, Roberts, Stokes and Hutchinson, to "examine the books of the Sunbury and Erie Railroad Company, and report in detail the amount of money, bonds or material for the road, which have been received in payment for subscriptions or instalments on subscriptions made to capital stock of the said Sunbury and Erie Railroad Company, together with the amount of expenditures, and the purposes for which said expenditures have been made, with such other information as they may deem proper to communicate."

New York Locomotive Works, JERSEY CITY.

THIS COMPANY are prepared to execute with despatch, orders for Locomotive Engines, Tenders, and Railroad Machinery generally, embracing the latest improvements. The works being located near the water, and in the immediate vicinity of the New Jersey and Erie Railroads offers great conveniences for shipping.

BREESE, KNEELAND & CO.,
Proprietors,
38 Exchange Place.

E. P. GOULD, Superintendent,
late Master Machinist on Hudson River R. R. [40 ft.]

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

SEPTIMUS NORRIS

Successor to

O. E. NORRIS,**American Railway Agency.**For the Purchase, on Commission, of all Articles required by
RAILROAD COMPANIES.

Office, 12 Farquhar Buildings,

PHILADELPHIA.**TEOS. M. CASH,****PHILADELPHIA RAILWAY AGENCY,**

FOR THE PURCHASE OF ALL ARTICLES

required by

RAILROAD COMPANIES

ON COMMISSION.

Office No. 80 South Fourth Street near Walnut,

PHILADELPHIA.**NUGENT'S COLLEGE**

OF

ENGINEERS AND MECHANICS,

Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

SEPTIMUS NORRIS,**CIVIL, MECHANICAL & CONSULTING ENGINEER**

OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 23 Summer st., Philadelphia.

New York and Erie R. R.

On and after Wednesday, Sept. 20th, and until further notice

PASSENGER TRAINS

will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a. m. for Buffalo.
DUNKIRK EXPRESS, at 6 a. m. for Dunkirk.
MAIL, at 8½ a. m. for Dunkirk and Buffalo, and intermediate stations.

ROCKLAND PASSENGER, at 3½ p. m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p. m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5½ p. m. for Dunkirk and Buffalo.

EMIGRANT, at 6 p. m., for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 5½ p. m.

These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

For Sale.

A STATIONARY Engine, having cylinders 13 inches bore and 20 inches stroke complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,

Paterson, New Jersey,

or 74-Broadway, New York.

Rensselaer Polytechnic Institute.

DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS, including Railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the *Annual Register*, giving full information respecting the Institute, apply to

R. FRANKLIN GREENE, Director, R. P. I.

3 23m] Troy, New York.

500 TONS No. 1 Gleggarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.

99 and 101 John st.

N. B.—The above Iron constantly imported.

[32 ft.

Buffalo Machinery Depot.**BUFFALO, N. Y.****H. C. BROWN, Sup't.****J. W. HOOKER, Proprietor.**

I AM prepared to furnish and keep constantly on hand from the best manufacturers a full stock of *Machinists' Tools* for railroad and other shops; such as Engine and Hand Lathes, Large Driver Lathes, Car Wheel Boring Mills, Power and Hand Planers, Drill Presses, Punch and Shears, Axle Lathes, Power Wheel Presses, Bolt Cutters, &c.

J. W. HOOKER, Buffalo, N. Y.**Fire! Fire! Fire!**

Preserve your books in one of Duryce & Forsyth's celebrated *Fire King* safes. They are perfectly secure and excel in finish.

J. W. HOOKER, Agent, Buffalo.

Railroad Track, Suspension, and Depot Scales, Dormant, and Portable Warehouse Scales, Trucra, Baggage Barrows, and Manifest Presses.

Buffalo Machinery Depot,**General Agency for Rochester Scale Works.****H. C. BROWN, Sup't.****J. W. HOOKER.****Railroad Iron.**

2,000 TONS Railroad Iron, 54 to 60 lbs. per linear yard. For sale by

THEODORE DEHON,

26½ Broadway,

New York.

Contracts made as above for Rails deliverable at English or American ports at lowest rates.

36 St.

Notice to Contractors.**CHIEF ENGINEER'S OFFICE,****Columbus Ga., Sept. 5th 1854.**

SEALED PROPOSALS, will be received by the undersigned at this office until the 1st day of December, for the clearing, Graduation, Track Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 130 miles. The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate Proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work 5½ miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two Rivers will be crossed with the common pile bridging, with Truss Pivot Draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The Country is healthy, with no swamps after leaving the Tensas River; from Mobile to the River (18½ miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one-third ($\frac{1}{3}$) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common Stock of the Road, and relying upon the earnings of the same, for dividends; the balance ($\frac{1}{3}$) to be paid in the (.08) per cent. Convertible Bonds of the company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus Ga. Mobile, Ala. or in N. Y. at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding ($\frac{1}{4}$) the amount of the contract, for the timely and faithful completion of the same.

22½ miles of the Road from Girard west will be open for business the first of November, and 52 miles (9) months thereafter. It is the intention to have the entire line of (245 miles) open for business **1st Dec. 1854.**

St. 37

GEO. S. RUNEY.**Port Morris Manufactory.****WESTCHESTER COUNTY, N. Y.**

ARE prepared to execute orders for all kinds railroad work and have on hand the approved Railroad Box with the raised Journal also Car Couplings (Lewis' Patent) and Ratchet Wrenches from \$5 to \$10 each.

All orders punctually attended to by addressing the above.

M. C. BAKER.

NB. Long Iron Planing done on reasonable terms.

37 6m.

108 Front st., up stairs.

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,**RICHARD W. TYSON,**

No. 25 South Charles str.

Baltimore, July 1st, 1854.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,**RICHARD W. TYSON.**

[33 3m

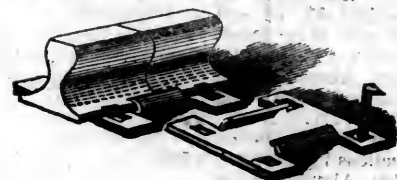
Baltimore, July 1st, 1854.

Notice of Copartnership.

MR. PETER MARIE, heretofore of the firm of DECOPPET & CO., has this day formed a copartnership with **MR. RUDOLPH KANZ**, (for many years with the banking house of Messrs. L. Von Hoffman & Co.,) under the firm of **MARIE & KANZ**, at No. 27 William street. Their attention will be devoted to the purchase and sale of Commission of Stocks, Bonds and Foreign Exchange, and to the negotiation of Business Paper.

New York, 1st September, 1854.

36 St.

RAILROAD SPIKES.**WROUGHT IRON****Chairs and Fastenings.**

THE undersigned will continue to manufacture with increased facilities, **HOOK & FLAT HEAD RAILROAD SPIKES**, of all patterns, **WROUGHT and CAST CHAIRS and FASTENINGS**, **BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES**, &c., &c.

The best quality of Refined Iron is used, and all orders filled with despatch.

J. HOPKINSON SMITH,

No. 25 South Charles str.

Please direct the name in full.

Baltimore, July 1st, 1854.

[33 ft.

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to

EDW. BECH & KUNHARDT, 62 Beaver St.,**A. TOWAR, Agent Pokepsie Iron Works,**

23rd

Pokepsie, N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to Railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

Or **BRIDGES & BRO.**

64 Courtland st., New York,

19 ft

Machinists' Tools.**SHRIVER & BROTHERS,****Cumberland, Maryland,**

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools.

These tools are built, in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others requiring first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address

SHRIVER & BROTHERS, Fulton Works,

Cumberland, Maryland.

August 19th, 1854

[52 6m

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 41.]

SATURDAY, OCTOBER 14, 1854.

[WHOLE No. 965, VOL. XXVII.]

Mr. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

General Railroad Law of New York.....	341
Philadelphia, Wilmington and Baltimore R. R.....	347
Great Railroad Traffic West.....	347
Milwaukee and Miss. R. R.....	347
Stonington R. R.....	347
Covington and Lexington R. R.....	347
Erie R. R.....	348
Share and Money Market.....	348
Fulton Car Works, Sandusky, Ohio.....	349
New York and New Haven Railroad.....	349
Reading R. R.....	349
New Railroads in New York.....	349
Concord, N. H., Railroad Corporation.....	349
Indiana and Illinois Central R. R.....	351
Racine, Janesville and Miss. R. R.....	351
Columbus, Piqua and Indiana R. R.....	352
Hudson River R. R.....	352

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, October 14, 1854.

General Railroad Law of New York.

We give this week, entire, a copy of the *General Railroad Law of New York*. It will show, particularly to foreigners, the character and tendency of legislation in the United States; which are, to provide by *general enactments* for *particular cases*. The advantages gained are, 1st: impartial laws, the benefits of which may be secured without delay or expense; 2nd: a more healthy development of the particular interest to which such general laws apply. Experience has fully proved that where railroad charters are granted by a special act, or law, the parties obtaining them soon come to regard themselves as possessing some special privilege, entitled to *protection*; and they naturally oppose the granting the similar privileges to *others*. Cases are not wanting to show that those possessing such special privileges, often become sufficiently powerful to control the legislation of a State, and deny the same to others simply on the alleged ground that what they possess, are *vested rights*, not to be interfered with. In this way great injustice is often done. Our people are rapidly coming on to more liberal ground, and it is fast becoming their conviction,

that every individual interest or pursuit, should be thrown entirely open to competition, on the ground that the instinct of self-interest is a much better judge of the *expediency* of any project than the *opinion* of a body of legislators, without such interest to sharpen their judgments, without a knowledge of the facts of the case, and most probably, without intelligence as to the matter acted upon. It would be considered as very absurd should government attempt to prescribe the model of *ships*, the number requisite to meet the wants of the country, or the parties who should have the privilege of constructing them. It is equally absurd for government to assume to designate the number of railroads that are to be built, the direction they are to take, or the parties who are to have the right of building them. Leave the public free to act upon its own judgment, and the probability is that railroads will be built *only* upon such routes as *will* pay. When parties undertaking their construction know that *other parties* have an equal right to build one within hail of their own; or one to accommodate the same business, they will take good care, by adopting the best route, or building and managing their road in the best manner, to leave no ground or apology for constructing a *rival*. Where, on the other hand, no road can be built save under a *special charter*, the parties obtaining such right, feel, and will act upon the conviction that they possess *vested rights*, which will not be allowed to be interfered with; and will be very likely to adopt a line to suit the interest or caprice of an influential party, and be lavish of expenditure under an idea that the privileges they possess will compensate for any loss that may be suffered. This conviction naturally begets an indifference as to the management or cost of the road; such a route may be taken, and such a work built, that the public interest may call for a *new* one. An application to construct such, though at first, perhaps, successfully resisted, is always certain to be successful; for justice and common sense is always in the end, more than a match for partiality and stupidity; and the result is *two* roads where only one would have been constructed, had the field been entirely open for competition. In this view, sanctioned by experience, we regard *general railroad laws* as the most effective mode of secur-

ing the best route, and of the construction of roads at the lowest cost; and consequently, precluding the necessity or apology for competing lines. We do not believe that shipbuilding would become a profitable business, should government assume to decide who should build ships, the courses upon which they should sail, or the cargoes they should carry. We think, if the matter should be carefully looked into, it would be seen that where the construction of railroads has been pushed to excess either in this country or Europe, it has been in those States apparently the most scrupulous about giving charters. When one is granted, and another is withheld, it is felt that a great wrong has been done, and the strongest motive to the construction of a road comes to be, *not* the money that is to be made, but to vindicate a *principle*. The aggrieved parties enter the contest with a tenfold zeal, corresponding to the wrong done them, and which is certain in the end to triumph over all obstacles. We are much mistaken, if the reasons we have stated have not had a great deal to do, with the over-construction of railroads in England. We believe if the people of that country had been as free to build railroads as to embark in any other lawful calling, they would have gone about the matter, slowly and deliberately, and the progress of these works would have waited upon the wants of the country, and that Englishmen would never have so far forgotten their natural caution, as to have sacrificed the immense sums wasted upon their railroads.

We think the safer way is for legislatures to give the people entire freedom of action in all such matters. They may run to excess in the outset, but the capacity for the proper use of liberty can only come from the practice of it.

As the organization and operations of our Railroads, are controlled by the *General Railroad Law* of the State, we copy the same entire into our columns for reference, as well as for an example to other States.

§ 1. Any number of persons not less than twenty-five, may form a company for the purpose of constructing, maintaining and operating a railroad for public use in the conveyance of persons and property, or for the maintaining and operating any unincorporated railway already constructed, for the like public use; and for that purpose may make and sign articles of association, in which shall be

stated the name of the company; the number of years the same is to continue; the places from and to which the road is to be constructed, or maintained and operated: the length of such road as near as may be, and the name of each county in this State, through or into which it is made, or intended to be made; the amount of capital stock of the company, which shall not be less than ten thousand dollars for every mile of road constructed, or proposed to be constructed, and the number of share of which said capital shall consist, and the names and places of residence of thirteen directors of the company, who shall manage its affairs for the first year, and until others are chosen in their places. Each subscriber to such articles of association shall subscribe thereto his name, place of residence, and the number of shares of stock he agrees to take in said company. On compliance with the provisions of the next section such articles of association may be filed in the office of the Secretary of State, who shall endorse thereon the day they are filed, and record the same in a book to be provided by him for that purpose; and thereupon the persons who have so subscribed such articles of association, and all persons who shall become stockholders in such company, shall be a corporation by the name specified in such articles of association, and shall possess the powers and privileges granted to the corporations, and be subject to the provisions contained in title three of chapter eighteen of the first part of the Revised Statutes, except the provisions contained in the seventh section of the said title.

§ 2.—Such articles of association shall not be filed and recorded in the office of the Secretary of State, until at least one thousand dollars of stock for every mile of railroad proposed to be made is subscribed thereto, and ten per cent. paid thereon in good faith, and in cash, to the Directors named in said articles of association; nor until there is endorsed thereon, or annexed thereto, an affidavit made by at least three of the Directors named in said articles, that the amount of stock required by this section has been in good faith subscribed, and ten per cent. paid in cash thereon as aforesaid, and that it is intended in good faith to construct or to maintain and operate the road mentioned in such articles of association; which affidavit shall be recorded with the articles of association as aforesaid.

§ 3.—A copy of any articles of association filed and recorded in pursuance with this act, or of the record thereof, with a copy of the affidavit aforesaid endorsed thereon or annexed thereto, and certified to be a copy by the Secretary of this State, or his deputy, shall be presumptive evidence of the incorporation of such company, and of the facts therein stated.

§ 4.—When such articles of association and affidavit are filed and recorded in the office of the Secretary of State, the Directors named in said articles of association may, in case the whole capital stock is not before subscribed, open books of subscription to fill up the capital stock of the company, in such places and after giving such notice as they may deem expedient, and may continue to receive subscriptions until the whole capital stock is subscribed. At the time of subscribing, every subscriber shall pay to the Directors ten per cent. on the amount subscribed by him, in money; and no subscription shall be received or taken without such payment.

§ 5.—There shall be a Board of thirteen Directors of every corporation formed under this act, to manage its affairs. Said Directors shall be chosen annually, by a majority of the votes of the stockholders voting at such election, in such manner as may be prescribed in the by-laws of the corporation, and they may and shall continue to be Directors until others are elected in their places. In the election of the Directors, each stockholder shall be entitled to one vote for each share of stock held by him. Vacancies in the Board of Directors shall be filled in such manner as shall be prescribed by the by-laws of the corporation. Every corporation formed under this act, shall be subject to the regulations con-

cerning the election of Directors of moneyed corporations, contained in article second of the second title of the eighteenth chapter of the first part of the Revised Statutes. The inspectors of the first elections of Directors shall be appointed by the Board of Directors named in the articles of association. No person shall be a Director, unless he shall be a stockholder, owning stock absolutely in his own right, and qualified to vote for Directors at the election at which he shall be chosen. At every election of Directors, the books and papers of such company shall be exhibited to the meeting, provided a majority of the stockholders present shall require it.

§ 6.—The Directors shall appoint one of their number President; they may also appoint a Treasurer and Secretary, and such other officers and agents as shall be prescribed by the by-laws.

§ 7.—The Directors may require the subscribers to the capital stock of the company to pay the amount by them respectively subscribed, in such manner and in such instalments as they may deem proper. If any stockholder shall neglect to pay any instalment as required by a resolution of the Board of Directors, the said Board shall be authorized to declare his stock, and all previous payments thereon, forfeited for the use of the company; but they shall not declare it so forfeited, until they shall have caused a notice in writing to be served on him personally, or by depositing the same in the Post Office, properly directed to him at the Post Office nearest his usual place of residence, stating that he is required to make such payment at the time and place specified in said notice; and that if he fails to make the same, his stock, and all previous payments thereon, will be forfeited for the use of the company; which notice shall be served as aforesaid, at least sixty days previous to the day on which such payment is required to be made.

§ 8.—The stock of every company under this act shall be deemed personal estate, and shall be transferrable in the manner prescribed by the by-laws of the company, but no shares shall be transferrable until all previous calls thereon shall have been fully paid in; and it shall not be lawful for such company to use any of its funds in the purchase of any stock in its own, or in any other corporation.

§ 9.—In case the capital stock of any company formed under this act, is found to be insufficient for constructing and operating its road, such company may, with the concurrence of two-thirds in amount of all the stockholders of the company, at a meeting of such stockholders, called by the Directors of the company for that purpose, by a notice in writing to each stockholder to be served on him personally, or by depositing the same, properly folded and directed to him, at the Post Office, nearest his usual place of residence, at least twenty days prior to such meeting. Such notice must state the time and place of the meeting, and its object, and the amount to which it is proposed to increase the capital stock. The proceedings of such meeting must be entered on the minutes of the proceedings of the company, and thereupon the capital stock of the company may be increased to the amount sanctioned by a vote of two-thirds in amount of all the stockholders of the company as aforesaid.

§ 10.—Each stockholder of any company formed under this act, shall be individually liable to the creditor of such company, to an amount equal to the amount unpaid on the stock held by him, for all the debts and liabilities of such company, until the amount of capital stock so held by him shall have been paid to the company; and all the stockholders of every such company shall be jointly and severally liable for all the debts due or owing to any of its laborers and servants, for services performed for such corporation; but shall not be liable to an action therefor, before an execution shall be returned unsatisfied in whole, or in part, against the corporation; and then the amount due on such execution shall be the amount recoverable, with costs against such stockholders.

§ 11.—No person holding stock in any such

company, as executor, administrator, guardian, or trustee, and no person holding such stock as collateral security, shall be personally subject to any liability as stockholders of such company; but the person pledging such stock shall be considered as holding the same, and shall be liable as a stockholder accordingly; and the estates and funds in the hands of such executor, administrator, guardian, or trustee, shall be liable in like manner and to the same extent as the testator, or intestate, or the ward or person interested in such trust fund would have been, if he had been living and competent to act, and held the stock in his own name.

§ 12.—As often as any contractor for the construction of any part of a railroad, which is in progress of construction, shall be indebted to any laborer, for thirty or any less number of days' labor performed in constructing said road, such laborer may give notice of such indebtedness to said company in the manner herein provided; and said company shall thereupon become liable to pay such laborer the amount so due to him for such labor, and an action may be maintained against said company therefor. Such notice shall be given by said laborer to said company, within twenty days after the performance of the number of days' labor for which the claim is made; and the name of the contractor from whom due, and shall be signed by such laborer, or his attorney; and shall be served on an engineer, agent, or superintendent employed by said company, having charge of the section of the road on which such labor was performed, personally, or by leaving the same at the usual place of business of such engineer, agent, or superintendent, with some person of suitable age. But no action shall be maintained against any company under the provisions of this section, unless the same is commenced within thirty days after notice is given to the company by such laborer as above provided.

§ 13.—In case any company formed under this act is unable to agree for the purchase of any real estate required for the purposes of its incorporation, it shall have the right to acquire title to the same, in the manner and by the special proceedings prescribed in this act.

§ 14.—For the purpose of acquiring such title, the said company may present a petition, praying for the appointment of commissioners of appraisal, to the Supreme Court, at any special term thereof held in the district in which the real estate described in the petition is situated. Such petition shall be signed and verified according to the rules and practice of such court. It must contain a description of the real estate which the company seek to acquire; and it must in effect state that the company is duly incorporated, and that it is the intention of the company, in good faith, to construct a railroad from and to places named for that purpose in its articles of association; that the whole capital stock of the company has been in good faith subscribed as required by this act; that the company has surveyed the line or route of its proposed road, and made a map or survey thereof, by which such route or line is designated, and that they have located their said road according to such survey, and filed certificates of such location, signed by a majority of the Directors of the company, in the clerks' office of the several counties through or into which the said road is to be constructed; and that the land described in the petition is required for the purpose of constructing or operating the proposed road; and that the company has not been able to acquire title thereto, and the reason of such inability. The petition must also state the names and places of residence of the parties, so far as same can be by reasonable diligence be ascertained, who own or have, or claim to own or have estates or interests in the said real estate remaining; add if any such persons are infants, their ages as near as may be, must be stated; and if any such persons are idiots, or persons of unsound mind; or are unknown, that fact must be stated, together with such allegations and statements of liens or incumbrances on said real estate as the company may see fit to make. A copy

of such petition, with a notice of the time and place the same will be presented to the Supreme Court, be served on all persons whose interests are to be affected by the proceedings, at least ten days prior to the presentation of the same to the said court.

1.—If the person on whom such service is to be made, resides in this State, and is not an infant, idiot, or person of unsound mind, service of a copy of such petition and notice must be made on him or his agent or attorney, authorized to contract for the sale of the real estate described in the petition, personally, or by leaving the same at the usual place of residence of the person on whom service must be made as aforesaid, with some person of suitable age.

2.—If the person on whom such service is to be made resides out of the State, and has an agent residing in this State, authorized to contract for the sale of the real estate described in the petition, such service may be made on such agent, or on such person personally out of the State; or it may be made by publishing the notice, stating briefly the object of the application, and giving a description of the land to be taken, in the State Paper, and in a paper printed in the county in which the land to be taken is situated, once in each week for one month next previous to the presentation of the petition. And if the residence of such person residing out of this State, but in any of the United States, or any of the British colonies of North America, is known, or can be ascertained by reasonable diligence, the company must, in addition to such publication as aforesaid, deposit a copy of the petition and notice in the Post Office, properly folded and directed to such person at the Post Office nearest his place of residence, at least thirty days before presenting such petition to the court, and pay the postage chargeable thereon in the United States.

3.—If any person on whom such service is to be made is under the age of twenty-one years, and resides in this State, such service shall be made as aforesaid, on his general guardian; or if he has no such guardian, then on such infant personally, if he is over the age of fourteen years; and if under that age, then on the person who as the care of, or with whom such infant resides.

4.—If the person on whom such service is to be made is an idiot, or of unsound mind, and resides in this State, such service may be made on the committee of his person or estate; or if he has no such committee, then on the person who has the care and charge of such idiot, or person of unsound mind.

5.—If the person on whom such service is to be made is unknown, or his residence is unknown, and can not by reasonable diligence be ascertained, then such service may be made, under the direction of the court, by publishing a notice, stating the time and place the petition will be presented, the object thereof, with a description of the land to be affected by the proceedings, in the State Paper, and in the paper printed in the county where the land is situated, once in each week for one month previous to the presentation of such petition.

6.—In case any party to be affected by the proceedings is an infant, idiot, or of unsound mind, and has no general guardian or committee, the court shall appoint a special guardian or committee to attend to the interests of such person in the proceedings; but if a general guardian or committee has been appointed for such person in this State, it shall be the duty of such general guardian or committee to attend to the interests of such infant, idiot, or person of unsound mind; and the court may require such security to be given by such general or special guardian or committee as it may deem necessary to protect the rights of such infant, idiot, or person of unsound mind; and all notices required to be served in the progress of the proceedings, may be served on such general or special guardian or committee.

7.—In all cases not herein otherwise provided for, service of orders, notices, and papers in the

special proceedings authorized by this act, may be made as the Supreme Court shall direct.

§ 15.—On presenting such petition to the Supreme Court as aforesaid, with proof of service of a copy thereof and notice as aforesaid, all persons whose estates or interests are to be affected by the proceedings, may show cause against granting the prayer of the petition, and may disprove any of the facts alleged in it. The court shall hear the proofs and allegations of the parties, and if no sufficient cause is shown against granting the prayer of the petition, it shall make an order for the appointment of five disinterested and competent persons who reside in the county where the premises are situated, commissioners to ascertain and appraise the compensation to be made to the owners or persons interested in the real estate proposed to be taken in such county for the purposes of the company, and to fix the time and place for the first meeting of such commissioners. The parties whose lands are to be appraised, or their attorneys, may, in case they appear, name six such persons, and the company a like number, provided they do so, and the court shall appoint two of the commissioners from each of the six so named, in case there is no legal objection to such appointment, and the other commissioner shall be appointed by the court in its discretion.

§ 16.—The commissioners shall take and subscribe the oath prescribed by the twelfth article of the constitution. Any one of them may issue subpoenas, administer oaths to witnesses, and any three of them may adjourn the proceedings before them from time to time, in their discretion.—Whenever they meet, except by the appointment of the court or pursuant to adjournment, they shall cause reasonable notice of such meetings to be given to the parties who are to be affected by their proceedings, or their attorney or agent.—They shall view the premises described in the petition, and hear the proofs and allegations of the parties, and reduce the testimony, if any is taken by them, to writing; and after the testimony is closed in each case, and without any unnecessary delay, and before proceeding to the examination of any other claim, a majority of them, all being present and acting, shall ascertain and determine the compensation, which ought justly to be made by the company to the party or parties owning or interested in the real estate appraised by them; and in determining the amount of such compensation, they shall not make an allowance or deduction on account of any real or supposed benefits which the parties may derive from the construction of the proposed railroad. They, or a majority of them, shall also determine and certify what sum ought to be paid to a general or special guardian or committee of an infant, idiot, or person of unsound mind, or to an attorney appointed by the court to attend the interest of any unknown owner or party in interest, not personally served with notice of the proceedings, and who has not appeared; for costs, expenses, and counsel fees.—They shall make a report to the Supreme Court, signed by them, or a majority of them, of the proceedings before them, with the minutes of the testimony taken by them, if any. Said commissioners shall be entitled to three dollars for their expenses and services for each day they are engaged in the performance of their duties, to be paid by the company.

§ 17.—On such report being made by said commissioners, the company shall give notice to the parties or their attorneys to be affected by the proceedings, according to the rules and practice of said court, at a general or special term thereof, for the confirmation of such report: and the court shall thereupon confirm such report, and shall make an order, containing a recital of the substance of the proceedings in the matter of the appraisal, and the description of the real estate appraised for which compensation is to be made; and shall also direct to whom the money is to be paid, or in what bank, and in what manner it shall be deposited by the company.

§ 18.—A certified copy of the order so to be made, as aforesaid, shall be recorded at full length

in the clerk's office of the county in which the land described in it is situated; and thereupon, and on the payment or deposit by the company of the sums to be paid as compensation for the land, and for costs, expenses, and counsel fees as aforesaid, and as directed by said order, the company shall be entitled to enter upon, take possession of, and use the said land for the purpose of its incorporation, during the continuance of its corporate existence, by virtue of this or any other act; and all persons who have been made parties to the proceedings shall be divested and barred of all right, estate, and interest in such real estate, during the corporate existence of the company as aforesaid. All real estate required by any company under and pursuant to the provisions of this act, for the purposes of its incorporation shall be deemed to be acquired for public use. Within twenty days after the confirmation of the report of the commissioners, as provided for in the seventeenth section of this act, either party may appeal, by notice in writing to the other, to the Supreme Court, from the appraisal and report of the commissioners. Such appeal shall be heard by the Supreme Court, at any general or special term thereof, on such notice thereof given, according to the rules and practice of said court. On the hearing of such appeal, the court may direct a new appraisal before the same or new commissioners in its discretion: the second report shall be final and conclusive on all the parties interested. If the amount of the compensation to be made by the company is increased by the second report, the difference shall be a lien on the land appraised, and shall be paid by the company to the parties entitled to the same, or shall be deposited in the bank, as the court shall direct; and if the amount is diminished, the difference shall be refunded to the company by the party to whom the same may have been paid; and judgment therefor may be rendered by the court, on the filing of the second report against the party liable to pay the same. Such appeal shall not affect the possession by such company of the land appraised; and when the same is made by others than the company, it shall not be heard, except on a stipulation of the party appealing, not to disturb such possession.

§ 19.—If there are adverse and conflicting claimants to the money, or any part of it, to be paid as compensation for the real estate taken, the court may direct the money to be paid into the said court by the company, and may determine who is entitled to the same, and direct to whom the same shall be paid; and may, in its discretion, order a reference to ascertain the facts on which such determination and order are to be made.

§ 20.—The court shall appoint some competent attorney to appear for, and protect the rights of any party in interest, who is unknown, or whose residence is unknown, and who has not appeared in the proceedings by an attorney or agent. The court shall also have power at any time to amend any defect or informality in any of the special proceedings authorized by this act, as may be necessary; or to cause new parties to be added, and to direct such further notices to be given, to any party in interest, as it deems proper; and also to appoint other commissioners in place of any who shall die, or refuse or neglect to serve, or be incapable of serving.

§ 21.—If, at any time after an attempt to acquire title by appraisal of damages or otherwise, it shall be found that the title thereby attempted to be acquired is defective, the company may proceed anew to acquire or perfect such a title in the same manner as if no appraisal had not been made; and at any stage of such new proceedings, the court may authorize the corporation, if in possession, to continue in possession, to take possession, and use such real estate during the pendency, and until the final conclusion of such new proceedings; and may stay all actions or proceedings against the company on account thereof, on such company paying into court a sufficient sum, or giving security as the court may direct, to pay the compensation therefor when finally ascertained; and

in every such case, the party interested in such real estate may conduct the proceedings to a conclusion, if the company delays or omits to prosecute the same.

§ 22.—Every company formed under this act, before constructing any part of their road into or through any county named in their articles of association, shall make a map and profile of the route intended to be adopted by such company in such county, which shall be certified by the President and Engineer of the company, or a majority of the Directors, and filed in the office of the clerk of the county in which the road is to be made.—The company shall give written notice to all actual occupants of the land over which the route of the road is so designated, and which has not been purchased by or given to the company, of the route so designated. Any party feeling aggrieved by the proposed location, may, within fifteen days after receiving written notice as aforesaid, apply to a justice of the Supreme Court, out of court by petition, duly verified setting forth his objections to the route designated, and the said justice may, if he considers sufficient cause therefor to exist, appoint three disinterested persons, one of whom must be a practical engineer, commissioners to examine the proposed route, and after hearing the parties, to affirm or alter the same, as may be consistent with the just rights of all parties and the public; but no alteration of the route shall be made, except by the concurrence of the commissioner who is a practical civil engineer. The determination of the commissioners shall, within thirty days after their appointment, be made and certified by them, and the certificate filed in the office of the county clerk. Said commissioners shall each be entitled to three dollars per day for their expenses and services, to be paid by the person who applied for their appointment; and if the proposed route of the road is altered or changed by the commissioners, the company shall refund the amount so paid.

§ 23.—The Directors of every company formed under this act may, by a vote of two-thirds of their whole number, at any time alter or change the route or any part of the route of their road, if it shall appear to them that the line can be improved thereby; and they shall make and file in the clerk's office of the proper county, a survey, map and certificate of such alternation or change; and shall have the same right and power to acquire title to any lands required for the purposes of the company, in such altered or changed route, as if the road had been located there in the first instance; and no such alternation shall be made in any city or village, after the road shall have been constructed, unless the same is sanctioned by a vote of two-thirds of the common council of said city or trustees of said village, and in case of any alteration made in the route of any railroad, after the company has commenced grading, compensation shall be made to all persons for injury so done to any lands that may have been donated to the company. All the provisions of this act relative to the first location, and to acquiring title to land, shall apply to every such new or altered portion of the route.

§ 24.—Whenever the track of a railroad constructed by a company formed under this act shall cross a railroad, a highway, turnpike, or plank road, such highway, turnpike, or plank road may be carried under or over the track, as may be found most expedient; and in cases where an embankment or cutting shall make a change in the line of such highway, turnpike, or plank road desirable, with a view to a more easy ascent or descent, the said company may take such additional lands for the construction of such road, highway, turnpike, or plank road on such new line as may be deemed requisite by the Directors. Unless the lands so taken shall be purchased for the purposes aforesaid, compensation therefor shall be ascertained in the manner prescribed in this act for acquiring title to real estate, and duly made by said corporation to the owners and persons interested in such lands. The same when so taken, shall become part of such intersecting

highway, turnpike, or plank road, in such manner and by such tenure as the adjacent parts of the same highway, turnpike, or plank road, may be held for highway purposes.

§ 25.—The commissioners of the land office shall have power to grant to any railroad company formed under this act, any land belonging to the people of this State, which may be required for the purposes of their road, on such terms as may be agreed on by them; or such company may acquire title thereto by appraisal, as in the case of lands owned by individuals; and if any land belonging to a county or town is required by any company for the purposes of the road, the county or town officers having the charge of such land may grant such land to such company, for such compensation as may be agreed upon.

§ 26.—In case any title or interest in real estate required by any company formed under this act, for the purpose of its incorporation, shall be vested in any Trustee not authorized to sell, release, and convey the same, or in any infant, idiot, or person of unsound mind, the Supreme Court shall have power, by a summary proceeding on petition, to authorize and empower such Trustee, or the general guardian or committee of such infant, idiot, or person of unsound mind, to sell and convey the same to such company, for the purposes of its incorporation, on such terms as may be just; and in case any such infant, idiot, or person of unsound mind, has no general guardian or committee, the said court may appoint a special guardian or committee for the purpose of making such sale, release, or conveyance, and may require such security from such general or special guardian or committee as said court may deem proper. But before any conveyance or release authorized by this section shall be executed, the terms on which the same is to be executed shall be reported to the court, on oath; and if the court is satisfied that such terms are just to the party interested in such real estate, the court shall confirm the report, and direct the proper conveyance or release to be executed, which shall have the same effect as if executed by an owner of said land, having legal power to sell and convey the same.

§ 27.—No company formed under this act shall lay down or use in the construction of their road, any iron rail of less weight than fifty-six pounds to the lineal yard, except for turnouts, sidings, and switches.—

§ 28.—Every corporation formed under this act, shall in addition to the powers conferred on corporations in the third title of the eighteenth chapter of first part of the Revised Statutes have power.

1.—To cause such examination and surveys for its proposed railroad to be made, as may be necessary to selection of the most advantageous route; and for such purpose, by its officers or agents and servants, to enter upon the lands or waters of any person, but subject to responsibility for all damages which shall be done thereto.

2.—To take and hold such voluntary grants of real estate and other property as shall be made to it, to aid in the construction, maintenance and accommodation of its railroad; but the real estate received by voluntary grant shall be held and used for the purposes of such grant only.

3.—To purchase, hold and use, all such real estate and other property as may be necessary for the construction and maintenance of its railroad, and the stations and other accommodations necessary to accomplish the objects of its incorporation: but nothing herein contained shall be held as repealing, or in any way affecting the act entitled "An act authorizing the construction of railroads upon Indian lands," passed May 12, 1836.

4.—To lay out its road not exceeding six rods in width, and to construct the same; and for the purposes of cuttings and embankments, to take as much more land as may be necessary for the proper construction and security of the road, and to cut down any standing trees that may be in danger of falling on the road, making compensa-

tion therefor as provided in this act for lands taken for the use of the company.

5.—To construct their road across, along, or upon any stream of water, water-course, street, highway, plank-road, turnpike, or canal, which the route of its road shall intersect or touch; but the company shall restore the stream or water-course, street, highway, plank road and turnpike thus intersected or touched, to its former state, or to such state as not unnecessarily to have impaired its usefulness. Every company formed under this act, shall be subject to the power vested in the canal commissioners by the seventeenth section of chapter two hundred and seventy six of the session laws of 1834. Nothing in this act contained shall be construed to authorise the erection of any bridge, or any other obstructions across, in or over any stream or lake navigated by steam or sail boats, at the place where any bridge or other obstructions may be proposed to be placed; nor to authorise the construction of any railroad not already located in, upon or across any streets in any city, without the assent of the corporation of such city.

6.—To cross, intersect, join and unite its railroad with any other railroad before constructed, at any point on its route, and upon the grounds of such other railroad company, with the necessary turnouts, sidings and switches, and other conveniences in furtherance of the objects of its connections. And every company whose railroad is or shall be hereafter intersected by any new railroad, shall unite with the owners of such new railroad in forming such intersections and connections, and grant the facilities aforesaid; and if the two corporations cannot agree upon the amount of compensation to be made therefor, or the points and manner of such crossings and connections, the same shall be ascertained and determined by commissioners to be appointed by the court as if provided in this act in respect to acquiring title to real estate.

7.—To take and convey persons and property on their railroad by the power or force of steam or of animals, or by any mechanical power, and to receive compensation therefor.

8.—To erect and maintain all necessary and convenient buildings, stations, fixtures and machinery for the accommodation and use of their passengers, freights and business.

9.—To regulate the time and manner in which passengers and property shall be transported, and the compensation to be paid therefor; but such compensation, for any passenger and his ordinary baggage, shall not exceed three cents per mile.

10.—From time to time to borrow such sums of money as may be necessary for completing and finishing or operating their railroad, and to issue and dispose of their bonds for any so borrowed, and to mortgage their corporate property and franchises to secure the payment of any debt contracted by the company for the purposes aforesaid; and the directors of the company may confer on any holder of any bond issued for money borrowed as aforesaid, the right to convert the principle due or owing thereon, into stock of said company, at any time not exceeding ten years from the date of the bond, under such regulations as the directors may see fit to adopt.

§ 29.—Whenever the railroad of any company formed under this act shall run parallel or nearly parallel to any canal of this state, and within thirty miles of such canal, the company owning such railroad shall pay to the canal fund, on all property transported upon its railroad other than the ordinary baggage of passengers, the same tolls upon that portion of the road running parallel to the canal, that would have been payable to the state, if such property other than baggage had been transported on any such canal; and every such company shall make returns, at such times and in such manner as the commissioners of the canal fund shall prescribe, of all the property transported on its railroad, except ordinary baggage of passengers; and the said commissioners are authorized and required to prescribe the manner in which such tolls so payable to the canal

fund by such company, shall be collected and paid, and to enforce the collection and payment thereof, and to make such regulations as they shall deem proper for that purpose; and every such company that shall neglect or refuse to comply with any such regulations, shall forfeit to the people of this State the sum of five hundred dollars for every day it shall so neglect or refuse; and in every case of such forfeiture, it shall be the duty of the attorney general to prosecute such company for the penalty, in the name of the people.

§ 30.—Every conductor, baggage master, engineer, brakeman, or other servant of any railroad corporation employed in a passenger train, or at stations for passengers, shall wear upon his hat or cap a badge, which shall indicate his office, and the initial letters of the style of the corporation by which he is employed. No conductor or collector without such badge shall be entitled to demand or receive from any passenger any fare or to exercise any of the powers of his office; and no officer or servant, without such badge, shall have authority to meddle or interfere with any passenger, his baggage or property.

§ 31.—Every Railroad corporation formed under this act, shall make an annual report to the state engineer and surveyor of the operations of the year ending on the thirtieth day of September; which report shall be verified by the oaths of the treasurer or president, and acting superintendent of operations, and be filed in the office of the state engineer and surveyor by the first day of December in each year, and shall state:

- 1.—The amount of capital as by charter;
- 2.—The amount of stock subscribed;
- 3.—The amount paid in as by last report;
- 4.—The total amount now of capital stock paid in;
- 5.—The funded debt by last report;
- 6.—The total amount now of funded debt;
- 7.—The floating debt as by last report;
- 8.—The amount now of floating debt;
- 9.—The total amount now of funded and floating debt;
- 10.—The average rate per annum of interest on funded debt.

Cost of Road and Equipment.

- 11.—For graduation and masonry by last report;
- 12.—The total amount now expended for the same;
- 13.—The amount for bridges by last report;
- 14.—The total amount now expended for the same;
- 15.—The amount for superstructure, including iron, by last report;
- 16.—Total amount now expended for the same;
- 17.—For passengers and freight stations, building and fixtures, by last report;
- 18.—Total amount now expended for the same;
- 19.—For engine and car houses, machine shops, and machinery and fixtures, by last report;
- 20.—Total amount now expended for the same;
- 21.—For land, land damages and fences, by last report;
- 22.—Total amount now expended for the same;
- 23.—For locomotives and fixtures and snow plows, by last report;
- 24.—Total amount now expended for the same;
- 25.—For passenger and baggage cars, by last report;
- 26.—Total amount now expended for the same;
- 27.—For freight cars, as by last report;
- 28.—Total amount now expended for the same;
- 29.—For engineering and agencies, by last report;
- 30.—Total amount now expended for the same;
- 31.—Total cost of road and equipment.

Characteristics of Road.

- 32.—Length of road;
- 33.—Length of road laid;
- 34.—Length of double track, including sidings;
- 35.—Length of branches owned by the company laid;
- 36.—Length of double track on the same;
- 37.—Weight of rail by yard on main track.
- 38.—The number of engine houses and shops; of engines and cars, and their character.
- 39.—It shall also be the duty of each corporation to transmit to the state engineer and surveyor the following maps, profiles and drawing, exhibiting the characteristics of their roads; the map to show the length and direction of each straight line, and the length and radius of each curve; also the point of crossing of each town and county line, and the length of line in each town and county accurately determined by measurements to be taken after the completion of the road. The profile to be on the map, and shall show the grade line and surface of ground in the usual method, also the elevation of grades above tides at each change in the inclination thereof. The maps and profile to be made on a scale of five hundred feet to one-tenth of a foot: vertical scale of profile to be one hundred feet to one tenth of a foot. For all roads or parts of roads now done, or in operation, the said maps shall be returned on or before the first day of January next; and for all roads now in progress, or which may hereafter be constructed, the said maps and profiles shall be returned within three months after the same or any portion thereof shall be in use.

Doings of the Year in Transportation, and Total Miles Run.

- 40.—Miles run by Passenger Trains;
- 41.—Miles run by Freight Trains;
- 42.—The rate of fare for passengers, charged for the respective classes per mile;
- 43.—Number of Passengers carried in Cars;
- 44.—Number of miles travelled by Passengers;
- 45.—Number of tons of two thousand pounds of freight carried in Cars;
- 46.—Number of miles carried, or total movement of freight in miles; all to be accurately compiled from the daily records or evidences of earnings, manifest and way bills.
- 47.—Average rate of speed adopted by ordinary Passenger Trains, including stops;
- 48.—Average rate of speed adopted by ordinary Passenger Trains, when in motion.
- 49.—Average rate of speed adopted by Express Trains, including stops;
- 50.—Average rate of speed adopted by Express Trains, when in motion.
- 51.—Average rate of speed adopted by Freight Trains, including stops;
- 52.—Average rate of speed adopted by Freight Trains, when in motion.
- 53.—Average weight in tons of two thousand pounds of Passenger Trains, exclusive of Passengers and Baggage;
- 54.—Average weight in tons of Freight Trains, exclusive of Freight.
- 55.—The amount of freight, specifying the quantity in tons, of the products of the forest, of animals, of vegetable food, other agricultural product, manufactures, merchandise, and other articles.

Expenses of Maintaining the Road or Real Estate of the Corporation.

- 56.—For repairs of road-bed, and railway, excepting cost of iron, which shall be the cost of labor and materials used during the year; also use and cost of engines engaged in ballasting; also the renewal and repairs of gravel and stone cars, and all items of cost connected with keeping the road in order.
- 57.—For depreciation of way;
- 58.—Length, in feet, of iron used in renewals, with weight and cost;
- 59.—Repairs of Buildings;
- 60.—Repairs of Fences and Gates;

- 61.—Taxes on Real Estate;
- 62.—Total expenses of maintaining road or real estate for the year;
- 63.—Expenses of machinery or personal property of the corporation;
- 64.—Repairs of Engines and Tenders;
- 65.—Depreciation of Engines and Tenders;
- 66.—Repairs of Passenger and Baggage Cars;
- 67.—Depreciation of Passenger and Baggage Cars;
- 68.—Repairs of Freight Cars;
- 69.—Depreciation of Freight Cars;
- 70.—Repairs of tools and machinery in shops;
- 71.—Incidental expenses, including Fuel, Oil, Clerks, Watchman about shops;
- 72.—Total expenses of repair of machinery;
- 73.—Office expenses, Stationery;
- 74.—Agents and Clerks;
- 75.—Labor handling freight, loading and unloading;
- 76.—Porters, Watch and Switchmen;
- 77.—Wood and Water Station attendance;
- 78.—Conductors, Baggage, and Brakemen;
- 79.—Enginemen and Firemen;
- 80.—Fuel (first cost, and labor preparing for use);
- 81.—Oil and waste for Engines and Tenders;
- 82.—Oil and waste for Freight Cars;
- 83.—Oil and waste for Passenger and Baggage Cars;
- 84.—Loss and damage of goods and baggage;
- 85.—Damages for injuries of persons;
- 86.—Damages to property, including damages by fire, cattle killed on road;
- 87.—General Superintendence;
- 88.—Contingencies;
- 89.—Total expenses of operating road.
- 90.—The above statements are to be made without reference to the sums actually received or paid during the year. The following statement of the earnings and cash receipts are required:
- 91.—From Passengers;
- 92.—From Freight;
- 93.—From other sources;
- 94.—The above to be stated without reference to the amount actually collected.
- 95.—Receipts during the year from Freight;
- 96.—From Passengers.
- 97.—From other sources, specifying what in detail;
- 98.—Payments for transportation expenses;
- 99.—For interest.
- 100.—Dividends on stock, amount and rate per cent.
- 101.—Payments to surplus fund, and the total amount of said fund;
- 102.—The number of persons injured in life and limb, and the cause of the injury, and whether passengers or persons employed;
- Whether any such accidents have arisen from carelessness or negligence of any person in the employment of the corporation, and whether such person is retained in the service of the corporation.
- 103.—It shall be the duty of the State engineer and surveyor to arrange the information contained in such reports in tabular form, and prepare the same, together with the said reports, in a single document, for printing, for the use of the Legislature, and report the same to the Legislature on the first day of its session in each year.
- 104.—All the items under the heads of expenses of maintaining the road or real estate of the corporation, expenses of machinery or personal property of the corporation, expenses of use of road and machinery or operating the road, shall be carried out under two heads, the one showing the cost of freight transportation, the other the cost of passenger transportation.
- 105.—The provisions of this section shall apply to all existing rail-road corporations: and the report of the said existing rail-road corporations, made in pursuance of the provisions of this section, shall be deemed to be a full compliance with any existing law or resolution requiring annual reports to be made by such corporation.

§ 32.—Any such corporation which shall neglect to make the report as is provided in the preceding section, shall be liable to a penalty of two hundred and fifty dollars, to be sued for in the name of the people, for their use.

§ 33.—The Legislature may, when any such railroad shall be opened for use, from time to time, alter or reduce the rate of freight, fare and other profits upon such road; but the same shall not, without the consent of the corporation, be so reduced as to produce with said profits less than ten per cent. per annum on the capital actually expended; nor unless on examination of the amounts received and expended, to be made by the state engineer and surveyor, and the comptroller, they shall ascertain that the net income derived by the company from all sources for the year then last past, shall have exceeded an annual income of ten per cent. upon the capital of the corporation actually expended.

§ 34.—Any such corporations shall, when applied to by the Postmaster General, convey the mails of the mails of the United States on their road or roads respectively; and in case such corporation shall not agree as to the rate of transportation therefor, and as to the time, rate of speed, manner and condition of carrying the same, it shall be lawful for the Governor of this State to appoint three commissioners, who, or a majority of them, after fifteen days' notice in writing of the time and place of meeting to the corporation, shall determine and fix the prices, terms, and conditions aforesaid; but such price shall not be less for carrying said mails in the regular passenger trains, than the amount which such corporation would receive as freight on a like weight of merchandise transported in their merchandise trains, and a fair compensation for the Post Office car.—and in case the Postmaster General shall require the mail to be carried at other hours, or at a higher speed than the passenger trains are run, the corporation shall furnish an extra train for the mail, and be allowed an extra compensation for the expenses, and wear and tear thereof, and for the service to be fixed as aforesaid.

§ 35.—If any passenger shall refuse to pay his fare it shall be lawful for the Conductor of the train, and servants of the corporation to put him and his baggage out of the cars, using no unnecessary force, at any usual stopping place, or near any dwelling house, as the Conductor shall elect, on stopping the train.

§ 36.—Every such corporation shall start and run their cars for the transportation of passengers and property, at regular times, to be fixed by public notice; and shall furnish sufficient accommodation for the transportation of all such passengers and property, as shall within a reasonable time previous thereto being offered for transportation at the place of starting and the junctions of other railroads, and at usual stopping places established for receiving and discharging way passengers and freights for that train; and shall take transport and discharge such passenger and property at, from, and to such places, on the due payment of the freight or fare legally authorized therefor; and shall be liable to the party aggrieved, in an action for damages, for any neglect or refusal in the premises.

§ 37.—A check shall be affixed to every parcel of baggage, when taken for transportation by the agent or servant of such corporation, if there is a handle, loop, or fixture, so that the same can be attached upon the parcel of baggage so offered for transportation, and a duplicate thereof given to the passenger or person delivering the same on his behalf; and if such check be refused on demand, the corporation shall pay to such passenger the sum of ten dollars, to be recovered in a civil action; and further no fare or toll shall be collected or received from such passenger, and if such passenger shall have paid his fare, the same shall be refunded by the conductor in charge of the train; and on producing such check, if his baggage shall not be delivered to him, he may himself be a witness in any suit brought by him, to prove the contents and value of said baggage.

§ 38.—In forming a passenger train, baggage, freight, merchandise or lumber shall not be placed in rear of the passenger cars, and if they or any of them shall be so placed the officer or agent who so directed, or knowingly suffered such arrangement, and the conductor of the train, shall be deemed guilty of a misdemeanor and be punished accordingly.

§ 39.—A bell shall be placed on each locomotive engine, and be rung at the distance of at least eighty rods from the place where the railroad shall cross any travelled public road or street, and be kept ringing until it shall have crossed such road or street; or a steam whistle shall be attached to each locomotive engine, and be sounded at least eighty rods from the place where the railroad shall cross any such road or street, except in cities, and be sounded at intervals until it shall have crossed such road or street, under a penalty of twenty dollars for every neglect of the provisions of this section, to be paid by the corporation owning the railroad, to be sued for by the district attorney of the county within ten days after such penalty was incurred; one-half thereof go to the informer, and the other half to the county; and said corporation shall also be liable for all damages which shall be sustained by any person by reason of such neglect, one-half of which penalty shall be chargeable to, and collected by the company, of the engineer having charge of the train, where the omission of duty consists in not sounding the whistle or ringing the bell.

§ 40.—Every such corporation shall cause boards to be placed, well supported by posts or otherwise, and constantly maintained across each travelled public road or street where the same is crossed by the railroad on the same level. Said boards shall be elevated so as not to obstruct the travel, and to be easily seen by travellers; and on each side of such boards shall be painted in capital letters, of at least the size of nine inches each, the words, "Railroad crossing, look out for the cars." But this section shall not apply to streets in cities or villages, unless the corporation shall be required to put up such boards by the officers having charge of such streets.

§ 41.—If any person shall, while in charge of a locomotive engine running upon the railroad of any such corporation, or while acting as the conductor of a car or train of cars on any such railroad, be intoxicated, he shall be deemed guilty of a misdemeanor.

§ 42.—If any person or persons shall wilfully do or cause to be done, any act or acts whatever, whereby any building, construction or work of any railroad corporation, or any engine, machine or structure, or any matter or thing appertaining to the same, shall be stopped, obstructed, impaired, weakened, injured or destroyed, the person or persons so offending shall be guilty of a misdemeanor, and shall forfeit and pay to the said corporation, treble the amount of damages sustained by means of such offence.

§ 43.—All penalties imposed by this act may be sued for in the name of the people of the State of New York; and if such penalty be for a sum not exceeding one hundred dollars, then such suit may be brought before a justice of the peace, and may be commenced by serving a summons on any director of such company.

§ 44.—Every corporation formed under this act shall erect and maintain fences on the sides of their road, of the height and strength of a division fence required by law, with openings or gates or bars therein, and farm crossings of the road for the use of the proprietors of lands adjoining such railroad; and also construct and maintain cattle-guards at all road crossings, suitable and sufficient to prevent cattle and animals from getting on to the railroad. Unless such fences and cattle-guards shall be duly made, the corporation and its agents shall be liable for all damages which shall be done by their agents or engines, to cattle, horses, or other animals thereon; and after such fences and guards shall be duly made and maintained, the corporation shall not be liable for any such damages, unless negligently or wilfully done; and if any

person shall ride, lead, or drive any horse or other animal upon such road, and within such fences and guards, other than at farm crossings, without the consent of the corporation, he shall for every such offence forfeit a sum not exceeding ten dollars, and shall also pay damages which shall be sustained thereby to the party aggrieved. It shall not be lawful for any person, other than those connected with or employed upon the railroad, to walk along the track or tracks of any railroad, except where the same shall be laid along public roads or streets.

§ 45.—Every corporation shall within a reasonable time after their road shall be constructed, cause to be made:

A map and profile thereof, and of the land taken or obtained for the use thereof, and file the same in the office of the state engineer and surveyor; and also like maps of the parts thereof located in different counties, and file the same in the offices for recording deeds, in the counties in which parts of said road shall be. Every such map shall be drawn on a scale, and on paper, to be designated by the state engineer and surveyor, and certified and signed by the president or engineer of such corporation.

§ 46.—In case any passenger on any railroad shall be injured while on the platform of a car, or on any baggage, wood, or freight car, in violation of the printed regulations of the company posted up at the time in a conspicuous place inside of its passenger cars then in the train, such company shall not be liable for the injury; provided, said company at the time furnished room inside its passenger car sufficient for the proper accommodation of the passengers.

§ 47.—If any corporation formed under this act shall not, within two years after its articles of association are filed and recorded in the office of the Secretary of State, begin the construction of its road, and expend thereon ten per cent. on the amount of its capital, or shall not finish the road and put it in operation in five years from the time of filing its articles of association as aforesaid, its corporate existence and powers shall cease.

§ 48.—The Legislature may at any time annul or dissolve any corporation formed under this act; but such dissolution shall not take away or impair any remedy against any such corporation, its stockholders or officers, or any liability which have shall been previously incurred.

§ 49.—All existing railroad corporations within this State shall respectively have and possess all the powers and privileges contained in this act; and they shall be subject to all the duties, liabilities and provisions not inconsistent with the provisions of their charter, contained in section nine, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty, twenty-one, twenty-three, twenty-four, twenty-five, twenty-six, twenty-seven, twenty-eight, (except sub-division nine,) thirty, thirty-one, thirty-two, thirty-three, thirty-four, thirty-five, thirty-six, thirty-seven, thirty-eight, thirty-nine, forty, forty-one, forty-two, forty-three, forty-four, forty-five, forty-six, of this act.

§ 50.—The act entitled, "An act to authorize the formation of railroad corporations," passed March 26, 1848, and the acts amending the same, are hereby repealed; but all railroad companies formed under said act are hereby continued in existence, in the same manner as if said acts were not repealed, and such companies shall be subject to all the provisions, and shall have the same powers, rights and privileges, and be subject to the same duties, as if they had been incorporated under this act; and the time limited by said act, for the expenditure of ten per cent. of their capital stock; and the time limited in said section of said law for their completion, is hereby extended to five years from the passage of this act; and also the time for completing any railroad organized previous to March 27, 1848, whose road was under contract prior to February 1, 1850, to be completed within the time prescribed by its charter, is hereby extended for one year.

§ 51.—Nothing in this act contained shall authorize or permit the New York and Erie Railroad

Company to abandon the use of their road in the county of Rockland, east of Sufern's depot.

§ 52.—This act shall take effect immediately.

Philadelphia, Wilmington and Baltimore Railroad.

The Philadelphia, Wilmington and Baltimore Railroad Company have omitted their usual August dividend, assigning therefor the following reasons:

"The net earnings of the Philadelphia, Wilmington and Baltimore Railroad Company, for the six months ending August 21, 1854, have been, after deducting the usual appropriation to Renewal Fund, of \$30,000, a little over three per cent. The company have on hand and unsold \$190,000 of bonds, authorized to be issued in January, 1853, for improvements, other than the bridge and double track. These improvements have already been made and paid for, by using from time to time the earnings of the road, and by the creation of a floating debt, which has been conveniently carried at six per cent. interest till the late unparalleled stringency in the money market. This company also has in available means, besides the aforesaid bonds, such as real estate, steamboats, stocks, &c., about \$350,000, which property it was the intention of the Directors to dispose of, from time to time, and apply the proceeds to pay the floating debt and reimburse the Treasury for improvement, but they have not been able to dispose of it without too great a loss. Rather than sacrifice the property by putting it into the market in its present depressed state and thus reimburse the Treasury for the earnings used on improvements, the Directors have concluded to postpone declaring any dividend till January next, when they have no doubt they will be in a condition to pay the usual dividend."

Great Railroad Traffic West.

The passenger business of the Chicago and Galena Railroad for September, will probably show a gain of 50 per cent. over any previous month, and double the business of August. The freight business is also largely increased, and would have been much greater but for the insufficiency of storage for grain in this city. Altogether the receipts will show figures running pretty well up to \$150,000.

The Chicago and Rock Island Road shows a corresponding increase. Notwithstanding the first named road has been finished to Scales' Mound, within twelve miles of Galena, and also that the Chicago and Mississippi Railroad has taken off nearly all the direct travel and freight between this city and Bloomington, Springfield, Alton and St. Louis, the Rock Island Road has about all that it can do. It has been far more successful than its most sanguine friends had predicted. Already it has brought to the city a large part of the trade of Iowa, and when, in another year, it shall cross the Mississippi on a bridge, and penetrate the centre of the young State beyond, its business will be doubled or trebled.

The Chicago and Mississippi Railroad has been finished but a short time, and its business has been increasing rapidly. Its through business is very large, and its way trade must grow very rapidly for many years, as it passes through and opens a section of country that is now thinly inhabited, but which will, within a few years, by reason of the unsurpassed fertility, be an almost uninterrupted garden.

The Illinois and Wisconsin road is increasing its business very much. We learn that enough iron is expected here this week to complete the line to Fox River, and that it will probably be extended to Crystal Lake before winter sets in. Its business will quadruple what it now is, as soon as the track is laid to Fox River, as McHenry County has a much larger surplus of grain to send to market than ever before, and it nearly all seeks this route as its outlet.

The Chicago and Aurora Road has largely increased its business, especially in freights. Its pas-

senger business, when it shall penetrate to the centre of the Military Tract, will be immense.

The Michigan Central and the Michigan Southern Roads are taxed to their full capacity. Scarcely a passenger train makes card time, owing to the immense number of passengers. Each have eight trains of from five to ten cars per day, and all run full. If the business is managed economically, the stockholders will get large dividends.

The Illinois Central Railroad is not in a condition to enable us to judge accurately of its prospects, as it is completed only in sections, and the machinery is much used for construction purposes. On the Chicago Branch, between this city and Urbana, there is a steady increasing business, and prospects are good for a continuance of the same.

—Chicago Tribune.

Rutland Railroad.

The gross earnings of the road since the Trustees had been in possession, November 20th, 1853, to August 31, 1854, were:

Passengers.....	\$148,710 99
Freight.....	143,575 14
Mails.....	10,500 00
Expresses.....	3,558 72
Rents.....	3,727 39
Miscellaneous.....	5,193 63
	\$310,263 87

The Running Expenses were for:

Passenger Department.....	\$20,821 47
Freight Department.....	35,422 71
Fuel and Water.....	44,442 18
Oil.....	6,478 67
Waste.....	1,205 74
Miscellaneous.....	16,762 34
	\$125,133 11

And the repairs were:

Repairs of road.....	\$46,614 82
Rail renewals.....	17,865 72
Repairs of locomotives.....	23,242 16
Repairs of cars.....	26,639 57
Repairs of stations, &c.....	4,642 68
	\$249,138 03
Leaving a balance of.....	\$61,125 84

Milwaukee and Mississippi Railroad.

The gross receipts for the month of September on the M. & M. R. foot up..... \$60,233 24
The total for the eight months preceding was..... 244,294 19

Giving a total for 9 months of.... \$304,527 43

In looking over the figures for the last month, we are able to give some idea of the value of the Janesville branch. If such results are shown by the following figures, come from this branch of 8 miles now, what may not be expected from the pouring in upon the M. & M. Railroad of the vast business to be developed by the extension of that branch; in other words—the Southern Wisconsin Railroad?

The following figures represent the business of 4 months. It should be stated that during the month of August, the Madison business suffered some drawback from the sinking of the track.

Months.	Janesville to Mil.	Milwaukee to J.
June.....	\$1,012 82	\$1,665 77
July.....	2,188 31	4,209 71
August.....	3,117 32	2,804 36
September.....	8,569 07	4,675 30
Total.....	\$18,884 52	\$16,255 14

Total Janesville branch—\$35,139 66.

Months.	Madison to Mil.	Milwaukee to M.
June.....	\$3,450 59	\$6,033 45
July.....	603 59	4,731 77
August.....	627 28	3,835 54
September.....	6,652 30	6,985 62
Total.....	\$11,333 64	\$21,586 38

Total Madison business \$32,920 02.

From the above table it will be seen that the aggregate amount of freight from Janesville to Milwaukee exceeds the aggregate amount from Madison by \$7,550 88; that the aggregate amount received at Madison for freight sent from Milwaukee exceeds that sent to Janesville by \$5,331 24; and the aggregate amount received for freights to and from Janesville exceeds that to and from Madison by \$2,219 64.

The number of tons of merchandize and the No. of buhels of grain to and from Janesville are greater than the above amounts by at least one-half, owing to the fact that the price to and from Madison exceeds that to and from Janesville by more than one-half. For instance wheat from Janesville to Milwaukee is 9c per bushel; from Madison 14c. First class merchandize to Madison is 30c. Second class 25c per 100 lbs. First class merchandize to Janesville 19c per 100 lbs. Second class 16c.

These figures are full of promise for the great enterprise of pushing the iron track into Southwestern Wisconsin.—*Milwaukee Sen.*

Stonington Railroad.

The earnings of the Stonington Railroad for the financial year ending 31st August, were \$289,000; the repairs and operating expenses, \$121,000, or 42 per cent.; interest on the debt, \$29,000, capital \$106,000. Leaving \$17,000 applicable to the purchase of the Loans of the Company, and a cash balance of \$16,300. The whole purchases of the Loans of the Company, since last report, amount to \$30,000; and this leaves the outstanding debt, not owned by the Sinking Fund, over \$348,700. The Sinking Fund holds \$97,000. It is stated in the report, that the road has no floating debt, and no constructive account unclosed.

Covington and Lexington Railroad.

This road is now completed to Paris, where it meets the completed portion of the Maysville and Lexington Railroad, opening the heart of Kentucky to Cincinnati, and to the northern markets, as well as forming a new route of travel between Cincinnati and Louisville. Its immediate extension to Lexington, a distance of 19 miles, will depend, we presume, upon whether a satisfactory arrangement can be made with the Maysville Road, the use of which would preclude the necessity of a parallel track, while with such, the former would be entirely unproductive. We presume the Covington Company will give for the use, or purchase of the portion of the Maysville Road between Paris and Lexington, twice what it would be worth to the latter, or any one else, unless the road be completed to Maysville. Should this road fall into the hands of the mortgages, we think it probable that arrangement above suggested will be carried out.

The Covington and Lexington Railroad is a first class work, in the importance of its line, its connections and prospective business, as well as its cost. This company is one of the few in Kentucky of recent date, that has shown real pluck in the management and prosecution of its road. We know its management has been such as to secure the confidence of the public, and with this, sufficient means for the progress of its road, even in the hardest times. Without such confidence it must have succumbed to the pressure to which all western roads have been subjected. It has now overcome all its difficulties, and we doubt not that a successful future opens before it.

The road is to be the grand avenue from Kentucky to Cincinnati, and the northern markets. It is soon to form the trunk of several great lines branching from Lexington to the southern Atlan-

tic and Gulf cities. It will prove a work of public utility, as well, as a productive one to its owners. It is already, we learn, in the receipt of a very handsome income.

American Railroad Journal.

Saturday, October 14, 1854.

To Railroad Companies.

We invite attention of railroad companies to the notices of several railroads in our present issue, and solicit replies to our inquiries from such as have not favored us with answers. What we desire particularly to obtain, are the *charters* of railroad companies; statements showing their cost, earnings, &c., &c., for each year since they have been in operation; also, showing the date and maturity of their funded debts; also showing their present financial condition, with an abstract of their last annual report. If companies will favor us with full sets of their reports we will save them the necessity of making an abstract of them.

We particularly desire reports from such companies as have a *history*, as we wish to publish first in the JOURNAL, statements in reference to them, for the purpose of giving opportunities for the correction of any mistakes that may occur.

The statements already published will show the general scope of the proposed work. Similar statements in reference to every company in the United States must constitute a very valuable collection, more so to the railroad interest than any other, as it must show in the main, a very satisfactory result. A few companies only are in that position which would lead them to desire to conceal the condition of their affairs, and even such should, we presume, knowing the impossibility of such concealment, make a public exhibition of their affairs as a matter of policy.

An interesting chapter in the Railroad history of this country, will be the peculiar legislation and policy that each State has adopted in reference to works of public improvement. We have collected a large amount of information upon this branch of the subject.

Erie Railroad.

The annual election for choice of directors of the company was held in this city on the 10th inst. The following names compose the board for the current year. The names of the *new* directors being in *italics*, viz:

Homer Ramsdell, of Newburg; and Samuel Marsh, William E. Dodge, Shepherd Knapp, Cornelius Smith, Marshall O. Roberts, Charles M. Leupp, George F. Tallman, Nelson Robinson, and Daniel Drew, of New York; John Arnot, of Elmira Ambrose S. Murray, of Orange, *D. A. Cushman*, *William B. Skikmore*, *Louis Von Hoffman*, *Chas. Moran*, and *Ralph Meade*, of New York.

The above ticket received about *three-fourths* of the votes cast, which were equal to 40,000 shares or *four tenths* of the entire capital stock.

Of the new members Messrs. Moran and Von Hoffman, were placed in the direction out of deference to the foreign holders of the stock and bonds of the road.

We are immediately to have the report of the "Committee of investigation." Whether we are to have one from the *Company*, save the annual report to the Legislature, we are not informed.

We presume the new board will soon indicate its policy for the future. There never was a time

when a position in the board of directors involved greater difficulties and responsibilities than the present. No step can now be taken by the company that will not be subject to the closest scrutiny, and a false one will be almost immediately followed by its legitimate consequences. The first thing to be done, must be to re-establish the credit of the company. The policy adopted for this purpose must be such as will command the assent of an impartial public; one that shall produce the desired result in the shortest time, and most economical manner. If the road can be reinstated in public confidence, the first difficulty will be surmounted. If in addition it be well managed, it can retain that confidence; for we are certain that with such management, it can be made productive.

The directors, who are supposed to represent the foreign interest, occupy a very delicate position. Their continuance in the board will be taken as satisfactory evidence that the interest they represent is properly protected. They thus in a manner become responsible for the acts and policy of the company. If on the other hand they become dissatisfied with a management which they cannot control, they will feel bound to resign, which may place matters in a condition worse than any previous one. However, we hope everything will go right; and that the new board will not only act in entire harmony with each other, but for the interest of all concerned.

Share and Money Market.

The share market continues without material alteration. There is but little speculative feeling, and cannot be, so long as prices of unquestioned securities remain at a low figure. Wherever there is a disposition to buy, first class securities are taken hold of instead of *fancies*; the former being as low as were the latter a year or two since. Till the market is relieved of the load pressing upon it, there cannot be any great improvement in prices. Money is not difficult to be had in the ordinary operations of business, but railroads and similar enterprises are compelled to pay high prices for it.

There continues to be a steady, though moderate demand for first class securities, both for domestic and foreign markets, the influence of which will, we think, soon begin to be seen in a general improvement in prices.

The earnings of railroads for September as far as received, are as follows:

Pennsylvania R. R.

Receipts of the road for the month ending Sept. 30th, 1854.....\$294,476 08
Same period last year.....260,036 76
Increase.....\$34,439 22

Receipts from Jan. 1 to Sept. 30, 1854.....\$2,725,498 29
Same period last year.....2,104,906 53

Increase.....\$620,586 76

Indianapolis and Cincinnati R. R.

The receipts of this road for the month of September, were as follows:

Passengers.....\$16,089 44
Freight.....15,021 90
Express.....274 40

Total.....\$31,385 74

Michigan Central R. R.

The earnings of the Michigan Central Railroad for September, 1853 and 1854, compare as follows:

	1853.	1854.	Gain.
Passengers.....	\$104,445 77	\$135,846 87	\$31,401 10
Freight.....	74,629 03	81,550 30	6,921 27
Miscellaneous	3,525 00	7,838 56	4,313 56

Totals...\$182,599 80 \$225,235 73 \$42,635 93

Chicago and Rock Island R. R.

The earnings of this road for September were:

Passengers.....\$76,303
Mail.....56,459

Total.....\$132,762

Hudson River R. R.

The earnings of this road for September were.....\$149,143
September, 1853.....134,079

Increase.....15,064

Macon and Western R. R.

The earnings of the Macon and Western Railway Co. for Sept., were:

Passengers.....\$8,314 80
Mail.....1,027 42
Freight.....10,279 82

\$19,622 04

Corresponding month last year. 24,427 15

Decrease (25 per cent.).....\$4,805 14

Eaton and Hamilton Railroad.

The earnings of this line for seven months of the fiscal year, 1854, compared with 1853, same time, are as follows:

	1853.	1854.
February.....	\$6,826 47	\$11,624 44
March.....	6,065 36	10,721 02
April.....	5,097 56	7,932 93
May.....	6,741 76	8,075 66
June.....	6,035 85	7,461 64
July.....	4,879 21	6,188 54
August.....	6,064 18	8,068 79
	\$41,710 39	\$60,073 02
		41,710 39

Increase, 44 per cent.....\$18,362.53

Engineers' and Surveyors' Instruments.

During the last few years the rapid advance in real estate, caused by the great influx of emigrants and the impetus given to the construction of plank roads and Railroads by the liberal supply of capital, created a demand from Engineers' and Surveyors' for the instruments which it is necessary for them to use, never before equalled in this country. As our advertising columns will bear testimony, the manufacture of these instruments has become an important business in the United States, although it is but a few years since all our transits, levels, etc., were obtained from Europe.

Mr. WM. J. YOUNG has a very large manufactory in Philadelphia, and we are glad to know that his instruments have obtained a wide celebrity as affective aids to Scientific Engineering. His business is also flourishing, notwithstanding the "dull times" of the past few months. We take pleasure in commending him to the attention of our friends who visit that city or who find it convenient to order their instruments from him.

In this city is a manufactory and importing house of high repute which we omitted to mention in our enumeration a few days since. We refer to Messrs. ALBERT COOKE & Co., John st, whose advertisement has been noticed in the Journal for

some time. This concern is very centrally located in the business portion of our city and will be found convenient for many strangers and others who may be in want of instruments:

Fulton Car Works, Sandusky, Ohio.

These works are much more extensive than we had supposed. Sandusky is a thriving Lake city of about 10,000 people, admirably situated for the easy distribution of the products of her manufactories to the South and West. Contiguous forests which skirt the Lake, furnish excellent timber for the manufacture of cars; while the iron required for the running portions is found of the best quality, within convenient distance. Direct connections by railway, with Cincinnati, Cleveland, Newark, and thence with all portions of the East, South, and West, and with the North by water, render the transmission of cars to any part of the country with great facility an easy task. These works, we are informed have now all the orders they are enabled to execute, and Mr. W. W. WETHERELL, the proprietor, is erecting new and very extensive works to meet the increasing demand. The new works will occupy about three acres of land in a lot some 330 by 400 feet, and comprise the following buildings, viz:

Foundry (of stone) 80 feet by 80.

Machine Shop (of brick, 2 stories) 44 feet by 170.

Building Shop (of wood, 2 stories) 60 feet by 120.

Paint Shop (of wood, 1 story) 60 feet by 120.

Blacksmith Shop (of stone, 1 story) 44 feet by 80.

When completed these works will, with the present facilities, enable the Fulton Iron and Car Works to furnish fifty passenger and five hundred freight cars per annum, being about \$500,000 worth of work. From the above it will be seen that these works manufacture their own wheels and machinery and have the best facilities for carrying the business forward in all its branches.

New Haven Railroad.

The law of the State of New York requires (under a penalty) every Railroad Company to make annual returns of the condition of their road and the state of their affairs, in a prescribed manner, to the Legislature, under the sanction of the oath of the President, or some responsible officer. For the year ending September 30th, 1853, the New Haven Company made no such report; though it has been accustomed to do so for previous years. The reason we suppose was, that the speculations of Schuyler had commenced, but he had either too much caution, or too much conscience to perjure himself, as he would have been compelled to do, had he concealed his frauds. But Schuyler was only one of eight directors, and his act in making the usual report was simply executive, as the servant of the directors. Now we should like to ask the directors, why no report was made? They know the law. Their habit has been to make an annual statement. There must therefore have been some reason for the extraordinary omission. Did they know or suspect any thing to be wrong, which they were unwilling to have exposed? What reason had they for their silence? Why did they not in the usual manner direct Schuyler to make out the required

statement? Was their neglect the result of inattention or indifference? We should like some explanation. It may throw important light upon the question of liability for the losses from taking the fraudulent stock. If the directors have omitted the usual and customary precautions, prescribed as checks upon just such frauds as have been committed, are not such omissions to tell either against themselves, or the company they represent?

The directors must take one horn of the dilemma. They must admit that there was a cause for not making the customary report for 1853, and explain the reason for its omission, or they must say that they took no interest in the company, but left it entirely to the tender mercies of Schuyler; even after they must have seen that he had sapped its very vitals.

Reading Railroad.

The Reading, is the only railroad in this country which can fairly be matched with English Roads, either in cost or amount of earnings. The latter for the current year now about closed are estimated at \$4,242,000. The road is 92 miles long and cost about \$18,000,000. The earnings for the year about closing are estimated at \$1,242,000; equal to about 24 per cent. upon its cost, or \$45,000 per mile. We doubt whether there is a road in the world that earns so much per mile; and but few that earn so large a per centage upon its cost.

New Railroads in New York.

During the present month two very important tributaries will be opened to the Erie Railroad, the Syracuse and Binghamton, and the Genesee Valley Railroad which is now completed from Rochester to a point of connection with the Buffalo and Corning Railroad at Avon. These openings will give the two largest interior cities in the State, Rochester and Syracuse, direct access to New York over the New York and Erie, and will undoubtedly throw upon it a large amount of travel from the above cities, in addition to the local traffic of their routes, which naturally belongs to New York.

Lowell Machine Works.

Messrs. ALDRICH & CALBERT, of the late firm of Aldrich, Tyng & Co., of Lowell, Mass. proprietors of the Lowell Machine Works, are now offering to machinists and others, tools of their manufacture of a superior quality, style, and finish. The high reputation which their works have long enjoyed justifies them in anticipating a liberal share of patronage.

Lowell has long been noted for the excellence of her machinery and the efficiency of the numerous outfits which she has furnished to shops in other parts of the country. A good machine shop, well furnished with whatever tools may be necessary to keep up its equipment, is a very important feature in the operation of a Railroad.

Saratoga and Washington Railroad.

A meeting of the stockholders of the Saratoga and Washington Railroad is called for the 17th instant, at Saratoga Springs, for the purpose of taking some action for the payment of the Second Mortgage Bonds and interest falling due on the 1st day of January next.

Memphis and Charleston Railroad.

The following table shows the receipts and expenditures of this road for the year ending August 31, 1854.

Receipts for passengers.....	\$76,379 25
Receipts for freight.....	88,729 72
Receipts for Mails.....	2,780 00

Total earnings.....	\$162,888 97
Expenses for 12 months.....	77,900 45

Net earnings for 12 months.....	\$84,988 52
---------------------------------	-------------

Ashcroft Steam Gauge.

The attention of those using steam power is invited to an advertisement of the AMERICAN STEAM GAUGE Co., of Boston, in this week's Journal. This gauge has an excellent reputation for the efficient performance of the services which it was invented to accomplish. It will be seen that the American Steam Gauge Co., have purchased the sole right of the patentee, both of this and the "India Rubber" gauge, which they offer for sale on the most favorable terms.

Concord Railroad Corporation, N. H.

President,—Isaac Spalding, Nashua, N. H.; Superintendent,—N. G. Upham, Concord, N. H.; Treasurer,—N. P. Lovering, Office No. 7, Merchant's Exchange, Boston.

Principal Office, Concord, N. H.; Transfer office, Boston,—annual meeting, Tuesday preceding last Wednesday.

Income account is made up semi-annually—April 1 and October 1.

Dividends payable ditto,—May 1 and Nov. 1.

Length of main line, double track, open for traffic, 35 miles.

Length of double track, 35 miles.

CHARTER.

This Company was incorporated by the Legislature of New Hampshire in 1835, and empowered to construct and maintain a railroad, commencing at any point at the southerly line of the State, in either of the towns of Hudson, Pelham, or Salem, or from certain specified points in Dunstable, (Nashua village,) so as to enter on the Nashua and Lowell Railroad, thence to run northerly to the town of Concord. By the original Charter and amendments thereto, in addition to the usual powers and liabilities, authority was given to lay out the road six rods wide, and to take as much more land as might be necessary for the proper construction of the road: to have a capital of ten thousand shares, at fifty dollars per share, (\$500,000) with liberty to increase the same by the creation of new stock; to extend the road so as to connect with the Boston and Lowell Railroad whenever power so to do, shall be granted by the State of Massachusetts, and to enlarge their capital stock for that purpose. Other provisions of the Charter reserve to the Legislature, if the net income for five years after the opening of the road shall exceed ten per cent., the right to reduce the tolls so as to produce only a net income of ten per cent for the next five years; and to interpose in like manner at the expiration of any five years; forbid the construction of any parallel road, within five miles, for the period of thirty years; required Annual Report to the Legislature under a penalty of a sum not exceeding \$500; established the principal place of business at Concord; and provided that the State, after

twenty years from the completion of the road for use, may purchase the road, by paying the amount expended and ten per cent. annual income on the same, if the Corporation shall not have received a net income equal to twelve per cent, per annum on their expenditure. The duration of the Charter (under a general statute) is unlimited; but it may be altered, amended or repealed at the will of the Legislature.

CONSTRUCTION.

Owing to the uncertainty as to the profitable extension of railroad lines into the interior, the Concord Railroad, notwithstanding strenuous efforts on the part of its confident friends, was not built until 1842—seven years after the Charter was granted. The road was opened from the State Line to Manchester, on the 1st of July, 1842; to Hooket on the 26th of July, and to Concord on the 7th of Sept. of the same year. The laying of a second track was commenced in 1846, and completed the whole length of the road in 1848.

PHYSICAL FEATURES.

The Concord Railroad extends from Nashua to Concord, up the valley, and along the left bank of the Merimac River, a direct and level route. The length of the road is 35 miles; the maximum grade 15 8-10 feet per mile: the average grade 3½ feet per mile: the length of straight line is 19½ miles. The road-bed is of gravel with wooden superstructure. There are 69 miles of main double track laid with heavy T rails, and heavy side tracks and crossings to the extent of 8 miles, and 2,391 ft. The line possesses ample accommodations in the way of Stations, Freight and Engine Houses; is completely equipped expenditures being annually made to keep the track and rolling stock in perfect order.

INCREASE OF BUSINESS.

When its passenger trains first commenced running, the Concord Railroad had three small engines, and run only one passenger car; fixtures, stations, and everything connected with it were upon a corresponding scale. Since that period the business of the road has greatly increased. It has, in connection with the Lowell and Nashua, and the Boston and Lowell, become to a large extent a trunk road; and this fact, together with the growth of the manufacturing city of Manchester, has augmented very rapidly, increasing the business of the road in an equal degree. The connecting road are the Northern—Boston, Concord and Montreal—Concord and Claremont, and Concord and Portsmouth Roads, which connect with the Concord road at Concord: The Manchester and Lawrence and the Merrimack and Connecticut River Road, at Manchester: The Nashua and Lowell—Nashua and Worcester and the Wilton, and Nashua Roads.

FINANCIAL CONDITION.

At the annual meeting in 1853, the capital stock of the Concord Railroad was finally fixed and closed at 30,000 shares, or \$1,500,000. The road has been wholly built by Stock Subscriptions. It neither owes nor has ever owed a debt. From the opening up to 1850 the dividends were 10 per cent., and since that year they have averaged a little over 8 per cent.—the reduction being owing to the increase of capital and diminution of the rates of fare and freight. Dividends have always been paid in cash. During the years 1847 and 1848, \$56,571 50 was taken from the surplus earn-

ings and expended in building the Depots, &c., in Concord, N. H., and Engine Houses at Nashua.—No preferred stock has ever been issued; consequently no shareholder has any preference as regards dividends.

SYNOPSIS OF THE LAST ANNUAL REPORT.

The Earnings of the Road for the year ending March 31st, 1854, \$329,744 76, were derived from the following sources, viz: from Passengers \$123,322 88; Freight, \$197,206 80; Expresses \$2,400 58; Mails \$4,425 56; rents \$1,444 12; interest \$944 82.

The Expenses were—maintenance of road (including wages of switchmen, gate keepers, signal men, and watchmen) \$34,775 87; motive power \$37,712 39; fuel \$36,482 54; oil, gas, materials for cleaning, &c., \$5,945 08; passenger department, \$16,362 72—freight department, \$20,915 67; gratuities, damages, bad debts, &c., \$2,501 31; miscellaneous \$16,386 36—making the total expenditure \$171,111 94, and leaving a balance of \$158,632 82. From the balance the tax on capital stock and the dividends were paid, two locomotives purchased, and \$3,500 paid to Manchester and Lawrence Road as apportionment of joint through business. The surplus carried to Contingent Fund was \$11,936 82, making that Fund \$29,454 65. The expenditures on construction account were \$24,411 12—making that account \$1,433,508 91, and leaving an unexpended capital of \$51,491 09, of which \$50,000 is loaned to the Portsmouth and Concord Road. The additional capital 300 shares or \$15,000, voted May 1853, was not needed till May 1854, at which time it was issued—this amount added to the unexpended balance, as per their report in May 1854, will make 16,491 09 balance on hand, applicable to construction,—agreeably to an Act of the New Hampshire Legislature in 1849.

BUSINESS OF THE ROAD.

The amount of freight transported over the Concord Road, exclusive of freight in connection with the Upper roads, during the year, is as follows:

	No. of tons up.	No. of tons down.	Total.
Concord road.....	36,777	37,950	74,727
The number of trains run has been 606; number of long cars run, 15,600; average tons per train, 123; average tons per long car, 4.			
Freight, in connection with the Upper Roads, has been as follows:			
	No. of tons up.	No. of tons down.	Total.
Upper Roads.....			
Through freight...	54,487	151,748	206,236
Local freight.....	3,521	24,512	28,033
In all.....	58,008	176,261	234,269

The total tonnage of the Concord Road, and in connection with the Upper roads, is 94,786 tons up; 214,211 tons down; making in all, 308,997 tons.

The whole number of passengers carried over any portion of the Concord road during the year, has been..... 248,787
Ditto for one mile..... 6,409,105
Equal to passengers over the whole road 156,788
Miles run of Engines with passenger
Trains..... 83,540
Freight do. 112,145
All other do. 7,213

Total..... 202,898

EQUIPMENT OR ROLLING STOCK.

Six passenger and seven freight engines; fifteen passenger cars, containing 894 seats; 5 baggage cars; 170 merchandize cars, equal to 287 short cars; gravel and other cars 51; snow ploughs 1 large, and 4 small.

Statement showing the Cost; Mileage; Cost per mile; Gross Receipts; Current Expenses; Net Receipts; rate of Dividend; Receipts from Passengers; Receipts from Freight; Miscellaneous; Earnings per mile; per centage of Gross Earnings; Do. of net Earnings, of the Concord R. R., since the opening of the first division of the Concord Road to the present time.

Year.	1842-3, 8 months.	1843-4.	1844-5.	1845-6.	1846-7.	1847-8.	1848-9.	1849-50.	1850-1.	1851-2.*	1852-3.	1853-4.
Cost of Road and Equipment.	\$42,223 35	\$76,444 35	\$779,681 35	\$1,042,718 35	\$1,350,000 35	\$1,350,000 35	\$1,386,788 35	\$1,390,698 35	\$1,398,937 35	\$1,409,097 35	\$1,433,508 91	\$1,433,508 91
Length in Miles.	35	35	35	35	35	35	35	35	35	35	35	35
Cost &c., per Mile.	\$21,206 21	\$21,563 21	\$22,274 21	\$27,702 21	\$38,571 21	\$38,571 21	\$39,633 21	\$39,751 21	\$39,953 21	\$40,260 21	\$40,367 21	\$40,367 21
Gross Receipts.	\$70,912 13	\$139,080 13	\$228,479 13	\$290,228 13	\$311,236 13	\$311,236 13	\$311,236 13	\$311,236 13	\$311,236 13	\$311,236 13	\$311,236 13	\$311,236 13
Current Expenses.	\$66,167 13	\$83,929 13	\$136,055 13	\$176,453 13	\$180,698 13	\$180,698 13	\$180,698 13	\$180,698 13	\$180,698 13	\$180,698 13	\$180,698 13	\$180,698 13
Net Receipts.	\$4,745 00	\$55,151 00	\$92,424 00	\$114,775 00	\$130,538 00	\$130,538 00	\$130,538 00	\$130,538 00	\$130,538 00	\$130,538 00	\$130,538 00	\$130,538 00
Dividend.	9	9	13	10	10	10	10	10	10	10	10	10
Receipts from Passengers.	\$43,034 00	\$72,799 00	\$90,545 00	\$109,971 00	\$138,545 00	\$138,545 00	\$138,545 00	\$138,545 00	\$138,545 00	\$138,545 00	\$138,545 00	\$138,545 00
Receipts from Freight.	\$21,808 00	\$65,420 00	\$90,099 00	\$114,117 00	\$141,117 00	\$141,117 00	\$141,117 00	\$141,117 00	\$141,117 00	\$141,117 00	\$141,117 00	\$141,117 00
Miscellaneous.	\$1,068 00	\$860 00	\$1,196 00	\$3,038 00	\$15,568 00	\$15,568 00	\$15,568 00	\$15,568 00	\$15,568 00	\$15,568 00	\$15,568 00	\$15,568 00
Earnings per Miles.	\$3,974 18	\$3,974 18	\$3,974 18	\$3,974 18	\$3,974 18	\$3,974 18	\$3,974 18	\$3,974 18	\$3,974 18	\$3,974 18	\$3,974 18	\$3,974 18
Per cent. Gross Earnings.	18 1/4	18 1/4	18 1/4	18 1/4	18 1/4	18 1/4	18 1/4	18 1/4	18 1/4	18 1/4	18 1/4	18 1/4
Per cent. Net Earnings.	10	10	10	10	10	10	10	10	10	10	10	10

* For eleven months and including the running of the Manchester and Lawrence Railroad, leased to the Concord.

† It will be recollected that the amount applicable to this account is \$1,450,000. Whereas the

capital stock is \$1,500,000, the difference between the construction funds and capital stock (\$50,000) is occasioned by a loan to the Portsmouth and Concord Railroad Company authorized by an act of the Legislature of New Hampshire in May, 1849, for which purpose 1,000 shares were created.

The Indiana and Illinois Central Railway Company.

President, A. S. Roache, Rockville Ind.

Secretary, John S. Spann.

Chief Engineer, John C. Campbell.

Principal and transfer, office Indianapolis.

Annual stockholders meeting, first Wednesday in May.

Close of financial year, last day of February.

Capital stock authorized, three millions.

The present corporation was formed by the consolidation of two companies, viz :

1st. The (original) Indiana and Illinois Central Railway Company was organized under the general laws of Indiana, in January 1853, for the construction of a railroad from Indianapolis, west, to the State line, with a capital stock of two millions.

2nd. The Decatur and Springfield Railroad Company, chartered by the State of Illinois on the—day of January, 1853. By a clause in the Act, the company were authorized and empowered to consolidate at the State line, with the Indiana and Illinois Central Railway Company.—Capital stock authorized, one million.

On the 4th day of May 1853, the two companies entered into a formal act of consolidation, in compliance with the laws of both States.

The line of the road embraced by the present corporation, extends from Indianapolis, in Indiana, to Decatur in Illinois, when it connects with the Great Western and Illinois Central.

The resources of the company consists of stock subscriptions amounting to \$1,914,050, and \$200,000 of bonds bearing 10 per cent. due January 1, 1860, principal and interest; and payable in New York—secured by a deed of trust based upon lands estimated to be worth \$300,000.

The length of the road is 149 54-100 miles.

The road was placed under contract in July 1853 and the grading was commenced in February 1854, since that time a force of about 500 men has been employed. The estimated cost is \$4,130,265.

About twenty miles of the road is now graded, and it is intended to have fifty miles ready for the iron in the spring. The route of the road is nearly due west from Indianapolis. The country is undulating—the road crossing the streams at nearly right angles, and in Indiana the summits on either side of the streams approach so near as to render the embankments at the crossings heavy. In Illinois, the line crosses the head waters of the streams, giving light work except at the Sangamon river, near Decatur.

In Indiana it passes through a timber country, while in Illinois it is mostly prairie. The excavations are earth with two or perhaps three exceptions.

Near the Wabash river it passes for twenty miles through a country abounding in bituminous coal of a superior quality.

The physical features of the road are as follows:

Elevation of summit near Danville above
Wabash river..... 511 feet.
Elevation of terminus at Indianapolis do. 207 "
" " " " Decatur do. 176 "
Total ascent going west..... 1377 "
" descent " " " 1408 "

Total rise and fall..... 2,785 feet.
139.05 miles straight line
6.14 " " " 5,730 feet radius.
2.08 " " " 2,865 " "
2.27 " " " 1,910 " "
93 per cent straight line—Longest tangent 70-60-100 miles.

Racine, Janesville and Mississippi Railroad.

Chartered in 1852. Authorized Capital \$3,000,000.

Portion now under construction, Racine to Beloit..... 68 miles.
Estimated cost, \$24,000 per mile, or, \$1,632,000.
Present reliable subscription to its Capital Stock..... \$815,000

Work of grading, masonry and bridging, is fully completed from the City of Racine, on Lake Michigan, to Fox River, 26 miles, together with farm and road crossings, and the ties delivered on the line.

The work of grading on the 43 miles west of Fox River, to Beloit on Rock River, is under contract and fully one half completed. The ties for the whole line are ready for delivery.

Ample and eligible depot grounds in the City of Racine, and in Beloit, have been purchased and paid for by the company, and for the depots on the line of the road ample grounds have been donated.

A consolidation of this company with the Rockton and Freeport Railroad Company, was made in April 1854, and the control and management of the latter company was placed under the Board of Directors of this. The Charter of the Rockton and Freeport Railroad Company was granted by the Legislature of the State of Illinois in 1853, and authorizes the construction of a railroad from the Wisconsin State Line at Beloit to the City of Freeport, and from thence to the Mississippi River at any point above Savannah. The line of this road passes through the southern tier of counties in Wisconsin, east of Rock River, and the northern tier of counties in Illinois, west of Rock River.

VILLAGES ON THE LINE.

Burlington, Lyons, Elkhorn, Delavan, Darien, Allen's Grove, Clinton, Beloit, Rockton and Freeport.

RAILROAD CONNECTIONS.

At Racine with the Chicago, Millwaukee and Green Bay Railroad. (Building.)

At Beloit with Belvidere Branch Railroad. (Completed.)

At Beloit with Beloit and Madison Railroad. (Building.)

At Freeport with Illinois Central Railroad. (Nearly completed.)

At Warren with Mineral Point Railroad. (Building.)

By these connections this line will have access to the northern and central portions of the State of Wisconsin, and with northern and central Illinois, besides a direct communication with the Cities of Galena and Dubuque, on the Mississippi River.

The present subscriptions to the Capital Stock are for the construction of the road from Racine to Beloit, and that portion is to be completed and put in operation during the year 1855.

PRINCIPAL OFFICE—RACINE, WISCONSIN.

Henry S. Durand, President;

Charles S. Wright, Secretary;

A. I. Redburn, Assistant Secretary;

Henry J. Ullmann, Treasurer;

Leverett H. Clark, Chief Engineer;

Col. R. B. Mason, Consulting Engineer;

Marshall M. Strong, Attorney;

Simeon D. Clough, Auditor;

DIRECTORS.

Henry S. Durand, Racine.

Marshall M. Strong, do.

Reuben M. Norton, do.

John Dickson, do.

Elisha Raymond, do.

Charles S. Wright, do.

Charles Herrick, do.

Simeon D. Clough, do.

Isaac Taylor, do.

Wm. C. Allen, Delavan.

Geo. B. Sanderson, Beloit.

F. W. Merrill, Rockton.

T. J. Turner, Freeport.

(For the American Railroad Journal.)

Buffalo, Oct. 1st, 1854.

In an article by Mr. ZERAH COLBURN on the "proportions of the cylinder, and their relations to the boiler", he assumes certain matters to be as stated by him, while in fact they are notoriously otherwise.

1st. "The steam passages should be the same size for the same work, whether the cylinder is long or short stroke, because the cubic contents of the cylinder must be the same in both cases, and the quantity of steam used, the same; requiring the same sized opening, to get the same quantity of steam through it, in the same length of time." There would, to be sure, be a very little steam saved, by reducing the area of the piston, in the space between it and the end of the cylinder; but that is very much reduced by working expansively, as is universally done, in these days.

Again: "Less relative loss of time in changing the motion of the piston, as compared with the duration of the whole stroke." This is all wrong. The crank pin moves in a circle and controls the motion of the piston.

Again: "The cylinder being smaller in diameter, there is less pressure on the cylinder head; and consequently, with outside connected engines, less tendency to sinuous motion." Wrong again. The pressure on the cylinder head, has nothing to do with sinuous motion, either with outside or inside connected engines. The sinuous motion is caused by the momentum of the reciprocating parts, and is at the time and at all times, exactly in the opposite direction to the pressure of the steam on the cylinder head, and can be compensated only, by counter weights, moving in the opposite direction at the same time. While the steam acts between two abutments, one of which is the cylinder head, and the other the crank-pin, and presses in opposite directions precisely alike—and further, the vibration of an engine is always greatest at the after end.

"With a smaller diameter of cylinder, the steam

from a given boiler may be worked at a higher pressure," &c. All wrong.

There is no trouble with high steam in the cylinder, as ordinarily constructed; but the great difficulty is to get a boiler strong enough, to stand the ordinary pressure, with safety; and every increase of pressure, and consequent temperature, increases the destructibility of boilers, in nearly a geometrical ratio.

Mr. Colburn, like some politicians, looks one way while he rows the other. The great efficiency of the Winans' freight engine, lies in retaining the cylinder as formerly made, and making the wheels smaller, and increasing their number, to get sufficient adhesion, and thereby increasing the number of revolutions and the quantity of steam used in a given distance.

Mr. COLBURN is wrong in recommending a driving-wheel, larger than six feet for any road; because it is perfectly easy to run as fast as any sane man would care to ride, with such a wheel, and any larger wheel, increases necessarily the weight of the engine in all its parts; makes the centre of gravity higher from the track, and shortens the smoke stack, and makes it necessary to pinch the exhaust-pipes still more, to make steam enough.

My object in writing the foregoing, is not to find fault with Mr. COLBURN, but to set him right in some important particulars, and assist him in future, to impart information, in which "assumption" shall not be the predominant feature.

AN OLD ENGINEER.

Columbus, Piqua and Indiana Railroad.

This road, which has for some time past been in operation to Urbana, 46 miles from Columbus, has just been extended to Piqua, 36 miles further, or 72 from Columbus, and is well advanced, and will undoubtedly be completed the present year to its western terminus at Union, upon the Indiana State Line. The whole road will be 102 miles long, and will probably cost about \$2,500,000, or a trifle less than \$25,000 per mile. The capital account is as follows:

Stock.....	\$950,000
1st mortgage bonds.....	600,000
2d " ".....	400,000
3d " ".....	600,000

Of the last issue \$550,000 have been guaranteed by the Cleveland and Columbus, Bellefontaine and Indiana, Indianapolis and Bellefontaine, and the Ohio Central Railroad Companies. We understand that the last issue will supply ample means for completion of the road.

The road is the western prolongation through the State of several eastern lines terminating at Columbus. It traverses a very excellent, highly cultivated and thickly settled country, and one capable of supplying a large local traffic. The completion of the Ohio Central and the Steubenville and Indiana Railroads, will open to this road very favorable connections with Philadelphia and Baltimore, and through these, with the more northern cities. It will connect one of the best portions of the State with its capital, which is already an important commercial and manufacturing town, and one of the most flourishing in the country. At Union, its western terminus, it connects, by a uniform gauge, with the Indianapolis and Bellefontaine; and with a line which in a few

months is to be extended to St. Louis, and with the numerous other roads either constructed, or in progress terminating at the former place.

We learn that the portion of the road which for some months has been in operation to Urbana, has been doing a very good business. The action of the above companies in endorsing its bonds speaks well for the project and is worth something as a certificate in its favor, in addition to the aid afforded.

It will be seen that the road has to earn only \$112,000 net, to earn interest on its funded debt, and only \$171,000 to pay seven per cent. upon its cost. A rate of earnings of only \$4,000 per mile would produce a net income of \$200,000. From the character of the country traversed, and the intercourse that prevails between different portions of it, the above would seem to be a very moderate estimate.

We are glad to see one after another of the roads of Ohio gradually brought to completion. We hope for the present no new one will be undertaken. The people of the State have accomplished a vast work, and now need a breathing spell. In a year or two more, the people of Ohio will be as well accommodated with railroads as those of any State, and nothing is wanting to make all their roads profitable but freedom from competition and time for the development of the resources of the State, for which the railroads constructed and in progress will give every needed facility.

Hudson River Railroad.

HISTORICAL SKETCH.

The Hudson River Railroad was chartered on the 12th day of March, 1846, with authority to construct and maintain a railroad from the City of New York to the City of Albany, (with the exception of building a bridge over the Hudson River). The charter required the road to be constructed through the tier of towns, (with one or two exceptions,) lying immediately upon the bank of the river, and in no case to be located more than $2\frac{1}{2}$ miles from the same. It contains the usual power to take the necessary lands for road-bed, right of way, stations, material, &c., &c. Its duration was limited to 50 years. The amount of capital stock authorized was \$4,000,000, of which \$3,000,000 was required to be subscribed before the organization of the company. No limits are placed upon the tolls, or profits to be received, with the exception, that it is restricted to a fare of two and one-half cents per mile, per passenger, for the months of December, January, February, and March; and to two cents for the remainder of the year; but in no case to charge more than three dollars for the through trip between New York and Albany. The company can hold no real estate not necessary to the objects of the road. It was authorized to borrow money to the amount of \$6,000,000, and mortgage its property therefor.*

The necessary subscription of \$3,000,000 to the

* It is necessary to be borne in mind that all the railroad companies in the State of New York are now amenable to the General Railroad Law of the State, (which we publish in the present number) and which, without abrogating or impairing special charters, authorizes railroad companies to increase the amount of their capital stock, and to borrow money, (under certain conditions), *ad libitum*.

capital stock having been obtained, the company was organized on the 4th day of March 1847. The work of construction was commenced in August 1847, and the first division of the road opened to Peekskill, a distance of 43 miles, on the 30th of September, 1849; and on the 31st day of December, 1849, 75 miles, to Poughkeepsie. The division from Poughkeepsie to Albany was not put under contract till July, 1850. On the 16th of June, 1851, the road was opened from Poughkeepsie to Tivoli, 100 miles from New York; on the 3d of August, to Hudson, 116 miles from New York; and on the 1st day of October, 1851, to Greenbush opposite Albany, 144 miles from the Company's station, on Chambers street in New York.

ROUTE.

The route of the Hudson River Railroad, as before stated, lies upon the immediate bank of the Hudson. For a considerable portion of the distance, the road-bed is formed by filling into the river, and is elevated only a few feet above ordinary high water. The road is consequently level, or nearly so; the only grade of importance being a short one near Poughkeepsie, which is at the rate of 10 feet to the mile. The road has an excellent line, as well as a level grade, allowing it to be run with safety, at the highest speed.

The excellence of the navigation of the Hudson, which in a great measure is independent of rains, the tide flowing to Albany, and the directness of its course, which does not allow any considerable saving in distance to be effected by a railroad, for a long time delayed the undertaking of a railroad upon its bank. The speed of the passenger steamers is very nearly up to the average of the railroads of the country, while in comfort, the railroad car is not to be compared with them. The public mind inclined to the conviction, that under such conditions, a railroad could not compete with the river in the carriage either of persons, or merchandize, although this competition was withdrawn for two or three months each year, by the closing of the river by ice; so that, although the route is one over which twice the number of people pass, annually, than any other, and ten times the tonnage, the construction of a railroad upon it was regarded as altogether too hazardous an experiment to be ventured upon. It may be said that the popular sentiment never was a convert to the success of the project, till within a year or two past; till success has been demonstrated, by the result of its operation. The road owes its construction not to popular favor, but to the public spirit, wealth, and resolution of a very few individuals, who saw the necessity of the road to the prosperity of the New York population, and who had the instinct to perceive that the most favorable water routes could never compete with the present modes of travelling by land. The projectors of the road succeeded in enlisting in its aid a sufficient number of the citizens of New York to furnish the amount of means necessary to its construction, trusting to the support of the community when the result of its operation could be seen.

Upon the route of the Hudson River the movement of both persons and property is undoubtedly much greater than upon any other in the U. S. For freight it is the outlet of the Western and North-western States, as well of the State of

Vermont, a portion of Massachusetts, and for a very large portion of the products of the Provinces of Canada. The Hudson is the only river in the United States, which carries its navigable waters through the great coast range of mountains extending from the Gulf of St. Lawrence nearly to the Gulf of Mexico. The head of waters of (the Mohawk Branch of) this river are one hundred feet lower than Lake Erie; and several hundred below the great interior basin of the country. The peculiarly favorable features of the route led to the construction of the Erie Canal, which was followed by the central line of railroad, which being completed many years in advance of any other line from the Lakes to tide water was, till other routes were opened, almost the sole route, in connection with the Lake and the Hudson, of travel between the Eastern States, and the interior of the country.

The road has been one of the most expensive in the United States; from the inherent difficulties in the route, and the great cost of lands, and right of way. The route necessarily lay over very valuable real estate, and as numerous villages are passed through, the claims for damages were consequently large. The route itself is an expensive one. From New York to Poughkeepsie, the banks of the river, which are composed of the hardest kind of rock formation, rise precipitously from the water, rendering necessary heavy side cuttings, or high embankments which have to be carefully protected from the water. A large amount of bridging and trussle work was required in crossing the numerous tributaries and indentations of the river.

The road will always be an expensive one to maintain from its exposed position, which renders the maintenance of a very large police force necessary; from the high speeds that have to be resorted to, to compete with the river, and from the fact that so large a portion of the operations of the company are within the city of New York. The employment of horse power between Chambers and 31st streets, is a very expensive item, while the expenses of all roads are largely increased by the fact of their termination in great cities. The ratio of expenses to earnings of the Hudson River Road have been nearly 75 per cent. The competition of the river forces the road to run a large number of trains, and to maintain high speeds, irrespective of the amount of business offering. Other roads freed from such competition, adapt the running of their trains to the amount of their business, increasing the service in proportion to increase of traffic. The Hudson River Road found the traffic of its route in possession of the steamboats, and had to attract such business to itself, by offering to it superior attractions. It had to perform very nearly the same amount of service the first year of its opening, with receipts equally to \$1,000,000, and at nearly the same expenses that it does at the present time, with receipts equally to \$1,800,000. This fact has compelled the company to forego dividends, which may not be paid for some time to come.

CHARACTER OF BUSINESS.

The revenue of the road is chiefly derived from the carriage of passengers. In competing for these with the steamboats, the road has steadily gained from the time of its opening, and will probably become the principal route of travel be-

tween Albany and Troy, and New York; though the night boats will always carry large numbers. The great bulk of the travel will however take the road. The receipts from passengers the present year are nearly 30 per cent. greater than those of 1853. During the summer months the river will be chiefly used for the transportation of freight; that of the road being made up chiefly of live stock, and light parcels. In the winter months the Hudson River will be one of the largest freight roads in the United States.

Statement, showing the Cost; Mileage; Cost per mile; Gross receipts; Current expenses; Net receipts; Receipts from passengers; Receipts from freight; Miscellaneous; Earnings per mile; Percentage of gross earnings; Do. of net earnings, of the Hudson River Railroad from its opening to the present time.

Year.	Cost.	Mileage.	Cost per mile.
1851.....	6,666,682	75	88,889
1852.....	9,305,551	144	64,505
1853.....	10,527,655	144	73,108
1854.....	11,780,524	144	81,809
	Gross re- ceipts.	Current expenses.	Net re- ceipts.
1851.....	267,661	167,283	100,278
1852.....	405,559	336,850	68,709
1853.....	1,063,659	724,876	338,783
1854.....	1,201,837	918,253	373,584
	Rec'ts from passengers.	Rec'ts from freight.	Miscella- neous.
1851.....	242,595	18,576	6,490
1852.....	361,654	37,096	6,800
1853.....	728,396	236,805	44,458
1854.....	935,628	312,005	44,205
	Earnings per mile.	percent- age of gross	do. of net earnings.
1851.....	3,569	4 1/4	1 3/4
1852.....	2,816	5	1
1853.....	7,435	10 1/4	3 1/2
1854.....	9,971	11 1/4	3 1/4

FUNDED DEBT.

The total funded debt of the Hudson River Railroad is \$8,000,000, viz:

1st mortgage 7 per cent. bonds, issued February 1st, 1849, and payable February 1st, 1869.....	\$1,954,000
Do. do. do. do. and payable February 1st, 1870	1,936,000
1st mortgage 6 per cent. bonds, issued February 1st, 1849, and payable August 6th, 1869	110,000

Total 1st mortgage bonds	\$4,000,000
2nd mortgage 7 per cent. bonds, issued Dec. 16th, 1850, and payable Dec. 16th, 1860	2,000,000
Convertible 7 per cent. bonds, issued May 1st, 1852, and payable May 1st, 1862	2,000,000

Total Funded Debt.....\$8,000,000
Interest payable at the company's office in New York, half yearly.

DOUBLE TRACK.

The road has a double track from New York to Poughkeepsie, 75 miles, and for 13 miles immediately below Albany, and 5 miles intermediate between the 13 miles, and Poughkeepsie. The road from Albany to Troy, known as the Troy and Greenbush Railroad has been purchased by the Hudson River Road and forms a part of the main line to Troy.

A financial statement, with an abstract of the last annual report, is postponed till the publication of the report to the Legislature, which is made up to Sept. 30th, of each year.

Journal of Railroad Law.

PRINCIPALS AND AGENTS.

The rights and obligations of the New Haven Railroad Company in regard to the late over-issues of stock can only be determined by reference to the established law governing the relations of Principal and Agent, whether that Principal be a private individual or a corporate body.

A principal appoints an agent to discharge certain duties and publicly announces him as duly authorized for that purpose. He is appointed, for example, to endorse notes. The public are justified in supposing that the agent so appointed is reliable and trustworthy. A principal would be insane should he knowingly confide important interests to a man of doubtful integrity. It is true that no agent can be safely deemed wholly proof against temptation. But it is fair also to suppose that every principal duly supervises the operations of his agent, and secures himself against any abuse of authority.

But if it should be found that the agent has, under color of the authority with which his principal has clothed him, defrauded a third party, who was justified in believing that the agent was acting within the limits prescribed to him; and if moreover, the principal has neglected to furnish any safe-guards against the treachery of his agent, and especially if the principal has, before the discovery of fraud publicly recommended his agent as worthy of all confidence—it would seem that while the latter is chargeable with fraud, the former is guilty of inexcusable negligence. In other words, the principal and agent both participated in the wrong which has been done.

When A announces to the public that he has duly authorized B to do certain acts in his place and stead, he virtually says to the public, "confide in B, I am responsible for the acts which he performs as my agent." It will usually be impracticable for the public to discern when B is guilty of excess in the exercise of his authority.—If B is authorized to endorse notes to the amount of \$10,000, he may endorse notes to the amount of \$20,000, and the public be never the wiser. The principal, on the other hand, can take due precaution against the misconduct of the agent in question. The public cannot usually take such precautions.

True, it is a general rule, that he who deals with a special agent, deals at his peril when the agent passes what is fairly to be considered the limits of his authority. But what, as regards the public, are the limits of an agent's authority? Are they the limits fixed by a private arrangement between him and his principal, or to be ascertained only by inspecting the private books of the latter? Or are the bounds of an agent's authority, so far as the public are concerned, those which are presented to the public—those which the public, in view of all the circumstances of the case, is authorized to consider the legitimate ones? There must be no mystification nor delusion practised. If a principal clothes his agent with powers calculated to induce innocent third persons to believe the agent duly empowered in a given case, the principal is liable for the injury thereby occasioned. The case is of course different when an agent does an act without color of authority—as, for instance, if a Bank Cashier should as such execute a policy of Insurance. Then the agents alone would be liable.

If the servant of a horse dealer and who sells for him, but with express instructions *not* to warrant as to soundness, does warrant, the master is held to be bound thereby, because the servant having a general authority to sell, acted within the general scope of his authority, and the public cannot be supposed to be cognizant of the private conversations of the master and servant. 3 Term Reports, 757.

Did or did not any party who has suffered from dealing with a fraudulent agent, have good reason to believe from the declarations and conduct of both the principal and the agent, that the agent was acting within the scope of his authority?

If so, it is difficult to perceive why both principal and agent are not responsible for any injury sustained.

The Railroad Convention.—No Increase of Freight.

The meeting of the Superintendents of the four great lines of railroads terminating in the City of New York—to wit: the New York Central, the New York and Erie, the Pennsylvania Central, and the Baltimore and Ohio—met at the St. Nicholas Hotel on Tuesday, the 26th, for the purpose of carrying out the details of resolutions adopted at the convention of the 15th of August last. In consequence of the depression of the prices of produce, the small amount of freight offering, and the general stringency of the markets, it was thought inexpedient at this time to increase the prices for transportation of freight. It is understood that many other matters contemplated in the resolutions referred to were fully discussed, and the necessary measures adopted to carry out the views of the convention.

For Sale.

A STATIONARY Engine having cylinders 13 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
jul.14 29 tf.] or 74 Broadway, New York.

Rensselaer Polytechnic Institute.

DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS,—including Railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the Annual Register, giving full information respecting the Institute, apply to
R. FRANKLIN GREENE, Director, R. P. I.
32 3m Troy, New York.

Lowell Machine Works.

ALDRICH & CALVERT (late ALDRICH, TYNG & Co.) manufacture and furnish to order, at short notice,

Machinists' Tools

of various description and with the latest improvements; as engine lathes, with swing 16, 20, 24, 28, 30, 36, 48 inches, up to 7½ feet, and bed made to turn any desirable length; planing machines, to plane 3½, 6, 8, 10, 12, 18, 20, 22 feet long, and 18, 24, 28, 36, 40, 48, 60 inches square; also hand lathes, compound planers, slotting and shaping machines, vertical drills, bolt cutters, and many other tools used in railroad, repair and machine shops.

Lowell, Mass., Jan'y 1, 1853.

41.17

THOS. M. CASH,

PHILADELPHIA RAILWAY AGENCY,

FOR THE PURCHASE OF ALL ARTICLES

required by

RAILROAD COMPANIES

ON COMMISSION.

Office No. 80 South Fourth Street, near Walnut,

PHILADELPHIA.

REFERENCES.

RICHARD NORRIS & SON, Locomotive Builders, Philadelphia.
WM. D. LEWIS, Esq., Pres't Catavissa R.R. Co., "
CHARLES H. FISHER, Esq., "
S. E. MESSEUR, Esq., Pres't Farmers Mechanic's Bk., "
JOHN CALDWELL, Esq., Pres't S. Carol's R.R. Co., Charleston.
J. PINCKNEY HUGGER, Esq., Pres't N. East'n R.R. Co., "

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

Buffalo Machinery Depot.

BUFFALO, N. Y.

H. C. BROWN, *Supt.* J. W. HOOKER, *Proprietor.*
I AM prepared to furnish and will keep constantly on hand from the best manufacturers a full stock of *Machinists' Tools* for railroad and other shops; such as Engine and Hand Lathes, Large Driver Lathes, Car Wheel Boring Mills, Power and Hand Planers, Drill Presses, Punch and Shears, Axle Lathes, Power Wheel Presses, Bolt Cutters, &c.

J. W. HOOKER, Buffalo, N. Y.

Fire! Fire! Fire!
Preserve your books in one of Duryee & Forsyth's celebrated Fire King safes. They are perfectly secure and excel in finish.

J. W. HOOKER, Agent, Buffalo.

Railroad Track, Suspension and Depot Scales, Dormant, and Portable Warehouse Scales, Trucks, Baggage Barrows, and Manifest Presses.

Buffalo Machinery Depot,

General Agency for Rochester Scale Works.

H. C. BROWN, *Supt.* J. W. HOOKER.

Port Morris Manufactory.

WESTCHESTER COUNTY, N. Y.,

ARE prepared to execute orders for all kinds railroad work and have on hand the approved Railroad Box with the raised Journal; also Car Couplings (Lewis' Patent) and Ratcliff Wrenches from \$5 to \$10 each.

All orders punctually attended to by addressing the above.
M. C. BAKER.
NB. Long Iron Planing done on reasonable terms.
37 6m. 108 Front street, up stairs.

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,
RICHARD W. TYSON,
No. 25 South Charles st.,

Baltimore, July 1st, 1854.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,
RICHARD W. TYSON.

Baltimore, July 1st, 1854.

33 3m

Notice of Copartnership.

MR. PETER MARIE, heretofore of the firm of DECOPPET & CO., has this day formed a copartnership with Mr. RUDOLPH KANZ, for many years with the banking house of Messrs. L. Von Hoffman & Co., under the firm of MARIE & KANZ, at No. 27 William street.

Their attention will be devoted to the purchase and sale on Commission of Stocks, Bonds and Foreign Exchange, and to the negotiation of Business Paper.
New York, 1st September 1854.

36 8t

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to

EDW. BECH & KUNHARDT, 62 Beaver st.,
or, A. TOWAR, Agent Poughkeepsie Iron Works,
23 tf Poughkeepsie, N. Y.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
or, BRIDGES & BRO.,
64 Courtland st., New York.

19 tf

Machinists' Tools.

SHRIVER & BROTHERS,
Cumberland, Maryland,

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools. These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others repairing first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address
SHRIVER & BROTHERS, Fulton Works,
Cumberland, Maryland.

August 19th, 1854.

32 6m

Low Moor Iron.

A FULL ASSORTMENT of this superior brand, which for strength, soundness, and uniform quality, is confidently recommended for all work requiring good iron, consisting of Round, Square, and Flat sizes of all dimensions, constantly in store and for sale in lots to suit purchasers, by

W. BAILEY LANG & CO.,
54 Cliff street.

Notice to Contractors.



CHIEF ENGINEER'S OFFICE,

Columbus, Ga., Sept. 5th, 1854.

SEALED PROPOSALS, will be received by the undersigned at this office until the 1st day of December, for the clearing, graduation, Track-Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 130 miles.—The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work 5½ miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two rivers will be crossed with the common pile bridging, with Truss Pivot draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The country is healthy, with no swamps after leaving the Tensas River; from Mobile to the river (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third (⅓) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common stock of the Road, and relying upon the earnings of the same for dividends; the balance (⅓) to be paid in the (.08) per cent. Convertible Bonds of the Company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus, Ga., Mobile, Ala., or in N. Y., at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding (¼) the amount of the contract, for the timely and faithful completion of the same.

22½ miles of the Road from Girard west will be open for business the first of November, and 52 miles nine months thereafter. It is the intention to have the entire line of 245 miles open for business early in 1858.

St. 37.

GEO. S. RUNEY.

New York Locomotive Works, JERSEY CITY.

THIS COMPANY are prepared to execute with despatch, orders for Locomotive Engines, Tenders, and Railroad Machinery generally, embracing the latest improvements.

The works being located near the water, and in the immediate vicinity of the New Jersey and Erie Railroads offers great conveniences for shipping.

BREESE, KNEELAND & CO.,
Proprietors,
38 Exchange Place.

E. P. GOULD, Superintendent,
late Master Machinist on Hudson River R. R.

(40.4)

500 TONS No. 1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

99 and 101 John st.

N. B.—The above Iron constantly imported.

32 tf

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

Sealed proposals will be received at the Engineer's Office in the city of Utica, until Monday, the 9th day of October next, at 10 o'clock, A. M., for the following described work:—

Description of Work.	Amount of Penalty in Bond.	Time of Completion.
Section No. 16.....	\$7,500.....	1st April, 1856.
" 36.....	3,300.....	"
" 37.....	5,200.....	"
" 57.....	7,000.....	" 1857.
" 58.....	9,500.....	"
" 59.....	6,000.....	"
" 60.....	6,000.....	"
" 61.....	6,000.....	"
" 62.....	12,400.....	"
" 75.....	5,100.....	" 1856.
" 78.....	5,800.....	"
" 131.....	5,300.....	" 1857.
" 132.....	5,800.....	"
" 133.....	6,000.....	"
Lock No. 34.....	5,600.....	1st July, 1856.
" 38.....	6,000.....	"
" 40.....	6,200.....	"
" 42.....	6,200.....	"
Waste Weir on Sec. 120.	1,200.....	1st April, 1855.
Bridge Abutments on Sections 15, 16 and 17.....	2,500.....	1st July, 1855.
Bridge Abutments on Sections 36 and 37...	1,300.....	"
Bridge Abutments on Sections 57, 58 and 59 and Main street Bridge at Fultonville.	3,000.....	" 1855.
Bridge Abutments on Sections 60, 61 and 62.....	2,000.....	"
Bridge Abutments on Sections 75 and 78...	1,500.....	" 1855.
Bridge Abutments on Sections 111, 115, 121 and 122.....	2,000.....	"
Bridge Abutments on Sections 132 and 133.	900.....	" 1856.
Culverts on Sections 59 and 60.....	1,200.....	"
Culverts on Section 75.	600.....	1st April, 1856.
Culvert at Van Vran- ken's on Section 18..	300.....	1st July, 1855.
Culverts on Sections 112 and 121.....	1,100.....	1st April, 1856.
Culverts on Sections 131, 132 and 133....	1,200.....	1st July, 1856.
Completion of Phillips' Aquaduct.....	1,300.....	1st April, 1855.

Sealed proposals will be received at the Engineer's Office at Lyons Falls until Thursday, the 12th day of October next, at 10 o'clock A. M., for the following described work:—

Reservoir at Wood Hull		
Lake	\$3,700....	1st Oct., 1855.
Reserv'r at N'rth Br'nc'h		
Lake	5,500....	"
11 Lock Houses from		
Boonville to Lyons		
Falls	1,000....	"
Stices' around Locks		
No's. 34 to 69 inclus.	2,900....	1st Aug. 1855.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse until Saturday, the 14th day of October next at 10 o'clock in the forenoon for the following described work:—

Section No. 195	..... \$6,400	..... 1st April, 1857.
" 196	..... 4,300	" "
" 197	..... 7,200	" "
Centre Port Aqueduct	.. 3,400	" "
Port Byron do.	.. 7,000	" "

Sealed proposals will be received at the En-

Section No. 4 below Salina.....	7,400....	25
Part of Sections 14 and 15, Gascon Rapids...	12,700....	25
Part of Sections 16 and 17, above Phoenix....	6,400....	25
Part of Sections 17 and 18, above Phoenix...	7,700....	25
Part of Sections 22 and 23, Morseman level..	6,500....	25
Section 27 at Fulton..	6,000....	25

Section No. 9.....	\$7,200.....	1st April, 1856.
" 10.....	8,500.....	"
Dam and Guard Gate on Section 10.....	5,600.....	"
Culverts on Sections 1 to 5 inclusive.....	2,200.....	"
Road and Farm Bridge Abutments on Sec- tions 1, 4 and 10.....	2,300.....	"

Sealed proposals will be received at the Engineer's Office, in the village of Albion until Wednesday, the 18th day of October next, at 10 o'clock A.M. for the following described work, between Lockport and Rochester:—

Section	276,	with	penalty	in	bond	of	\$9,000.
"	277,	"	"	"	"	"	"	6,700.
"	278,	"	"	"	"	"	"	7,000.
"	279,	"	"	"	"	"	"	7,600.
"	280,	"	"	"	"	"	"	8,400.
"	281,	"	"	"	"	"	"	9,200.
"	282,	"	"	"	"	"	"	5,700.
"	283,	"	"	"	"	"	"	4,100.
"	316,	"	"	"	"	"	"	6,600.
"	317,	"	"	"	"	"	"	6,500.
"	318,	"	"	"	"	"	"	9,400.
"	319,	"	"	"	"	"	"	9,300.
"	320,	"	"	"	"	"	"	9,200.
"	322,	"	"	"	"	"	"	10,100.
"	323,	"	"	"	"	"	"	8,000.
"	324,	"	"	"	"	"	"	7,700.
"	325,	"	"	"	"	"	"	7,100.
"	326,	"	"	"	"	"	"	9,400.
"	327,	"	"	"	"	"	"	7,600.
"	328,	"	"	"	"	"	"	8,800.
"	329,	"	"	"	"	"	"	9,700.
"	330,	"	"	"	"	"	"	13,000.
"	331,	"	"	"	"	"	"	8,500.
"	332,	"	"	"	"	"	"	8,500.
"	333,	"	"	"	"	"	"	12,200.
"	334,	"	"	"	"	"	"	13,000.
"	335,	"	"	"	"	"	"	8,000.
"	336,	"	"	"	"	"	"	6,000.

Bridge Abutments on Sections 276 to 283, inclusive.....	3,600.
Bridge Abutments on Sections 316 to 329, inclusive.....	7,300.
Bridge Abutments on Sections 330 to 336, inclusive.....	5,400.
Culverts on Sections 276 to 283 inclusive..	6,200.
" " 316 to 320 " ..	5,500.
" " 322 to 329 " ..	8,000.
" " 330 to 336 " ..	4,000.
" " 306 " ..	1,900.

Waste Weir on Section 330	"	500.
Iron superstructure of Genesee st. Bridge,	"	500.

The superstructure of Genesee street Bridge and the Culvert on Section 806 to be completed by the 1st day of April, 1855, and the remainder of the above work by April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner, until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, Sept. 13th, 1854.

HENRY FITZHUGH, }
FREDERICK FOLLETT, } Canal Comm'rs
CORNELIUS GARDINIER, }
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

STATE OF NEW YORK, SECRETARY'S OFFICE, ALBANY, AUGUST 10, 1854. To the Sheriff of the County of New York.—Sir: Notice is hereby given, that at the General Election to be held in this State on Tuesday succeeding the first Monday of November next, the following officers are to be elected, to wit:

A Governor, in the place of Horatio Seymour;
A Lieutenant Governor, in the place of Sanford E. Church;

A Canal Commissioner, in the place of Henry Fitzhugh; and

An Inspector of State Prisons, in the place of Henry Storms;

All whose terms of office will expire on the last day of December next.

A Representative in the Thirty-Fourth Congress of the United States, for the Third Congressional District, composed of the First, Second, Third, Fifth and Eighth Wards in the City of New York; for the Fourth District, composed of the Fourth, Sixth, Tenth and Fourteenth Wards of the City of New York; for the Fifth District, composed of the Seventh and Thirteenth Wards in New York, and the City of Williamsburg, in Kings County; for the Sixth District, composed of the Eleventh, Fifteenth and Seventeenth Wards in New York; for the Seventh District, composed of the Ninth, Sixteenth and Twentieth Wards in New York; and for the Eighth District, composed of the Twelfth, Eighteenth and Nineteenth Wards in New York.

County officers also to be elected for said County:—

Sixteen Members of Assembly;
A Surrogate, in the place of Alexander W. Bradford;

A Recorder in the place of Francis R. Tillou;
A City Judge, in the place of Welcome R. Beebe;

A Mayor, in the place of Jacob A. Westervelt;
A Register, in the place of Garret Dyckman;

A Commissioner of the Streets and Lamps, in the place of George G. Glasier, who was appointed to fill a vacancy caused by the resignation of Henry Arcularius;

A Police Justice, for the Second District, in the place of Daniel W. Clarke, who was appointed to fill a vacancy caused by the death of John McGrath;

Two Governors of the Alms House, in the place of Gustavus A. Conover and William Pinkney, appointed to fill vacancies;

A District Attorney, in the place of Lorenzo B. Shepard, who was appointed to fill a vacancy occasioned by the death of Nathaniel B. Blunt;

A Civil Justice and a Police Justice, for the Seventh Judicial District, composed of the Twelfth, Nineteenth and Twenty second Wards;

A Police Justice for the Eighth Judicial District, composed of the Sixteenth and Twentieth Wards.

Yours, respectfully,
E. W. LEAVENWORTH,
Secretary of State.

SHERIFF'S OFFICE,
New York, August 14, 1854.

The above is published pursuant to the notice of the Secretary of State, and the requirements of the statute in such case made and provided.

JOHN ORSER,

Sheriff of the City and County of New York.

All the public newspapers in the County will publish the above once in each week until the election, and then hand in their bills for advertising the same, so that they may be laid before the Board of Supervisors, and passed for payment. See Revised Statutes, volume 1, chapter 6, title 3, article 3d, part 1st, page 140.

JOHN ORSER, Sheriff.

Sept. 1, 1854.

Railroad Iron.

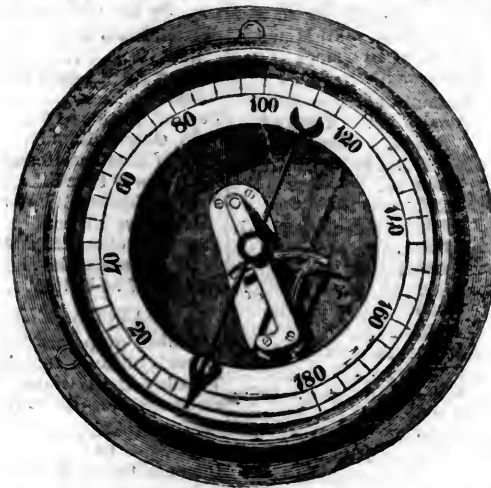
2,000 TONS Railroad Iron, 54 to 60 lbs. per lineal yard. For sale by

THEODORE DEHON,
20 1/2 Broadway,
New York.

Contracts made as above for Rails deliverable at English or American ports at lowest rates.

ASHCROFT STEAM GAUGE.

AMERICAN
STEAM GAUGE
COMPANY.
SOLE PROPRIETORS
AND
MANUFACTURERS
FOR THE
UNITED STATES.

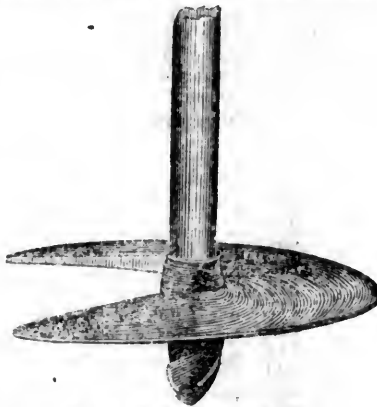


THE COMPANY
ARE PREPARED TO
EXECUTE
ORDERS FOR THEIR
GAUGE
AT THEIR MANUFACTORY
No. 4 Charlestown Street,
BOSTON, MASS.

THIS Company purchased of Mr. E. H. Ashcroft the Patent for the above Gauge in February last, and they presume there is no necessity of stating the benefit of this celebrated Gauge, which has obtained so much repute throughout the Country during the last three years, as a matter of economy and safety for Railroads, Stationary Boilers and Steamers its equal has never been discovered. The Company also purchased of Mr. Ashcroft the Patent for the Fountain Moreau or India Rubber Gauge of which the Eastman, Lowe and German Gauge are considered by them to be infringements. They will furnish the India Rubber Gauge if desired, although they think it cannot be depended upon.

41 ly

Screw Pile Foundations.



ALEXANDER MITCHELL'S

Patent Iron Screw Pile,

FOR obtaining permanent foundations on Rivers, Morasses, and Quicksands, for Railway Bridges, Viaducts, Depots, Wharves, &c.

I. W. F. LEWIS, C. E.,

Agent in the United States,
No. 30 South 5th street, PHILADELPHIA.

NUGENT'S COLLEGE

OF

ENGINEERS AND MECHANICS,

Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

SEPTIMUS NORRIS,

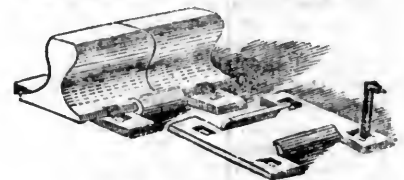
CIVIL, MECHANICAL & CONSULTING ENGINEER

OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his New Patent Boiler for burning Anthracite Coal; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

RAILROAD SPIKES.



WROUGHT IRON

Chairs and Fastenings.

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.

The best quality of Refined Iron is used, and all orders filled with despatch.

J. HOPKINSON SMITH,
No. 25 South Charles str.

Please direct the name in full,
Baltimore, July 1st, 1854.

33 tr.

American Railway Guide.

BEST ADVERTISING MEDIUM EXTANT.
Circulation 28,000 Monthly.

WITH A NEW RAILWAY MAP.

THE "AMERICAN RAILWAY GUIDE" is the only work of the kind which contains information for all sections of the United States and Canada; and in every respect is a complete and accurate hand-book for the traveller. Besides the routes, distances, fares, and the times of starting and arrival of trains, the work furnishes in a condensed form, or in notes, a great amount of information respecting Steamboats, Canals and Stage Routes, connecting with the several Railroads. Issued on the first of every month, and is always thoroughly corrected from official information to date of publication. Subscription \$1 per annum: single copies 12 1/2 cents: agents supplied at \$8 per 100 copies.

Published by DINSMORE & CO., No. 9 Spruce-st., N. Y.

New York and Erie R. R.

On and after Wednesday, Sept. 20th, and until further notice PASSENGER TRAINS will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a.m. for Buffalo.
DUNKIRK EXPRESS, at 6 a.m. for Dunkirk.
MAIL, at 8 1/2 a.m. for Dunkirk and Buffalo, and intermediate stations.

ROCKLAND PASSENGER, at 3 1/2 p.m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAY PASSENGER, at 4 p.m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5 1/2 p.m. for Dunkirk and Buffalo.
EMIGRANT, at 6 p.m., for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 5 1/2 p.m. These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 42.]

SATURDAY, OCTOBER 21, 1854.

[WHOLE No. 966, VOL. XXVII.]

MR. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

New York and Erie Railroad.....	657
General Railroad Law of New Hampshire.....	662
Railroad Convention in Ohio.....	668
Earnings of Railroads for September.....	664
Railroads of Texas.....	666
Journal of Railroad Law.....	668
Cincinnati and Marietta Railroad.....	668
Ogdensburgh Railroad.....	669
Stonington Railroad.....	669
Railroads of New Hampshire.....	669

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, October 21, 1854.

Erie Railroad.

REPORT OF THE COMMITTEE OF INVESTIGATION.

We give in another column the report of the Committee (of the Banks, we believe) appointed to make an examination into the affairs of the Erie Railroad Company. The report contains little that is new or of interest to a person familiar with the history of this company. By such, a report similar to the one made was anticipated. It will not be without its influence, however, and is worth a great deal to the company, as the result of the examination, and the conviction, of men in whose opinions the public are accustomed to confide.

The report states the cost of the road on the 30th of June last, to have been \$34,850,004, made up as follows:

Capital Stock.....	\$10,017,700
Funded Debt.....	23,500,000
Floating Debt.....	1,332,304

Total.....\$34,850,004

The operations for the year ending Sept. 30th, 1854, are stated as follows:

Earnings from freight.....	\$3,394,598
" " passengers.....	1,728,068
" " miscellaneous.....	253,607

Total Earnings.....\$5,376,273

The payments on account of interest, and current expenses for the same period, have been—

Transportation Expenses ..	\$2,740,961
or 51 per cent.	
Incidental charges	398,565
Interest on Funded Debt....	1,491,667
	\$4,631,193
Profits.....	745,080
	\$5,376,273;

or something over seven per cent. on the total cost of the road.

The attention of the Committee appears to have been mainly directed to an examination into the condition of the Company's affairs, and the manner in which they were conducted. The examination does not reach back further than Sept. 30, 1852, covering a period of only two years. Some misstatements in the report of 1852, with which the readers of the JOURNAL are familiar, are exposed and severely censured. Since the report of that year, we are not aware that there has been much to condemn in the statements of the Company. It does not appear that the directors were party to the erroneous statements at the time they were made, though they did not make a public correction of them when discovered. The commission of such mistakes shows the danger of having stock speculators fill important places in railroad companies.

By looking further back, other causes for censure would probably have been discovered, but no good would have resulted, and there is a general disposition to proclaim an amnesty for the past, provided the future shall deserve it.

To achieve the results, of which the Committee believe the road to be capable, they recommend—

1. That the construction account be closed.
2. An increase in the tariff price of freight and passengers, both way and through.
3. That no dividends be paid till the floating debt is disposed of.
4. That a sinking fund be established, to be paid monthly into the hands of Trustees, independent of the Company.
5. That the President and Vice-President of the Company be required to give their whole time and undivided attention to the duties of their respective offices.

Now while we agree with most of the above recommendations, we do not see how the first is to be carried out without foregoing dividends al-

together, for many years at least. It may be laid down as an axiom in railway economy, that the cost of a railroad increases in ratio of its receipts. If this were not so, it is easy to see that roads might go on increasing their profits *ad infinitum*. But the profits of railway investments are limited as well as those of any other kind of business; and an increase of receipts by no means implies an increase of the rate of gross, or net earnings. The Erie Railroad cannot do a business of \$7,000,000 a year with the same capital it could one of \$5,000,000. Otherwise it would have the royal road to wealth. For the present the earnings should increase faster the cost of the road, because the business is not yet up to the capacity of the track or machinery; but let this capacity be once reached, and increase of capital and receipts will go on very nearly *pari passu*. We think that it will be safe to assume, however, that from the present time the capital will increase in one-half the ratio of the receipts. We estimate the increase of net receipts at 7 per cent., and the increase of capital, consequently, at 3½ per cent., equal to an increase of \$1,220,000 for the first year, and of course a larger sum for the second. Now if the directors will look at the history of our most successful and best managed roads, they will find that had their construction accounts been closed, as they propose to close that of the Erie, not the first penny would have been paid in the shape of dividends—although such roads, without any charge of mismanagement, have returned in dividends their first cost of construction. To close the construction account on the Erie Road will be at the expense of dividends perhaps for ten years to come: a matter not to be thought of: and we do not like to see the Committee weaken the moral force of their recommendations by assuming positions that cannot be sustained. The construction account of the Erie Road cannot be closed. There is no reason for doing so. The argument against keeping this account open might have been urged with equal force against the construction of the road on the outset. The object of the road was to accommodate the business of its line, not one-half or one-quarter, but the whole. If this business double in five years, as it will, the new business must be provided for as well as the old.

The first cost of the road was estimated at 6,-

000,000. Suppose its projectors had required its capital account to be closed upon the expenditure of that sum: what would have been the result? Or to take a better illustration; the total cost of the road, Sept. 30, 1851, five months after its opening to Lake Erie, was about \$24,000,000. In less than three years it has increased more than ten millions, a sum nearly equal to the gross earnings for the same period. Where would the road have been had it been required to close its capital account at the date of its opening? Why, it would have proved a disastrous failure, as all, and none more clearly than the Committee, can easily see. The illustration put may serve as a guide for the future. The Committee have clearly not considered the effect of this recommendation, or they would not have made it.

We are aware that the increase of "capital account" is the bugbear that frightens the purchasers of railroad securities, as well as the process by which the means of companies are wasted, and their roads mismanaged and made shipwreck. It is the weak spot in the system. While a road is in progress, the feeling that the road can be constructed *only* through the exercise of great watchfulness, and the most rigid economy, secures the exercise of such qualities. After it is opened, its great success relieves the Company of the necessities that made them vigilant and saving. Credit, which follows, gives them the command of ample means, and extravagant anticipations of the future naturally begets a lavishness, and indifference as to the expenditure. Stockholders thinking success secured, cease to watch the conduct of directors, and both go sleep, to wake and find their property half wasted. We think we might name several important roads of which the above is not an overdrawn picture. We wish to arouse all such from the lethargy into which they are liable to fall, and the Erie among others. In a country like the United States, the development of whose resources has only commenced, and the receipts, and consequently, the cost of whose railroads, must increase equally with such development, it is useless to talk of closing construction accounts. But the stockholders of our roads must see that such increase only as is required, is made, and that such increase be faithfully expended. So expended, it is just as proper as was the original outlay for construction.

The Committee, very properly under the circumstances, advise that no dividend be declared till the floating debt be paid. We suppose this recommendation is intended to apply to the Income Bonds, should they not be met at maturity; or should they be paid in full, or in part, by the creation of an additional floating debt. Now as the road appears to be earning at least seven per cent. upon its cost, and as the floating debt is a part of this cost, we see no reason why capital should be paid off from earnings, except upon the ground that the company cannot fund this debt, nor carry it, by borrowing, without too great a sacrifice. Now assuming that the Erie Railroad is earning seven per cent. upon its cost, as the Committee admit, then they should have recommended that no dividend should be declared, till the floating debt could have been funded, at par. We say this, not because we think a dividend should be declared at present, for, as is well known, we have been opposed to all the dividends

ever made by the Erie Company. We wish to wait to see whether one has been earned beyond all cavil and peradventure, and because the floating debt cannot be disposed of without an unjustifiable sacrifice; but the fact that one is earned having been established, and the liabilities funded at a rate not exceeding seven per cent., with suitable provision made for its ultimate liquidation, then we are in favor of a dividend, whether it be in six months, or six years. The recommendations of the committee are proper, but not the reason in which they are founded.

The report of the Committee is silent upon the most interesting topic connected with the Erie Road; the payment of the *Income Bonds*. This matter is, we presume, receiving the careful consideration of the new Board. Without pointing out what course should be adopted, we are clear it should be such as would secure the greatest confidence in the value of the company's securities, irrespective of the immediate effect it may have upon the market value of the stock. The moment the company can sell a new seven per cent. loan, (with a sufficient sinking fund to liquidate it at maturity) they are instantly relieved from their embarrassments, and a dividend, if earned, becomes not only practicable, but proper. Suppose the company announce that they will devote the entire earnings of the road to the payment of the floating debt and Income Bonds, till these are paid, and should place their earnings in the hands of *Trustees* for these objects, would not the effect be, if time should verify the estimated profits, to place the securities of the company at a premium? They have been at this figure without any provision made for their payment. Why may this not be again the case, with such provision, and with receipts far greater than the most sanguine estimate? It strikes us that the most effectual way of putting up the stock, and securing a dividend at the earliest practicable moment, is to take such steps as will secure the highest degree of confidence on the part of the bond-holders, and capitalists. As soon as the policy and mettle of the company have been sufficiently tested, there would be no difficulty in negotiating, at par, a new loan to meet immediately impending liabilities. A dividend cannot be paid at present under any circumstances! Ought the company to submit to any further losses by way of discounts on their loans? If not, then clearly the course that will quickest place their bonds at par, is the one to be taken. What such a course should be is better known to savans in monetary matters than to ourselves.

Subjoined is the Committee's report.

New York and Erie Railroad.

REPORT OF COMMITTEE OF EXAMINATION.

To the Board of Directors of the New York and Erie Railroad Company.

The Committee organized on the 14th ult., at the request of your Body, to "examine into all the books, papers, accounts and transactions of the Company," submit the following report:

SUBJECTS EXAMINED.

Under the authority derived from the Board, we have inquired into—

1. The system of Checks and Accounts.
2. The Printed Reports of the Company, to ascertain whether they correspond with the Books.
3. The state of the Stock Account.
4. The amount of the Stock and other indebtedness of the Company.

5. The principle governing the classification of Construction and Transportation Accounts.
6. The Construction Account.
7. The additions to the Bed, Track, Cuttings, Embankments, Rolling Stock, &c.
8. The Property of the Company.
9. The ordinary sources of Income.
10. The ordinary charges upon Income.
11. The gross and net Earnings as exhibited by the Books.
12. The prospective Revenue.

We had also inquired into such acts of your Board as have come before us incidentally in investigating the above subjects.

The period inquired into is that between Sept. 30th, 1852, and Sept. 30th, 1854. The complete returns terminate with June 30th, 1854, but with the help of partial returns and estimates, we are able to come with proximate accuracy to Sept. 30th, 1854. The resolution of your Board invited inquiry "for such period as we might see fit," and authorized us to "question the officers of the Company concerning the same." On consulting with each other, we thought that the purposes to which we were called would be answered by going back to Sept. 30th, 1852, at which time the road had been in operation nearly a year and a half, and two dividends had been declared.

Mr. George Holbrook, of Boston, an experienced accountant, well versed in railroads, and recently favorably known in this community, has been employed to aid us in the general examination. We have found the officers of the Company ready to render every assistance in their power, and to answer all questions. We therefore feel justified in assuming that the examination is thorough for the time which it covers, and the subjects to which it relates.

REPORT OF SEPT. 30, 1852.

We assume the condensed Balanced Sheet, of 1852, hereto annexed (A,) to be a correct exhibit of the affairs of the Company on that day. The balances have been compared by Mr. Holbrook and found right—certain corrections being made in the construction and transportation accounts, which will appear by reference to the note to Schedule (A.)

You will observe that certain discrepancies exist between that statement and the published Report of the standing of the Company at the same time, made by the Treasurer in pursuance of law. These discrepancies are principally as follows:

First—The floating debt is represented in the published Report at \$1,323,053 55, whereas, including unpaid interest and dividends, paymasters', &c., accounts, and other accounts payable, it then amounted in gross to—

(C).....	\$2,771,550 29
Deduct accounts and bills receivable (C).....	387,143 46

Balance floating debt (II)...\$2,384,406 83

Second—The passenger, freight, and other earnings, are represented in the Report as follows:

Passenger earnings	\$1,382,636 87
Freight.....	1,883,198 76
From other sources.....	271,930 90

Total.....\$3,537,766 53

The actual earnings for the same time were:

Passengers.....	\$1,286,732 38
Freight.....	1,761,016 01
Other sources.....	272,157 75

Total.....\$3,319,906 14

The first discrepancy was caused by regarding Bills Payable as alone constituting a Floating Debt, and by deducting from them the value of the Buffalo and State Line Railroad stock, and of the Fuel on hand, Cash, acceptances for iron not received, and Bills Receivable. The Balance is assumed to represent the Floating Debt.

The second discrepancy is caused by reporting only the credits of Passenger and Freight Earnings, without deducting debit amounts to be refunded to independent connecting roads. The

item "Other Sources," in the Report, is made up by adding the Hudson River Ferry Earnings to the Ledger Balance, which appears to be correct, since the Ferry Expenses are reported.

We leave your Body to determine the reasons for these erroneous statements, and to whom they are to be charged. We can see no justification for them. It appears in evidence before us, that the knowledge of them came to the then Board of Directors in a short time after the Report had been sent to Albany by the Treasurer, and that the subject was investigated by their orders. We think they erred in not frankly exposing them. Since September, 1852, your Board has had to contend against the effects of a dividend declared when not fully earned, and the representation of your Floating Debt as far below its actual amount.

A development like this, in the outset, led us to regard all after transactions with suspicion, and to scrutinize them rigidly. The results have been highly favorable to the Company.

SYSTEM OF ACCOUNTS.

The mode of keeping the books, and the system of checks, first attracted our attention. This is best described in the testimony of Mr. BREMNER, the General Book-keeper.

1. State the System of Accounts as to Receipts.

The rule is that the Agents must remit to the Treasurer daily, all moneys received on account of the Company.

Upon the receipt of the remittances by the Treasurer, they are all counted and examined, and placed to the credit of "Transportation Receipts" on the Cash Book, and upon a side book are placed to the credit of the Agents personally; the state of the personal credits to the Agents agreeing, daily, with the amount placed to the credit of "Transportation Receipts" on the Cash Book.

At the end of the month Cash is charged on the General Ledger with the total of the receipts during the month, and "Transportation Receipts" is credited with the same amount, thus leaving to the credit of "Transportation Receipts" the amount received by the Treasurer during the month. The Treasurer then makes a report to the General Book-keeper of the amount received from each agent, the total of which should agree with the amount credited to "Transportation Receipts." The General Book-keeper makes an entry crediting the Agents, personally, with the amounts received from each, and charges "Transportation Receipts" with the total amount; or, which is the same thing, charging "Transportation Receipts" with the same amount that the Treasurer has credited it with, thus closing monthly, "Transportation Receipts" account.

"Transportation Receipts" account is merely a memorandum account through which the Agents get credit for the amounts remitted by them, or, in other words, instead of crediting each Agent daily on the Cash Book with the amounts remitted by them, it is first carried into "Transportation Receipts" and at the end of each month "Transportation Receipts" is charged with the amounts received from each Agent, and the Agent gets his appropriate credit through a Journal entry, instead of through the Cash Book.

2. As to Expenditures for Construction.

Expenditures for Construction, except contract work, are made under the direction of the General Superintendent, and under the immediate supervision of the Superintendents of Division, who certify to the vouchers for the expenditures. Contracts are made by a Committee of the Board of Directors, called the "Committee on Contracts;" the vouchers for payments under such contracts are approved by the Chairman of the Committee.

3. As to the Expenditures for Transportation.

All expenses for "Office and Station Expenses," "Cost of Running," "Repairs of Machinery," "Repairs of Track and Roadway," "Repairs of Buildings, &c." "Cost of Operating Telegraph," and the "Expenses of Hudson River Ferry," between New York and Piermont, are charged to "Transportation Expenses." The interest on the Funded

and Floating Debt, and Dividends on Stock are charged to "Transportation."

"Transportation" is charged with:

Interest on Funded and Floating Debt.

Dividends on Stock.

Rent of Union Railroad.

Taxes.

Transportation Expenses, and such other items as properly belong to it.

Transportation is credited with the Earnings of the Road, such as Freight Earnings, Passenger Earnings, &c., as will more fully appear from the tabular statement of earnings.

4. As to other charges.

There are no other charges, except the current business of the Company between other railroad companies or individuals.

5. As to Income and Earnings.

The Earnings of the Company are principally made up from the transportation of freight and passengers.

The Freight Earnings are made up from the waybills of goods transported over the Road. Each Agent is charged with the freight and charges on the goods destined for his station, as per the waybills. When an Agent forwards any goods, he makes a waybill of the same to be sent with the goods and a duplicate waybill is also made and sent to the Chief Clerk, who has charge of the details of the freight accounts: thus having a complete check upon the Agent who is to account for the freight money. In making up the Freight Earnings, which are made up from the totals of the waybills each month, if any portion has been transported over any connection roads, that portion is separated from the proportion belonging to the New York and Erie Railroad, and credited to the road to which it belongs—the "Freight Earnings" accounts being credited only with the amount belonging to the New York and Erie Railroad Company.

The Passenger Earnings are made up from the sales of tickets by the different Agents. The Agents report the sales daily, which are charged to them, and their reports are verified by the comparison of the tickets collected and returned by the Conductors, with the Agents' reports of sales.

In making up the Passenger Earnings, "Passenger Earnings" account is credited only with the proportion of the tickets sold belonging to this Company; if any are sold to go beyond our own road, the proper amount is separated from the total of ticket sales and credited to the road to which it belongs.

"Passenger Earnings" account is credited only with the amount belonging to the New York and Erie Railroad Company; all the connecting roads get their appropriate credit without reference to the Earnings of the New York and Erie Railroad.

6. In reference to the Collection of Earnings.

Each Agent is charged with the freight received at his station, and any amount he may collect on freight which is prepaid before being forwarded; also with the passenger tickets sold by him. He is required to send to the Treasurer daily all the money he collects, which he gets credit for in the manner as explained in No. 1 of these explanations. Each Agent is required to send to the General Book-keeper, monthly, a detailed balance sheet of all the business at his station, which is carefully examined and returned to him for correction, if any errors are discovered. The Agents thus account for all the business done by the Company, if any of it belongs to other roads; the Treasurer pays the amounts which are charged to such other roads, they first having received the appropriate credits in making up the Freight and Passenger accounts; or the agent sends all the money he receives to the Treasurer whether it belongs to this Company or not. If any portion belongs to any other Company, the Treasurer is put in funds to pay the amount.

It will be seen from the above that the "Receipts" is not the true basis upon which to judge of the amount of business done by the Company—the true basis is the Earnings, the Earnings

being only credited with the amounts belonging to the Erie Company. The Receipts may include amounts belonging to other Companies, and may not have included in it amounts due from other Companies, because where a general account is kept with other Companies, they may pay the amounts due in General Account, which may include Freight and Passenger Balances, and be credited with the same directly on the Cash Book, if they pay in cash, or by a Journal entry if they pay by note.

7. State how long this system of account has prevailed, and whether it gives a just view of the business of the Company.

The present system of arriving at the actual earnings of the Company has been in force since September 30, 1852, and it is believed to be as nearly correct as the nature of the business will allow. The great point to endeavor to arrive at is, to make the credit side of the Earnings Account show just the amount earned by the Company. This has been nearly attained. There will be small amounts to charge back by overcharges, &c., but the system of crediting each road with its proportion of the business done, independently of the proportion belonging to this Company, is the true method of arriving at the Earnings of this Company.

8. Whether the public statements since October 1st, 1852, of the Earnings and Expenses of the Company, have been in exact accordance with the books?

The tabular statement of the Earnings and Expenses for the year ending September 30, 1853, embodied in the Report of the Directors, November, 1853, are in exact accordance with the books of the Company, as is also the tabular statement of the Earnings and Expenses for the nine months ending June 30, 1854.

To our own opinion of the excellence of this system, we subjoin the evidence of Mr. Holbrook.

Question—What is your opinion of the system of accounts and checks in use in the New York and Erie Railroad Company?

Answer—In the course of my investigation I have had occasion to examine and compare the Books, Returns and Statements of the various departments, with the accounts upon the Ledger in the principal office, and I am fully convinced that the business of the Corporation, in all its details, is most perfectly arranged; and that the system adopted for keeping correct reports of the earnings and disbursements of the Road, under their legitimate and appropriate heads, cannot be surpassed.

(Signed)

GEORGE HOLBROOK.

ACCOUNTS AND REPORTS SINCE 1842.

Having satisfied ourselves of the correctness of the system, we proceeded with the examination. The accountant found all the books accurately kept. The Ledger balances were audited by him, and the reports compared with them by the Committee. The published Treasurer's Report of September 30, 1853, the condensed balance sheet of that date, in the Report to the Stockholders in November, 1853, (B,) and the condensed balance sheet of June 30, 1854, (C,) are certified to be correct, as are also subsequent results contained in the annexed Schedules purporting to be derived from actual returns. Those which are estimated are, in our judgments, near the actual result.

STATE OF THE STOCK ACCOUNT.

The examination of the Stock Ledger shows that department to have been conducted with equal accuracy. We subjoin the Report of Mr. Holbrook, and also a certificate from Mr. WHITE, a gentleman employed by the Company, independently of Mr. HOLBROOK, to do a similar service, after the discovery of the frauds in the Transfer Office of the New Haven Railroad Company.

NEW YORK, Oct. 7, 1855.

GENTLEMEN:—From a careful examination of the Stock Ledgers of the New York and Erie Railroad Company to this date, I find 100,177 shares to the credit of 2,336 Stockholders: and 625884-10,000 shares of Unconsolidated and Fractional Stock, which in the aggregate, will be found to

agree with the amount of the Capital Stock upon the Ledger of the Company.

Respectfully yours, &c.,
GEORGE HOLBROOK.

To the Committee of Investigation, New York and Erie Railroad Company.

NEW YORK, Oct. 6, 1854.

I certify that I have carefully examined the Stock Certificate account of the New York and Erie Railroad Company, covering a period of ten years, or from the time of the consolidation of the old stock. I have made a complete list of all outstanding certificates, and find it to compare with the Stock List of the Company, and that there are no certificates outstanding, unless covered by stock, without being accounted for.

(Signed,) JUSTIN D. WHITE.

STATEMENT OF THE STOCK AND OTHER INDEBTEDNESS.

Between September 30, 1852, and September 30, 1853, the stock was increased \$2,233,099 91; the Funded Debt \$2,170,000; and the Floating Debt \$300,619 66.

Between September 30, 1853, and June 30, 1854 the same accounts were increased as follows: Stock, \$23,867 76; Funded Debt, \$1,934,131 10; Floating Debt, \$126,848 88.

The total increase, therefore, in the Stock, Funded, and Floating Debt, between September 30, 1852, and June 30, 1854, was \$6,788,567 31; (G).

On the 30th September, ult., the Stock, Funded Debt, and bills payable amounted to \$34,850,004 90 (H.) The books not being yet written up, (which is impossible from the nature and extent of the Company's business,) we cannot give the exact Floating Debt on that day.

On the issue of Stock since Sept. 1852, the Company have suffered a loss of \$215,645 76, principally through sales of stock hypothecated for purchase of iron. The iron is said to have advanced nearly enough to cover the loss. The discount in the sales of bonds of the Company during the same time has been \$235,158 97.

The condition of the Floating Debt on the 30th June, merits attention, (D.) The bills payable account on that day, amounted to \$2,799,585 78. * The total liabilities of the Company to mature in the months of July, August, and Sept. amounted to

	July.	Aug.	Sept.	Total.
Floating debt.	\$805,056	\$648,019	\$543,793	\$1,996,868
Interest.	122,500	245,000	315,000	682,500
Total.	\$927,556	\$893,019	\$858,793	\$2,679,368

Owing to these heavy payments maturing in such proximity, the Company found themselves in a critical situation. After obtaining about \$350,000 on acceptances endorsed by various members of your board, and secured by hypothecation of the bonds of 1853, they executed three mortgages as follows: one dated Aug. 29, 1854, to CORNELIUS VANDERBILT, on the road and franchises to secure him as endorser of their acceptance to the amount of \$400,000; one dated Aug. 29, 1854, to CORNELIUS VANDERBILT, on 180 locomotives, 2,975 cars, platform trucks and baggage crates, and upon other goods and chattels of the company, to secure the same; and one dated Aug. 31, 1854, to DANIEL DREW, to secure him for accommodation notes and endorsements to the amount of \$981,168 20, and for all future endorsements, the whole not to exceed \$1,000,000 at any one time. The liabilities secured by these mortgages are shown by schedule (H.) Thus while the net earnings of the road for the quarter were between seven and eight hundred thousand dollars, and its prospects were more favorable for the future, the Company was forced, by crowding such heavy

payments into a time of great depression and want of confidence, to pledge all its available assets to meet a part of its floating debt, and its stock and securities were lamentably depreciated in consequence.

The measures adopted gave the necessary temporary relief, and it is the opinion of your financial officer that such an emergency cannot occur again. We understand that the contracts for rolling stock which increased the present heavy Floating Debt are either nearly completed, or are cancelled. We are assured that no new contracts have been made since March last, and that for seventy-five engines contracted for to meet the necessities of the road, the contracts for twenty-two have been cancelled with the consent of the contractors, and sixteen remain to be delivered. This wise arrangement has checked the increase of the floating debt, and if the policy be persisted in, the affairs of the company will soon be put on a sounder basis. In our judgement, it is better to pause where you are, until additions can be made at a less sacrifice of the means and credit of the Company.

RULES FOR DETERMINING THE CLASSIFICATION OF ACCOUNTS, AND DISTINGUISHING THOSE BELONGING TO CONSTRUCTION FROM THOSE BELONGING TO TRANSPORTATION.

The Superintendents have furnished us, at our request, with the following General Rules for governing the classification of construction and transportation charges. They seem to be sound in principle:

RULES.

Adopted on the New York and Erie Railroad in determining the classification of Accounts, and distinguishing those properly chargeable to "Construction" from such as belong to "Transportation."

1. All work done with special reference to construction of Second Track,
2. All new Switches or extensions of old ones.
3. All new structures of every description, (not renewals of others that have been used up or destroyed,) and all additions to old ones.
4. Widening or embankments not rendered necessary from the washing away of materials, but from their not having originally been constructed of sufficient width.
5. New ditches that have been found necessary since the road has been brought into use.
6. Removing material from slopes that were originally too steep.*
7. Difference in value of new materials, in renewals, as compared with the original value of such as were previously used, to wit: Increased weight of rails and chairs; increased number of cross ties; substitution of iron for log pipes; permanent station buildings for shanties, &c., &c.

We, the undersigned Superintendents of the several Divisions of the New York and Erie Railroad, do hereby certify that the above rules furnish the theory upon which we have acted and are now

NEW YORK, Sept. 19, 1854.

*HOMER RAMSDALL, Esq., President.

SIR: In explanation of the 6th item of work chargeable to Construction, i. e. Removing material from slopes, that were originally too steep.—I would remark that in constructing roads, the practice is to grade the slopes through excavations to what is termed the "natural slope," the incline upon which the materials will rest without sliding. The natural slope of coarse differs according to the character of the material, some kinds of rock requiring no sloping, whilst sand requires to be very flat. This natural slope, therefore, varies from a perpendicular, or 90 degrees, to two base to one perpendicular or angle of 26½ degrees. In the construction of this road, in many cases a way was excavated for laying the track sufficient to admit of the passage of the trains, leaving the necessary sloping to be done after the road was brought into operation and it is for doing this work that the charge is made against Construction, and embraced in the 6th item above referred to.

Yours respectfully,

D. C. McCALLUM, General Sup't.

governed in the classification and allotment of our accounts.

A. S. WHITON, Sup't Eastern Division and Union Railroad.

W. H. POWER, Sup't Delaware Division.

R. N. BROWN, Sup't Susquehanna Division.

S. A. HART, Sup't Western Division.

SEPTEMBER 14, 1854.

CONSTRUCTION ACCOUNT.

On the 31st September, 1852, the Construction Account amounted to (A).....\$26,841,576 08

Added to Sept. 30,

'53, (B).....\$4,381,257 42

Added to June 30,

'54, (C).....1,654,121 80 6,035,379 02

Total, June 30, 1854, (C) \$34,876,956 01

The Superintendent states that he deems it "Essentially necessary for the economical working of the road, that the Delaware River Bridge, the engine houses at Susquehanna, the connection of the main track with Centre street pier at Dunkirk, and the switches on the Delaware Division, should be completed, which will involve an outlay of about \$30,000."

An expenditure of \$500 will complete the second track on the Union Railroad. The locomotives and cars for which the company are still liable, in addition to acceptances, amount to \$218,000; and \$10,000 will be required to complete the Neversink Bridge, which is deemed important, though not essential. It is believed that a test may then be made in the construction account.—We deem this highly desirable, and recommend that the construction account be then closed, and that future additions be made from earnings.

ADDITIONS TO THE BED, TRACK, CUTTINGS, EMBANKMENTS, ROLLING STOCK, &c., SINCE SEPTEMBER 30, 1852.

Having ascertained the increased indebtedness of the company, and the increased cost of the Road since Sept., 1852, and having learned the principles governing the distribution of accounts, our next enquiry was concerning the expenditure of this large sum of money. On this head we depend entirely on information derived from the General Superintendent, in reply to our question, which we return herewith (Appendix II.) If any topographical information be necessary to the comprehension of his returns, it may be found in the Director's Report to the Stockholders, in November, 1853.

PROPERTY.

The next natural inquiry was concerning the property representing this expenditure.

The Company are possessed of a broad gauge road, 464 miles in length, having termini on the Hudson at Newburg and Piermont, and on the Lakes at Dunkirk, and connected with New York at Jersey City, by the Union Railroad, of which they hold a lease. This road is thoroughly built, and in perfect repair, and affords to travellers accommodation and comforts unequalled on any other American line. Tributary to it are 625 miles of road with wide gauge, and 75 with narrow gauge. The lands through which it runs are held by a clear title, and are all paid for, with some few exceptions in the case of minor heirs, &c. One hundred and eighty miles are laid with double track, and eighty-two miles with sidings and turnouts.—The stations, woodsheds, and other buildings, incidental to such a property, are represented to be sufficient. In addition to these, the Company hold a long lease of a valuable water property and offices in the city of New York.

This estate has cost a large sum in interest and discounts above the actual amount paid for land, labor and materials. In constructing it the Company was obliged by its necessities to keep in advance of its means, having only the alternative of abandoning sums already spent, or going on at a sacrifice. The individual members of the Board, as we are informed, lent their names freely for large amounts, without compensation. The heavy floating debts thus contracted were met from time to time by sales of securities at a discount. Justice,

*The Company had at this date \$1,392,000 of the Bonds of 1853 contracted for, to be delivered in monthly installments.

B. E. BREMNER, General Bookkeeper.

however, requires that we should state that some parts of this property are believed to have sufficiently appreciated by reason of the advances in labor and materials to be nearly or quite worth the sums absorbed in them.

The outstanding accounts and bills receivable cannot be exactly ascertained, the books not being made up to September 30. On the 30th of June last, they amounted to \$390,470 54. We are told that they are probably now about equal to the accounts payable.

The other property is as follows:

2,962 Cars, valued by detailed estimate about.....	\$1,889,162 00
188 Locomotives, valued by detailed estimate about.....	1,736,903 00
Materials.....	555,804 81
Fuel.....	223,321 70
One-third interest in Lake Erie Steamers (cost).....	143,437 43
One-third interest in Lake Erie Propellers (cost).....	72,337 27
Four-fifth interest in <i>Francis Skiddy</i> (cost).....	100,000 00
Corning and Blossburg Railroad Bonds.....	9,000 00
Loan to Canadaigua and Niagara Falls Railroad.....	100,000 00
Cash on Sept. 30, about.....	140,000 00
Real estate.....	12,811 80
Owners Propeller <i>Buffalo</i>	18,542 88
Bond City of Toledo.....	100 00
Total.....	\$5,000,920 88

Our attention has been called to the fact that with scarcely an exception, the New York and Erie Railroad Company has refrained from contributing to the construction of tributaries. We think that the Directors may point with pride to this evidence of good judgement.

SOURCES OF INCOME.

These are: 1, Transportation; 2, Mails; 3, Storage; 4, Rents; 5, Hire of Engines and Cars; 6, Telegraphs; 7, Dividends on Buffalo and State Line Railroad Stock; 8, Miscellaneous (I).

The Buffalo and State Line Stock has been lately sold. The amount of earnings from all these sources, except the first, has been about \$250,000 for the last fiscal year. The comparative statements of Transportation Earnings (the main branch of revenue) for three years is as follows:

	1851-52.	1852-53.	1853-54
Pas'grs..	\$1,286,732 38	\$1,601,309 71	\$1,728,068 08
Freight.	1,761,016 01	2,537,214 52	3,394,598 10

Total... \$3,047,748 38 \$4,133,424 23 \$5,122,666 18

Passenger Earnings.—In regarding the results it is to be remembered, as to way travel, that until this road was built the country through which it runs was not within easy access of the great markets, and was consequently less densely populated than more favored districts. It must also be borne in mind that the through travel has been long accustomed to follow the track now occupied by the Canal and the Central Road—a road co-extensive with the Erie, and offering nearly equal inducements to the public. In regarding the total passenger earnings for the year just passed, the serious epidemic prevailing through the country must be taken into consideration; and in comparing them with last year, we must remember that the Crystal Palace then drew numbers to New York. We think you have reason to be satisfied with the results in this department. The increase of earnings has been constant, notwithstanding the influence to check them. They increased this year nearly 8 per cent. over those of last year, and 34½ per cent. over those of 1851-2. The per head cost of carriage has not decreased essentially if any; but it is supposed that decided reductions in the expenses will result from recent changes and improvements. The through tariffs have also been recently advanced 11½ per cent. on the former rates, which will be a clear gain to the Company as long as maintained. The through travel, however, bears but a small numerical relation to

the way. For the ten months ending with July, it was only 7.45 per cent. of the entire travel.

Freight Earnings.—The great expansion of the business of your Road is in the direction of freight. The freight earnings of the year just closed are 33 4-5 per cent. more than those of last year, and 92 3-4 more than those of the year before. They now amount to the enormous sum of \$3,394,598, and freight transportation keeps from one to two thousand freight cars in constant employ.

The increase in tonnage for the nine months ending June 30, was somewhat less than the increase in earnings. The total tonnage moving West increased about 8 per cent., or (deducting the products of the forest, vegetable food, and manufactures,) about 24 per cent.; the tonnage moving East increased about 22 per cent.

The present Way Tariff, (except for Lumber,) was adopted in Sept. 1853, and it is proposed to continue to work under it. The Lumber Tariff was adopted in February last, being an increase of 10 per cent. on former prices, and gives an average of 1.83 cents per ton, per mile, on long and short distances.

The through Tariff on many articles is regulated by agreements with competing lines. The rates on freight beyond Buffalo and Dunkirk, were lately advanced five per cent. The additional sum received under this arrangement will be clear gain to the road.

The tonnage moving West for the nine months ending June 30, 1854, was, (in pounds:)

Way.....	368,828,100...	Yielding... \$487,600 01
Through...	53,170,440...	"... 369,459 03

Total... 421,998,540... \$857,059 04

The total tonnage moving East, for the same time, was, (in pounds:)

Way.....	466,309,100...	Yielding... \$899,554 94
Through...	158,686,590...	"... 681,636 25

Total... 624,995,690... \$1,581,191 18

The total number of pounds carried one mile during the same time, was:

Way West.....	31,636,326,566
Through West.....	22,663,445,414
Way East.....	78,231,589,420
Through East.....	61,507,690,910

Total..... 192,039,052,310

Thus it appears that the Earnings amount to, per ton of 2,000 pounds per mile, Way West, 3.08 cents; Through West, 3.26 cents; Way East, 2.45 cents; Through East, 2.11 cents. The average Way Earnings East are depressed by the low rates for lumber and coal. The Through Freight West are generally of a higher class than the Through East.

The proportion of way to through business is almost as great in Freight as in Passenger transportation; 87 1-6 per cent., in bulk, of the Freight going West, and 74½ per cent. of that going East, for the nine months ending June 30, was way.—We regard this as a very satisfactory statement, since the way Freight is decidedly more profitable than the through Freight.

The unrivalled advantages which the New York and Erie Railroad enjoys for the transportation of freight are so well understood that we shall not dwell upon them. Other reports have fully set forth the magnitude of its connection; and we have already shown the business which flows over the road and the means which it has for doing it. Six hundred and ninety-one men, we are informed, are in motion daily upon its freight trains, besides those employed in its shops, stations and offices. The completion of the double track allows such an economy in the use of rolling stock, than it can be kept in constant repair, and we are assured by the Superintendent that it will answer the present and prospective wants of the company better than was supposed.

The results of the three years under consideration, show that freight is a lucrative source of revenue; but are not of much use in determining

its relative value. In 1851-2, when the Passenger Earnings were 42.2 per cent. of the whole, the Transportation Expenses absorbed 56½ per cent. of the earnings. In 1852-3, when the Passenger Earnings were 38.7 per cent. of the whole, the Transportation Expenses were 58½ per cent. of the earnings. During this year Transportation was credited with \$125,270 85, on account of the use of the Road and rolling stock for the construction of the double track. This would diminish the per centage to 55½. In 1853-4, when the Passenger Earnings constitute, 33.7 per cent. of the whole, the Transportation Expenses are 53½ per cent. of the earnings. The similar items on account of construction this year, amount to \$63,991 39, which reduces the per centage to 52½. It is to be observed in regard to these charges for construction, that as the business obstructed the Road, and excluded more profitable traffic, they were, in our judgment, a fair credit to Transportation.—They were credited at the rate of 1.71 cents per ton per mile.

CHARGES UPON INCOME.

These are—1, Transportation Expenses; 2, Rent of the Union Railroad; 3, Loss in running connecting Steamers; 4, Depreciation; 5, Interest; 6, Dividends.

Transportation Expenses.—We have already shown that the relative proportion of Transportation Expenses to Earnings is less this year than last. Actually they have increased; principally in the repairs of engines, cars, track and road way, and incidentals, (G.) We are informed by the Superintendent that the changes which the completion of the double track permits, will effect a decided reduction in the relative transportation expenses of the coming year. All bear testimony to the admirable system now prevailing in this department. Notwithstanding the length of the road and the amount of its business, the trains move with great regularity, and accidents are rare. The telegraph enables the Superintendents to know the exact number of trains on the limits at any one time, and the situation of each. This almost insures against collision from ordinary causes.

Rent of the Union Road.—This road connects the main line with the City of New York. The rent is \$80,100 per annum. There is also a debit on the balance sheet of \$400,000, for repairs and improvement to this road, which appears to us to belong to the Construction Account.

The Loss by connecting Steamers on the Lakes arises from the necessity of connection on those waters where trade and travel have been used to flow to other channels. We are informed that two-thirds of the interest in them has been advantageously sold to other parties. The loss by the *Francis Skiddy*, on the Hudson, grows out of the following transactions: The New York Central Railroads and the New York and Erie Railroad were competitors in Western cities for the New York travel. Owing to the advantages derived from the North River transportation, the Central Road was able to offer, in Cincinnati and elsewhere, to carry passengers to New York cheaper than the New York and Erie. The Executive Committee, in whom the general power over steamers had been vested by a previous vote of your Board, found it necessary to take some steps to counteract this advantage, and purchased of parties having no interest in, or connection with the New York and Erie Railroad, the *Francis Skiddy*, to run between New York and Newburg in connection with trains going from and arriving at that place.

Depreciation.—No allowance has been made for depreciation. It appears that the sums annually expended in repairs leave the track and road bed as good at the end of the year as at the beginning. But as to station houses, water stations, wood sheds, bridges, rolling stock, &c., some think that a sum in addition to repairs should be set aside annually to keep them good. Others, equally well informed, assure us that they are kept constantly good by repairs and replacements at the expense of transportation. Hitherto it has not been necessary to replace much of the rolling stock. Pos-

sibly, when replacements become necessary, the per centage of repairs will be increased, which will amount to the same thing as an annual allowance for depreciation. On these points the Superintendent says:

"Some of the property of the company has appreciated, whilst the other has depreciated in value, but to what amount I am unable to state. The road-bed and real estate—two important items in the cost of construction—are enhanced in value, whilst the superstructure, buildings, rolling stock and machinery have depreciated; whether they will depreciate still more, depends upon the care to be exercised in their preservation, and the amount of repairs to be expended upon them. I have no doubt that an examination at any period of time would show the property to be of less value than its original cost, but at the same time I have but little doubt that if our present system of repairs is continued, and an annual amount expended for repairs equal to that of last year, it would be worth as much one hundred years hence as at the present time; or if not, the difference would be so small as to require but very little to be charged annually for depreciation to make it so."

Interest.—The annual interest on the Funded Debt, when the Bonds of 1882 are all issued, will be \$1,045,000. We suppose the Floating Debt will be retired as fast as possible.

Dividends should be declared only when fairly earned, after payment of all these charges, and when the financial conditions of the company will permit. We think that none should be declared until the Floating Debt is disposed of. We also recommend a sinking fund towards meeting the Funded Debt, unless some more complete scheme can be devised.

GROSS AND NET EARNINGS. 1852-53.

Gross Earnings.....	\$4,318,962 36
Transportation Ex- penses.....	\$2,407,373 13
Other Charges.....	111,408 55
Interest on Funded Debt.....	1,298,291 29
	<hr/> 3,817,072 97

Net Earnings.....\$501,889 39
1853-4. Complete to June 30, thence part Return and part Estimate.

Gross Earnings.....	\$5,376,278 14
Transportation Ex- penses.....	\$2,740,960 42
Other Charges as be- low.....	398,565 05
Interest on Funded Debt.....	1,491,666 89
	<hr/> 4,691,192 36

Net Earnings.....\$745,080 78
The following are the "other charges" in the year 1853-4:

Rent of Union Railroad.....	\$80,100 00
Loss in running Lake Steamers.....	74,202 77
Loss in running <i>Francis Skiddy</i>	14,153 64
Transportation Expenses prior to Sept. 30, 1853, not received so as to be carried into last year's account....	42,531 47
Hire of Engines and Cars.....	24,858 87
Interest on Floating Debt to June 30.....	112,718 30
Estimate of same for 3 months.....	50,000 00
Total.....	<hr/> \$308,565 05

It is estimated that during the last year the gross earnings were decreased about \$300,000 by the break of gauge, the strike of Engineers, and the May freshets.

THE PROSPECTIVE REVENUE.

The President estimates the gross earnings for the next year at \$6,000,000. We are not well enough acquainted with the data upon which he forms his judgment, to be able to give an opinion concerning the precise result; but in so far as it is

an expression of confidence in a decided increase, both in the gross and net earnings of the Road, we fully agree with it.

Notwithstanding the systematic management of the Road, it is the opinion of your officers that decided reductions may yet be effected in the Transportation expenses. By the increase in Tariffs, which has gone into effect, and the promised decrease in expenses, we think that you may count upon a decided gain upon the results of the year just closed, even without the anticipated increase in business.

But we do not think that any past results are to be taken as the measure of the future business of the New York and Erie Railroad. From the opening in 1851 until May last it was in the condition of a man with one arm. It had virtually but one track, with insufficient sidings and turn-outs (great as they were,) with incomplete road-bed, cuttings, embankments and bridges; with station-houses unequal to the business; and with a rolling stock constantly added to, and yet ever behind its wants. It was also used in the construction of its second track to the exclusion of a better paying business.

These things are now changed. With the exception of 7½ miles, the proposed second track is completed, and in use; the old track is in better order than ever before; the cuttings are widened and brought to the natural slope; the embankments are in good order; the station-houses, water stations, wood sheds, &c., are esteemed adequate to wants, as shown by experience; the bridges are represented as in good repair; and the rolling stock, though not as large as the Directors seem to have desired, will meet demands for some time to come, when the works in progress are completed, which can be done for \$270,000.

The New York and Erie Railroad now earns annually about as large a sum as was originally proposed to be expended in its construction. It is a competitor for the enormous passenger and freight business of the Lake country, the Northwest, and the Canadian Peninsula, with New York; and also for that of the Valley of the Ohio and the Mississippi, with which it is soon to have even better connections than now. It passes through a line of country having no other eastern outlet by rail, whose productions are bulky, and which has hitherto been less densely peopled than some other sections of the State, only because more difficult of access; and its tributaries penetrate some of the richest mineral and agricultural lands in the Union.

When we see what it has already done, while new, encumbered and without perfect connections, we have no difficulty in agreeing that it is destined to do decidedly more with experience, without incumbrance to the traffic, and with connections established.

At the same time we cannot shut our eyes to its financial condition. We are aware of the difficulties with which your Board has had to contend, and bear willing testimony to your arduous and untiring exertions to surmount them. But we think you will agree with us, that the recent critical situation of the company has demonstrated the imprudence of anticipating earnings so largely, and calls for frankness and judicious management on the part of the Directors. If the public can be assured that the construction account is closed, and a scheme can be devised for retiring the floating debt, making at the same time prospective provisions for meeting the funded, we see nothing to prevent this road from becoming one of the most valuable railway properties in the world.

To insure this result we recommend:

1. That the Construction Account be closed.
2. An increase in your Tariff prices of freight and passengers, both Way and Through. We believe that an immediate judicious addition to the present rates is not only due to the Stockholders, but will essentially conduce to the permanent welfare of the company.
3. That no dividends be paid till the Floating Debt is disposed of.
4. That a Sinking Fund be established, to be

paid monthly into the hands of Trustees, independent of the company.

5. That the President and Vice-President of the company be required to give their whole time and undivided attention to the duties of their respective offices. We think this is indispensable to the proper management of so large a Corporation as the New York and Erie Railroad Company.

All of which is respectfully submitted.

JAMES BROWN, CALEB C. HALSTED,
THOMAS TILESTON, DAVID HOADLEY,
D. D. WILLIAMSON, JOHN GOURLIE,
JOHN E. WILLIAMS, J. C. BANCROFT DAVIS.
New York, Oct. 10, 1854.

General Railroad Law of New Hampshire.

SECTION 1. No person shall be allowed to pass or be carried over any railroad in this State without first paying the customary fare, excepting the stockholders going to and returning from the annual or any special meeting of said railroad corporation; the directors, treasurer and clerk of said company on their own road, the superintendent and conductor of such road and such other roads as shall have a business connection and contract with such road, persons actually engaged in running the cars, in charge of baggage or in repairing the road, or persons in charge of freight forwarded by express in pursuance of a contract with the corporation, or in charge of the mail, or accompanying their own freight on a freight train. *Provided*, however, that if any person shall apply to the president, superintendent, conductor or a ticket master of any road for permission to pass free, and it shall appear that such person is poor or in misfortune, and unable to pay the usual fare, and that it is necessary such person should pass over the road, it shall be lawful for such president, superintendent, conductor or ticket master to give such person a written permit to pass free over such road, and such permit may include the wife and children of such poor person. A record of all such permits shall be made by the person giving the same, which shall at all times be open to the inspection of the stockholders, and a return thereof made at the annual meeting.

Sec. 2. It shall be the duty of the conductor on each railroad, immediately after the cars start on their road, to examine the tickets of the passengers, to ascertain if all have purchased tickets, and examine the tickets of all persons entering the cars by the way, and if any person who is not hereby excepted is found who has no ticket, to require such person forthwith to pay the usual fare over such road, or such part of it as the person proposes to travel, and in case of neglect or refusal to pay, it shall be the duty of the conductor to cause the train to be stopped, and the person or persons so neglecting or refusing to pay, to leave the train; and in case of refusal it shall be lawful for said conductor to use such force as may be necessary to remove such person from the train, and the conductor shall have the same power to command assistance in removing such person as sheriffs by law have when serving process, and under the same penalty in case of refusal. Any person refusing to pay the fare, and refusing to leave the trains, as aforesaid, shall be liable to a fine of ten dollars.

Sec. 3. Any conductor who shall refuse to perform the duties required of him by this act, or any president, director, superintendent, ticket master or conductor who shall pass or knowingly allow any person to pass or be carried over their road, or furnish any person with a ticket or pass over their road, in violation of the first section of this act, shall be punished by fine not less than ten dollars nor more than one hundred dollars.

Sec. 4. Every railroad corporation in this State shall, in the month of August in each year, agree upon and fix their rates or tariffs of toll for the transportation of freight and passengers over their road. The toll shall be rated by the mile for each passenger, and by the ton per mile on freight, except timber, lumber, bark and wood, which may be rated by the thousand feet, or by the cord, per

mlia. Such corporation shall, on the first day of September in each year, post up at all the stations and depots on their road, a copy of such rates or tariffs of tolls, and shall cause said copy to remain so posted through the year. They shall also post up a statement of the whole cost of freight per ton, thousand or cord, and the fare of each passenger over their road between the several stations on their own road and other roads for which they assume to execute any agency or joint contract, whether within or without this State. Such corporation shall not for one year after the rates of toll are posted as aforesaid, or until after sixty days notice has been given, charge or receive any higher rates of toll, fare or freight than shall be fixed upon and posted as aforesaid.

Sec. 5. Every railroad corporation in this State shall make and maintain all necessary cattle-guards, cattle passes and farm crossings, for the convenience and safety of the land owners along the line of their road, and in case the corporation and land owner cannot agree upon the place, number or manner in which such guards, passes or crossings should be constructed, the land owner may by petition apply to three disinterested justices of the peace, two of whom shall be of the quorum, neither of whom shall be resident in the same town with the applicant, or who shall have been previously advised with by the petitioners in relation to the matter to be submitted, and who shall notify the parties by giving each at least fifteen days notice in writing of the time and place they will meet to consider such petition, and shall examine and determine the place or places where such passes, guards or farm crossings and the time in which the same shall be constructed, and make a report thereof in writing, and file a copy of their report with the town clerk of the town where said land is situated; and in case the corporation shall refuse or neglect for sixty days after the report is filed as aforesaid, and after the time fixed for building the same by said justices, to construct passes, guards and crossings, agreeably to the report made as aforesaid, they shall be liable to a fine of five hundred dollars, and a fine of one hundred for each month they shall refuse or neglect to construct the same, after the expiration of said sixty days. *Provided*, that the said justices to whom said land owner shall apply as aforesaid shall be selected as follows: one by the land owner, one by the railroad corporation, and the third by the two first, selected as aforesaid; and if said railroad corporation shall refuse to select one of said justices, it shall be the duty of the selectmen of the town in which the land is situated to name the person in behalf of said corporation. *Provided*, however, that the provisions of this section shall not apply in any case where the corporation have settled with the land owner in relation to such guards, passes and farm crossings.

Sec. 6. That whenever any railroad company shall unreasonably neglect or refuse to establish reasonable and proper depots or stopping places for the public accommodation after being thereto requested, the persons aggrieved thereby may by petition represent their said grievance to the Governor, who shall refer the same to the railroad commissioners, and if said commissioners shall after hearing the several parties, be of opinion that such railroad company have unreasonably neglected or refused to establish such depots or reasonable or proper stopping places, they shall in writing declare what such railroad company ought to do in the premises, and fix and order the time when the same shall be done, and make their return to the Secretary of State; and if said company shall neglect or refuse to comply with such order they shall forfeit the sum of one hundred dollars for each and every month's neglect, to any petitioner for such accommodation who may sue for the same. The fees of said commissioners, and other reasonable expenses of the petitioners, shall be taxed by said commissioners, and in cases where they determine that such railroad company have thus neglected and refused to make such necessary accommodation for the public, the same shall be paid by such company, and may be re-

covered in the name of such petitioners by action for money laid out and expended.

Sec. 7. If the life of any person not in the employment of the corporation shall be lost by reason of the negligence or carelessness of the proprietor or proprietors of any railroad, or by the unfitness or gross negligence, or by the carelessness of their servants or agents in this State, such proprietor or proprietors shall be liable to a fine not exceeding five thousand dollars nor less than five hundred dollars, to be recovered by indictment to his use of his executor or administrator of the deceased person, for the benefit of his widow and heirs; one moiety thereof to go to the widow and the other to the children of the deceased; but if there shall be no children, the whole shall go to the widow, and if no widow, to his heirs, according to the law regulating the distribution of intestate personal estates among heirs.

Sec. 8. No contract between two or more railroad corporations for the use of their roads shall be legal or binding on either party unless such contract shall be sanctioned in writing by the railroad commissioners, and approved by the Governor and Council. And in no case shall such contract be for a longer term than five years, and no such use of another road shall be allowed unless by contract in writing; executed by both parties, and a copy filed with the Secretary of State.

Sec. 9. The treasurer and clerk of any corporation in the State, except such whose road is connected with a railroad in some other State by the acts of two or more States, shall reside within this State, and all the books, papers and funds of said corporation, with the foregoing exceptions, shall be kept therein, or shall provide for the payment of all dividends to the stockholders in this State at the place of business of the corporation in this State.

Sec. 10. The directors of every railroad corporation shall from year to year make a report to the Legislature, under oath, of their acts and doings, receipts and expenditures, under the provisions of their charter, which report shall be made in the month of May in each year, and shall contain full information upon the several items hereinafter enumerated, to wit:

[The form of returns prescribed to companies are very similar to those prescribed to the Railroad Companies of New York, and published last week.]

Sec. 11. If any railroad corporation shall violate any of the provisions of this act, or shall permit any such violation, for which violation no mode of punishment is provided, such corporation shall be liable to an action upon the case in the name of any party injured thereby, to recover his damage, and shall also be liable to indictment and fine not exceeding one thousand dollars for each offence. And if any officer, agent or servant of any railroad corporation shall knowingly violate any of the provisions of this act, where no other remedy is provided against such officer, agent or servant, he shall be liable to indictment and fine not exceeding one hundred dollars, according to the nature and aggravation of the offence.

Sec. 12. Each passenger over any railroad shall be entitled to have taken with him by the same as part consideration of the fare paid by him, a reasonable amount of personal baggage, exclusive of specie and bills; *Provided*, that no road shall be required to carry such baggage to an amount valued beyond one hundred dollars without notice being given and extra charges paid for such risk and liability; and such corporation shall be liable for the safe transportation and delivery of all such baggage at the station for which the same was received, or for the payment of the value thereof, if they neglect or refuse to pay for such baggage as aforesaid, on demand, after the expiration of said thirty days.

Sec. 13. Whenever any land may have been or shall be entered upon and taken for the construction of a railroad, and any party shall appear entitled to an estate, right or interest in or charge affecting said land, which was not adjusted by pur-

chase or appraisal thereof at the time of the laying out and construction of said road, in such cases said land, on petition to the railroad commissioners, may be laid out and appraised in the same way and manner as is provided for the original laying out and appraisal of land, and if the road is in operation, it shall not be obstructed in the use of said land after written application has been made to the commissioners to lay out the same, and notice thereof has been served on the landholders, until such appraisal shall be made.

Sec. 14. This act shall take effect and be in force from and after the first day of August (1850).

Convention of the Railroad Companies of Ohio and Indiana.

A convention, composed of nearly all the Railroad Companies, of Ohio and Indiana, embracing some 30 companies, to take measures to secure uniformity of charges and action, in reference to Free passers, Runners, etc. etc., was held at Columbus, Ohio, on the 21st ult. The following recommendations and resolutions, were adopted.

1st. Recommendations, in reference to "mail service and business freight, extra Baggage."

1. *As to Mails and Mail Service.*—That Railway Companies charge, as the lowest remunerative price for one hundred square feet of car room, including a distribution room and conveniences of lights, stove, fuel and fare of route agent, sent once each way daily, thirty-seven and a half cents per mile for each mile run, or \$235 per mile for 313 days. For any additional room, either in the same car or any other car or train, twenty-five cents per mile for each one hundred square feet. The mails to be received and delivered on the railway, at either way or terminal stations; all other expenses to be paid by the Department.

2. *As to Express Freight.*—That express freight, carried on passenger trains, should be charged at the rate of nine cents per ton, per mile; that the iron safe should be rated at four hundred pounds, and charged at the same rate of goods; and that small packages should be collected in a trunk or box at the terminus, and also charged as goods. Messengers should be charged half-price of first class passenger fare.

3. *As to Extra Baggage.*—That ordinary personal baggage, to the amount of eighty pounds for each passenger, should be carried without charge; that in all cases over eighty pounds, the charge should be at a rate of not less than one half cent per one hundred pounds per mile; and that each Railroad Company should limit its liability for baggage to an amount not exceeding one hundred dollars.

The Railway Companies should release themselves, as far as possible, from all responsibility for the transportation of baggage consisting of articles not strictly for the personal use of the passenger carried. Trunks containing goods should be taken as freight or express matter.

2d. Resolutions in reference to Free passers, and half price tickets.

1. *Resolved*, That no Free Passes, or tickets to pass free on any railroad, by granted to and person after the first day of January next, except by a company to its own Directors, Officers, Agents and Employees on the road of such company, and under such rules and regulations as the Directors thereof may establish.

2. *Resolved*, That the carrying of passengers (except children under twelve years of age) on railroads at half fare, or for any other rate below the regular price or fare established for carrying passengers of a similar class, be confined to passengers going to and returning from the regular Annual State Agricultural Fairs, under such regulations as the Superintendents of Roads shall adopt to prevent imposition: *Provided*, that children under five years of age shall pass free under the tickets of their parents or guardians, and that children between five and twelve years of age

shall be charged half price: Provided further, that this resolution shall not prohibit local excursion trains, with reduced fares, at the discretion of the several companies.

3. *Resolved*, That the several companies here represented, require written passes to be issued on their respective roads to every employee of inferior grade, from his superior, stating that such employee is going on the business of the company, for each trip he may so pass; which pass shall be taken up and returned to the proper officers of the company by the conductor, with other passage tickets.

4. *Resolved*, That no free pass will hereafter be issued or renewed to any *Shipper or Forwarder of Freight*, as such.

5. *Resolved*, That from and after the first of January next, no return pass will be issued to any owner or driver of stock; nor will any such owner or driver be passed free on any other train than that which carries his stock.

6. *Resolved*, That no letter of introduction or certificate shall be given to any employee or other person, recommending him to the courtesy of a free pass.

3d. Recommendations as to runners and agents:

1. That the companies represented in convention shall discharge all persons in their employ as agents or runners, by the first day of November next, and discontinue the employment of all persons in such capacity thereafter.

2. That whenever, hereafter, it shall be important to circulate or post bills in any place where two or more companies are interested in so doing, the same, if practicable, shall be done at the joint expense, and under the joint direction of such companies.

3. That all bills or other publications containing official announcements in reference to transportation business, shall be issued with a responsible signature; and that simultaneous with such issue, copies thereof shall be forwarded to the companies interested in such business; and nothing disparaging or derogatory to any other lines of road shall be inserted in such bills or publications.

4. That no employee of any company shall, under any circumstances, be permitted to solicit passengers, under the penalty of immediate dismissal from the employment of such company.

5. That no compensation, except a regular salary, shall be allowed, either directly or indirectly, to any person for the sale of passenger tickets.

The following are the resolutions to be adopted in reference to fares and freight.

Resolved, That the railroad interests here represented will be best promoted by the adoption, as near as practicable, of a rate of fare of not less than two and a half cents per mile for through passengers, transported in cars of the first class; of not less than two cents per mile for through passengers, in cars of the second class; and of not less than one cent per mile for emigrant passengers, when carried in connection with freight trains.

Resolved, That the rates for the transportation of freight, when carried on trains at an average speed not exceeding ten or twelve miles per hour, should not be less than two cents per ton per mile for all heavy and cheap articles in quantities not less than a car load; and not less than three cents per ton per mile, for the same articles in small quantities; not less than four cents per ton per mile, for all light and valuable articles in large quantities; and not less than five cents per ton per mile, for the same articles in small quantities; and not less than twenty-five cents per car per mile, for single deck cars loaded with stock: Provided, that when lines of roads, at certain seasons of the year, are compelled to compete with water communications, such lines may modify their rates accordingly.

Resolved, That the classification of freights shall be the same as that adopted at the Railroad Convention held at the St. Nicholas hotel, New York, August 15, 1854.

Resolved, That for the purpose of placing the emigrant business in the hands of the several Railroad and Steamboat Companies, and shielding the emigrants from imposition, those tickets only which are issued by other Railroad and Steamboat Companies running in connection, shall be received on and after the 1st of December next, and that all tickets issued by individuals after that date shall be rejected.

Resolved, That routes composed of lines, or parts of lines of roads between important points, with a difference in distance over the shortest line not exceeding twenty-five cent., shall be deemed competing routes; that through tickets issued by any of the companies composing the competing routes, shall be honored upon all parts of either of the routes which may be indicated in such tickets; that the rates of fare shall be governed by the parties composing the shortest route; and that all settlements between the companies relating to such tickets shall be made *pro rata*: Provided, that no company composing a portion of any short route shall be required to receive less than a *pro rata* proportion of short route fare.

This rule shall also apply to any two or more routes composed in part of steamboat transportation and settlement of freights as well as of passengers.

Routes composed of lines, or parts of lines of roads between important points, with a difference in distance over the shortest line exceeding twenty-five per cent., may be formed by agreement; but the companies composing such competing routes, shall not transport freight or passengers at less rates than those established by the shortest route.

American Railroad Journal.

Saturday, October 21, 1854.

Cattawissa, Williamsport and Erie Railroad.

This road from Tamagan to Milton, was formally opened for business on the 6th instant. In a few weeks, that portion of the Sunbury and Erie Railroad from Milton to Williamsport will be opened, giving an uninterrupted line between the latter place and Philadelphia.

A Good Move.

The railroad companies of Ohio and Indiana, numbering about 30 in all, recently met in convention, and determined—

- 1st, to charge remunerating rates;
- 2nd, to discontinue entirely the dead-head system;
- 3rd, to discontinue the employment of runners and blowers.

We know a great majority of the companies represented to be thoroughly in earnest. A sufficient penalty is provided for refractory members by an agreement not to ticket over the roads of such.

The above movement will add twenty-five p. ct. to the earnings of railroad companies, and at the same time reduce expenses. When one-half of the cost of a road is represented by a debt, 25 per ct. added to the net receipts, will be equivalent to a fair dividend, on the other half.

The action of the convention is the most important step yet taken in the West toward the improvement of the value of railroad property. It was the first and most obvious step to be taken. The rates of fare were unquestionably much too low. It was seen that the generous sentiment of that portion of the country, which delights in courtesy, was loading the trains with non-paying passengers; and that a noisy blower did not add in the aggregate, a single penny to the receipts of the roads. All these abuses have been reformed.

Others will follow in their train; and we feel an assurance, that, in time, an excellence of management will be reached which will make our railroads what they are capable of being, the most profitable investments in the country.

Earnings of Railroads for September.

The earnings of railroads for September as far as received have been as follows:

Virginia and Tennessee Railroad.

For passenger fare.....	\$9,354 53
For freight and transportation of U. S. Mail.....	12,122 49
Total.....	\$21,477 02
Receipts in Sept. 1853.....	13,157 25

Increase.....\$9,319 77

Terre Haute and Richmond R. R.

The earnings of this road for August and September are as follows:

August, 1854.....	\$20,482 86
" 1853.....	15,425 83
Increase.....	\$5,058 08
September, 1854.....	\$22,239 87
" 1853.....	16,293 13

Increase.....\$5,946 74

Chicago and St. Louis R. R.

The receipts of this road for September were \$119,552, a very gratifying result for a new road.

Baltimore and Ohio R. R.

The revenue of the Baltimore and Ohio Railroad for September was:

	Total for
Main Stem. Wash'n Br'nch. both.	
For pass'gers.....\$62,184 81	\$28,866 23 \$91,051 04
For freight.....246,185 30	9,009 78 255,194 08

Totals..\$308,370 11 \$37,878 01 \$346,248 12

As compared with September, 1853, these receipts show an increase of \$69,069 70 on the main stem, and of \$6,146 98 on the Washington branch, making a total increase of \$75,216 68. The receipts of the year ending Sept. 30 show a net increase of \$1,613,674 over the same period of last year.

New York Central R. R.

The following is a comparative statement of the receipts of the New York Central Railroad during the month of September, 1853 and 1854:

	Passengers.	Freight.	Total.
1854.....	\$375,321 53	\$265,263 75	\$640,585 28
1853.....	371,332 06	217,532 91	588,864 97

Increase...\$3,989 47 \$47,730 84 \$51,720 31

Michigan Southern R. R.

The earnings of the Michigan Southern and Northern Indiana Railroads for September were:

Passengers and Mail.....	\$158,664 09
Freight and Miscellaneous.....	77,775 86

Total.....\$236,439 95
Earnings in Sept., 1853..... 197,520 99

Increase.....\$38,918 96

Galena and Chicago R. R.

The earnings of the Galena and Chicago R. R. for September were over \$150,000.

Indianapolis and Cincinnati R. R.

The earnings of the Indianapolis and Cincinnati Railroad for the week ending Oct. 7th, were \$8,639.

Ohio and Pennsylvania R. R.

The receipts of the Ohio and Pennsylvania Railroad for the month of September, 1854, were \$123,441 59. The estimate for September was only \$95,000.

(For the American Railroad Journal.)
Texas Railroads.

The subject of internal improvement, by means of Railroads in the State of Texas, is just now attracting much public attention, both in this country and in Europe; and it is hoped that the considerations and suggestions that may be found in this memorandum will not prove altogether uninteresting. They shall have the merit of being *reliable* in statement, at any rate, though we have no disposition to deny the *interest* we have in the prosecution of the works to which they specially apply—the Galveston, Houston and Henderson, and the Galveston and Red River Railroads. We are interested in both these enterprises, and object to no scrutiny of our statements that this fact may invite. Those who projected, and those who now sustain and are carrying forward these public works, are intelligent men; and they feel a confidence in the benefits to result from them, reciprocally to themselves and the public, which is easily shown to be fully justifiable. And while in these brief notes we have neither time nor facilities for presenting statistical details, which are so abundantly to be found in existing publications, and which are conclusive in their character, we think we can present sufficient general facts to warrant the conclusion that these railroads afford a better basis, for any credit they may require, than any enterprise ever offered to men of capital and business.

The prodigious territorial extent of the State of Texas is what first attracts the attention of the observer of her place upon the map of our country. With an average width of some 400 miles, and extending westward, from the Sabine river, not less than 800 miles, to El Paso, she is an empire in herself, and possesses, in this respect, a foundation for political greatness and power, upon which the fertility of her soil, the richness, variety and extent of her mineral wealth, and the loveliness and salubrity of her climate, are enabling her to build, with a rapidity and a certainty, without a parallel in the history of the world. By the most intelligent computation, the present population of Texas cannot be less than 500,000,—an increase of more than one hundred per cent. within the past three years. And it need scarcely be suggested that this population is, almost necessarily, from among the most enterprising, energetic and active of the people of the older states of Europe,—men of nerve and of will, and, to a considerable extent of substance, who voluntarily encounter the difficulties, obstacles, embarrassments, perils and discomforts, unavoidable in a *new* State, because they possess the sagacity to discern the "better day" in the immediate future.

The first great necessity of Texas, political, social, economical,—is railroads. To say nothing of progress and development, it is scarcely possible for her to *exist*, as a single state, without them. She must be broken by her own expansion, unless bound together and riveted with *iron*. And though this may be said to be matter interesting only to *herself*, yet, when we consider the vast power for accomplishing beneficial results, which her *united* resources give her, and compare it with the feebleness and inefficiency that would unavoidably flow from a division of those resources, among different and *independent* communities, it is apparent that the territorial integrity of Texas is a

question of interest quite beyond the limits of that noble state. Where power to do good exists in a state,—power to promote the happiness and prosperity of man—the question of dividing, and thereby diminishing, that power, oversteps state lines.

But it is enough here to assume that Texas *must* have railroads. It is enough, because it shows that it is her highest interest to afford every facility and favor to those who propose to aid her efforts to obtain them. Her recent Legislature proves that she appreciates this interest. Of her immense and reliable public domain, she has given 10,240 acres, to the mile, to each of the Railroad Companies in the state, upon certain reasonable condition. These conditions favor feasible enterprises, and only discourage and defeat those which are not demanded.

Beyond question or comparison, the two railroads mentioned in these notes, are, before all others, demanded and required. They are absolute commercial necessities. The State of Texas, the trade of Texas, cannot do without them.—Whatever the condition of the "money market,"—roads *must* be built. The necessity exist, and cannot otherwise be met. Those who know Texas best, will soonest admit the conclusion.

The immense trade now carried on between Galveston and the interior of Texas, (which is rapidly increasing) makes the constructing of railroads from Galveston into the region of country included between the waters of the Colorado and the Sabine, so indispensable, that argument about it is idle. It is simply a question of *time*. With the necessary aid, the work can be accomplished at once, and immense resources at once developed,—without this aid, it *must* be accomplished. The producers and factors of Texas are compelled to build these roads, for their own benefit and production. If she can be helped to do this, sooner than they can do it unaided, they are more than willing to confer the large benefits of the enterprise upon those who help them,—if not, they keep them for themselves. Let us look a moment, with a map of Texas in our hands, at the lines of these roads:

The Galveston, Houston and Henderson Road runs from Galveston to Houston, and thence, in a north easterly direction, to Henderson, near the parallel of 32° where it will connect with the great Pacific Line. The Galveston and Red River Road runs from Houston, in a north-westerly direction, to the "bottom" of the Brazos River, thence, in two directions;—1st. towards Austin the Capital of the state:—2d. along the Brazos Bottom across the Navasoto, to the parallel of 32, at some convenient point for connecting with the Pacific Line; and thence, in a north-easterly course, to the Eastern boundary of the state, near the town of Fulton, there to connect with the "Cairo and Fulton Road," through the state of Arkansas. A glance at the maps of Texas and the Union will demonstrate the grand importance of both these lines. The Galveston, Houston and Henderson Road is something over two hundred miles in length,—the Galveston and Red River, something under five hundred miles. Now, these lines of railroad penetrate the most populous, and, consequently, the most productive portion of Texas. They will afford market facilities to the already large trade of Middle and Eastern Texas, and tend to develop

the almost limitless resources of that region, which are now, to a great extent, undeveloped and unemployed, in consequence of the impossibility of their reaching a market.

The principal productions of Texas up to, and below, the line of 33° are cotton and corn,—productions of the North and the South, suburb fields of which are cultivated, side by side, on and above the very line of the proposed Pacific road. Within the region of country to be opened by the two roads under consideration, there are, undoubtedly, not less than two hundred thousand bales of cotton, now produced, annually. The means by which this cotton is transported to market are the rivers and ox-teams of Texas. The former are *totally unreliable*, at any given period of the year; and the latter transport from 5 to 8 bales, of 500 pounds each, drawn by from five to eight yoke, at the average rate of ten miles per day. Nothing is more manifest than that this condition of things discourages enterprise and production. Neither corn nor cotton can bear such transportation charges, and the inevitable consequence is that industry and enterprise languish and die, even in the finest producing country in the world. It is estimated, after a good deal of careful inquiry, that the absolute loss, on the cotton crop of Texas, for the last year, arising from the want of railroads, through the territory which these roads will penetrate,—the loss resulting from the impossibility of getting the crops seasonably to market, and from the waste, incident to the existing methods of transportation, would pay for a hundred miles of railroad. Of this we entertain no doubt. The effect of these embarrassments, in restraining immigration and repressing production, is obvious. The effect of penetrating by railroad, this rich producing region,—rich in mineral resources,—in stimulating industry by offering it its highest rewards, in stimulating enterprise, by offering it its strongest inducements, can scarcely be over-estimated. Give to Texas railroads, the railroads that *existing* commercial necessities demand, and the *immediate* increase of production, consequent upon the boon, will at once call for a "double track." Throughout, Texas is swelling with productiveness in all the great staples,—in cotton, sugar, corn, wheat and all the cereal grains, potatoes, and in everything that can prove her to be the great producing country of the world,—the "*officina gentium*." All she requires is railroads, and the railroads she most requires are the two that penetrate her interior, from Galveston Bay,—every mile of which will be instantly remunerative.

The immigration into Texas, both by sea and over land, is enormous. It is larger than ordinary observers would venture to believe. This immigration is occasioned by well founded reports of the excellence and cheapness of Texas lands. It comes both from Europe, and from our own country. But, from whatever direction it comes, its starting point, to the interior, to a very large extent, is Galveston. Europeans know no other Texan port;—and, practically, there is no other port. Galveston harbor is the best, on the whole gulf coast, from New Orleans to Vera Cruz. For confirmation of this important fact, we have only to refer to the *Insurance offices*, in New York, Liverpool or London. Ships and cargoes destined for the port of Galveston, are everywhere insured

at a rate some $2\frac{1}{2}$ per cent. less, than if destined for any other port on the Texas coast. This fact is conclusive of the question. Galveston is the New York of Texas. Immigrants and speculators, from over sea, land there, and thence "seek their fortune" in the interior. The existing difficulties in getting into their interior prevent multitudes from attempting it. Build the railroads under consideration, and these difficulties will be removed, immigration will be largely increased, and, in our judgment, the very increase of immigration and speculation would, alone, render them remunerative.

But there is another important thing to be stated,—*Railroads can be built cheaper in Texas, than in any other part of the world.* We assert this very positively, because we have some thirty five miles of road, from Galveston and Houston, towards the interior, now graded and ready for the iron. We therefore speak in this behalf of matters of which we experimentally know the truth. On one hundred and fifty miles now located, from Galveston, towards the interior of Texas, the average grade is less than 7 feet per mile, and the maximum grade is but 12 feet, and that for only two miles, in the whole distance. It may almost be assumed, for the entire lines under notice, that the earth taken from the necessary ditches on each side will form the required road-bed or grade. It will at once be seen, therefore, that the rapidity with which these works can be pushed forward to completion, is mainly measurable by the *means* possessed by the companies who build them.

The indispensable necessity of these roads to the great Pacific Road, already under contract, through Texas, and doubtless soon to be built, can scarcely require a more forcible elucidation than a simple inspection of the map of Texas furnishes. In view of the indisputable fact, that the port of Galveston is the best on the Texan coast, a fact that gives that port a precedence that neither argument nor interest can overthrow, it is apparent that roads penetrating from Galveston to the line of 32° (the line of the Pacific Road), are just as important to the commerce of the world, and as necessary for its accommodation, as the Pacific Road itself. A vast portion of the freight that will seek the Atlantic, on the completion of the Pacific line, will demand the quickest access to the waters of the Atlantic, to find the cheaper method of water transportation. The point where this can be reached, and the only point between San Diego or San Francisco, and New Orleans, is Galveston. Of this there can be no dispute. As we have before suggested, insurance offices supply conclusive evidence in this respect, and to them throughout the world we refer. But, outside of this, Galveston is the port to which a large portion of the immense material required to build the Pacific Railroad must be shipped, and thence transported to the line of that road.

It is idle to waste time in further demonstrating, therefore, how indispensable roads from Galveston to the line of 32° are to the Pacific Company; both as respects the commerce they expect to control, and the economy of construction. The gentlemen holding the contract for that great road perceive and admit it. We need only say they could *afford* to build the lines we refer to, for the benefits they would derive from them; and we

may, perhaps, add, that they would be glad to do so. The ultimate difference in expense to them, would justify a far greater outlay.

Perhaps we might properly stop here. Our purpose, as we have said, does not include the presentation of detailed statistics, going to prove the general statements we have made. We have only desired to present an outline of the intrinsic merits of these enterprises. But we may be permitted to add, a few words illustrative of the comparative advantages of the Texas Roads.

The Illinois Central Railroad, now very near its completion, has been built upon the credit of a donation of 3,840 acres of public land, to the mile. The stock of this road is, at the present moment, above par. The donation is liberal, and the affairs of the road have been judiciously managed, no doubt, and its prosperity is the proper result of this management. But let us look a moment at the relative advantages of this road, and those of the roads to which we refer.

To the Illinois Central Railroad was given 3,840 acres to the mile; to our roads, 10,240 acres, per mile. The principal products of Illinois are corn, wheat, and potatoes. Texas produces these in at least, equal amounts, per acre, and, in addition Cotton and Sugar. The lands of Texas are superior to those of Illinois; they are as good, if not better than any lands on the face of the earth. Texas can raise in perfection all the products of all the zones, except the frigid. Her wheat and corn and cereals, generally, cannot be surpassed in quality, or quantity per acre; Irish, and sweet potatoes are grown in her soil equally well. Texas is immensely richer than Illinois, in mineral wealth, both in variety and extent. There is no possible comparison of the two States, aside, of course, from population, that will not show Texas in the ascendant. And beyond all this, the roads of which we are speaking, receive *nearly three times* more land to the mile than the Illinois Central.—Now let us refer a moment to well known facts.

In 1841, Illinois was bankrupt. Her large debt was owned in Europe, and her resources were quite unequal to the preservation of her credit.—Through the judicious management of the Hon. John Davis, of Massachusetts, then Governor of that State, her credit was revived. Her canal was built, and by the recuperative energy, communicated through the efforts of Mr. Davis, her works of internal improvement, including, of course, the great Illinois Central Railroad, were pushed rapidly forward; and, at this moment, according to the statements of Gov. Matteson, the public debt of that State is nearly "cancelled," and her career of prosperity, thanks to her public works, unimpeded. But look at another fact: before the commencement of the Illinois Central Railroad, land upon its line, especially upon that section of it from Cairo north, known better as "Little Egypt," possessed a mere nominal value, say 10 cents per acre. Since the construction of this road from Cairo, northward, *these lands have been sold* for from five to twenty dollars per acre. The lands we refer to are in the Southern Illinois Bottoms, and were simply *worthless* before the building of the Central Railroad. They are rich in mineral resources, fertile in soil and covered with valuable timber, it is true, but a hundred years of ordinary and unaided increase of population and improvement, could scarcely have raised them to the

value, and the region and State that embraces them to the wealth and prosperity, that the Central Railroad has accomplished in three years.

Again, we learn that the absolute increase of the value of a belt of land, ten miles wide, penetrated by the Chatanooga Road, Tenn., is equal to \$7 50 per acre, or \$96,000 per mile, and that lands in Georgia, contiguous to the line of this road, that could scarcely find purchasers in 1846, at ten or fifteen cents per acre, were sold in 1849, at ten and twenty dollars per acre.—Our authority for these facts (which have so many confirmations in the Railroad history of the country,) is the Report of the President of the Nashville and Chatanooga Road. Apply this reasonable rule of increase to a belt of such a soil as that penetrated by these roads in Texas, of equal width, and it will be seen that the 700 miles, embraced in the charters we refer to, would occasion an increased valuation of more than sixty-seven millions of dollars! A sum, that, large as it is, we believe to be far below what actual results would show. Estimate also the value of the lands, given to the Companies, by Texas, at the lower price named above, (and we believe it would exceed the higher,) and the 700 miles would produce the amount of seventy-one millions six hundred and eighty thousand dollars,—*a sum quite sufficient to construct any three thousand five hundred miles, of the projected Railroads in Texas.*

Compare these ascertained results of the building of the Illinois Central and the Chatanooga roads—compare them fairly and logically, with the results that might fairly and logically be anticipated to follow similar causes in Texas, and we ask no more. Compare soils, productions, resources, climates. Compare the respective wants and exigencies of commerce, demanding Railroad avenues, and facilities. Compare the cheapness and facility of the construction of Railroads.—Compare every point that enters into the question of inducement of enterprise. Compare distances from the Atlantic coast, as respects the interior of Texas and the interior of Illinois, and above all, compare the respective grants of land, per mile, (in the one case less than four thousand acres,) always bearing in mind how triumphantly results, in the case of the Illinois Central Road, have vindicated the wisdom and sagacity of those who projected and carried it forward, and it hardly seems too much to assert, that enterprise never before was offered so wide, so sure and so rich a field of operations, as that presented by the Galveston, Houston and Henderson, and the Galveston and Red River Railroads.

We have already extended these notes beyond the space we proposed; and yet we are very sensible that what we have set forth, in a general way, of the claims of these Texas Roads, is far from doing them justice. Much, very much, more could be said to illustrate and prove the comprehensive statements we have made. But, as intimated in the beginning, this would be quite beyond our present purpose, which is already answered.—Otherwise we comment upon the fact that the grants, privileges, franchises, given to the Illinois Central Road, are on the express condition, that the company shall pay into the Treasury of the Illinois, semi-annually, *seven per cent* of the gross earnings of the road,—a condition which is not imposed in any charter granted by Texas; we

might refer to the fact, that the early period of harvesting in Texas, will enable the wheat growers of that State, with Railroad facilities, to place wheat in the New York markets, at least *six weeks sooner* than it can be placed there from any other wheat growing portion of the Union; we might refer to the perennial pastures of Texas, which make that State the finest grazing and stock-growing country in the world; we might specify the various mineral deposits which enrich her soil, and in short, there is scarcely one particular in the range of agencies, for developing and increasing wealth, and promoting human welfare and prosperity, that we could not show to appertain in a surpassing degree, to Texas, and the enterprise we are advocating. But, as we have said, such details, interesting and important as they are, quite exceed our present purpose; and we therefore submit these imperfect memoranda, simply asking for them that consideration, to which, for their truthfulness, they are certainly entitled.

JAMES W. BURKE & Co.,

New York Oct. 13, 1854.

of Texas.

Above we give an interesting communication upon the subject of railroads in Texas.

Without being responsible for the statements as to which are the *most* important projects, we fully concur in the opinion expressed as to the value and importance of railroads to the State, and that several extensive lines, if immediately constructed, would find a lucrative support. One-half of Texas is undoubtedly as fine a country as the sun shines upon; and though thinly settled, the bulk and value of its productions are enormous, and are increasing with astonishing rapidity.

Texas possesses advantages over any other State, in the greater *variety* of her productions. There is no State in which the *sugar, cotton* and *cereal* zones lie, in such close proximity. This is owing not so much to difference in *latitude*, as to the different degrees of elevation of the several portions of the State above tide water. In westerly, and north-westerly directions from the Gulf, the surface rises very regularly at the rate of from 5 to 12 and 15 feet to the mile. The ascent near the coast is the most gradual. It is upon the *lowest* belt, circling the Gulf, that the *sugar* lands are found. The width of the sugar belt does not, we think, exceed fifty miles. The cotton zone, or belt comes next, enclosing the sugar lands, and is some two hundred miles wide. Outside of this, the elevation of the country is such as to give a climate admirably adapted to the growth of the *cereals*, particularly wheat and Indian corn. The finest wheat grown in the United States is produced in Texas; the finest we mean for southern markets, for the reason that flour made from it is not liable to *sour* in any latitude. The third belt, or zone, and an extensive range of country outside of it, is admirably adapted to the raising of *stock*, which is already, and must continue to be, one of the great staples of the State.

From the best existing sources of information, we should judge that *one-half* of the area of the State is composed of the very best quality of *sugar, cotton, corn* and *grazing* lands. Including the latter the available portion of the State may exceed one-half, though it will be many years before lands suitable *only* for the raising of stock will be of much value. We put down one-half of

the State as *waste* land. A considerable portion of its surface is elevated at least 5,000 feet above the sea, and lies spread out in vast and sterile plains, without wood or water. Over the fertile portion of the State equal to an area of nearly 120,000 square miles, or 76,000,000 of acres, is scattered a population of 400,000, or 450,000 souls, which is increasing, we should think, at the rate of 50,000 annually. It is the sparseness of the population in not allowing concert of action, that is the great obstacle to the construction of railroads. To make up for this as far as possible, the State has adopted the policy of devoting the *unsold* lands to the encouragement of these works, and has chartered companies with a length of line, which, if built, would call for about 50,000,000 acres, or *twice* the amount of *good* lands remaining unsold. A large number of the companies chartered will never build their roads, which will leave for such few as are constructed, a valuable donation. The grants are equal to about 10,000 acres to every mile of road built. We have no means of determining, at present, what these lands are worth. This would depend upon their *location*, and no company has yet so far complied with the terms of their grants, as to entitle them to locate them. If the lands could be selected upon the line of a *road*, the construction of it would add very largely to their value, which might in such case go far toward defraying the cost of its construction. But if they have to be taken at a distance from settlements, or from lines of public improvement, they may not amount to much. As it is, too great a value must not be put upon them, as their value is yet in a great measure, hypothetical.

Whatever may be the value of these lands, we think the railroad interest of the State would have been better off without them. We think the result so far proves this. The people of the State placing a high estimate upon them, and believing that they will secure the construction of the roads to which they are granted, put little money in their projects, and take little personal interest in them. They consequently of necessity go into the hands of parties who have no other object than to make money; some by speculating upon the charters, and privileges they confer, and others by *building* the roads. The manner in which it will be attempted to make money, will be to issue a large amount of fictitious stock and securities, and sell them at the best price that can be had. There is great danger, therefore, that most of the projects of the State will degenerate into mere speculations, which will found to be incompatible with *success*: that the roads will not be built: that the people, disgusted by failure, will refuse to have anything to do with such works till they have outgrown the recollections of their misfortunes and mistakes. It is well known that the early attempts at the construction of railroads throughout the south-western States proved disastrous failures. In commencing anew the construction of these works, the first and most difficult impediment to overcome, was the remembrance on the part of the people of their previous ill success. A double work had to be done:—first to disabuse the public mind of prejudicious, or incorrect views, before an opening could be made for the implanting of correct ones. We can appeal to every influential railroad man within the district

named for a confirmation of our statements. Now we do not wish to see the people of Texas go through an experience similar to that of their southern neighbors, by which they will lose some 8 or 10 years of precious time, which in this age cannot be measured by *money*. We want they should know that *lands* will *not* build their roads: that it is better that they should not: that unless roads are built in obedience to proper principles, they will prove an injury, instead of a blessing. They should bear in mind that if they get persons who have no interest in the result, to build their roads, they may be made to cost twice as much as they should, and as transportation is taxed in proportion to the cost of the medium of conveyance, in a very short time they may pay twice the first cost of a road in excessive charges. They ought on no account to place beyond their control the right and power to regulate the cost of the transportation of their products, as they are doing; neither ought they to lose the opportunity of educating themselves up to the capacity of constructing and managing railroads. Without such education these works will not be worth half as much as *with*; and in no other way can such an education be gained, but by making the people interested in the success of their roads, as *owners* of them. A man's heart will go after his money. We know that this will be considered is a roundabout way of talking, but we have seen enough of Railroad to know, that our views are correct; that no people will take an interest in a railroad in which their money is not invested, and that a railroad badly managed is often worse than none at all. Till we see the people of Texas taking the lead in the construction of their roads, owning, controlling, and putting their own money into them, we neither expect to see many roads constructed, nor those that are built, amount to much. We never knew a railroad to be well managed, when a considerable portion of the means for its construction were not furnished by the people on its line, and where such people did not control its management. Look at the Vermont Central, Ogdensburgh, Long Island and others which it may not be so popular to mention. The people of Texas must resolutely take their projects into their own hands; own and control them, and by good management, make them the instruments of the development of the resources of the State, instead of allowing them to become the football of speculation. The course we suggest will be worth more than the railroads themselves in the degree of self-respect, confidence and capacity which it will bring to the people of the State; a real independence, fitting them not only to construct and manage railroads, but any kindred work which may be demanded.

While making these remarks, we are convinced that in no part of the country would railroads pay better than in Texas. Nowhere can they be built for less money. No State is richer in those products which can afford to pay a high freight. No element of success, save the want of a suitable disposition on the part of the people of the State to take hold of their schemes in the right spirit, and in a proper manner, is lacking. But this is a most important element. They must put their shoulder to the wheel before calling upon others. They should retain control of the roads as a matter of self-interest and self-respect. As soon as

they show a disposition to help themselves, they will find a plenty to second their efforts. So long as they hold back, they must not expect parties who have less interest in their roads, to take the initiative.

Journal of Railroad Law.

MEASURE OF DAMAGES IN CASE OF A REPUDIATED BUILDING CONTRACT.

The following case was tried last week before Judge Woodruff, in our Court of Common Pleas.

James B. Greene vs. The Second Avenue Railroad Company.—This was an action to recover for a breach of contract in relation to the construction of the foundation and works for the Second Avenue Railroad from Chatham Square through to the upper terminus. The plaintiff alleged that in February, 1853, he made a proposal to the defendants to construct the work at \$1 per square yard, between Grand and Walker streets, amounting to some 1,633 square yards. Before this work was completed another contract, as the plaintiff alleged, was entered into by the parties, for the plaintiff to do the whole work on the entire route, amounting to 36,400 square yards, at 81 cents per yard. On this contract the plaintiff went on and performed the work on the road up to Twenty-fifth street, when he was stopped by the agents of the Company. The plaintiff alleged that inasmuch as the lower part of the road was the more expensive and laborious, his loss by the act of the defendants amounted to \$5,000, which sum he claimed to recover. In defence it was urged that the plaintiff had been paid for all the work he had completed, and that he had given receipts for the amount so paid, and that there was no contract existing for him to perform the whole of the work required by the defendants. The plaintiff proved that his estimates and specifications were for the entire route, to the upper terminus, and that his proposals were duly entered, were accepted by the Board of Directors; and that on the faith of the contract the plaintiff entered upon the performance of the work up to Twenty-eighth street. Also, that the work was received and approved by the company. On the part of the defence it appeared by the evidence of certain books of the Company, that the plaintiff had rendered bills and receipts, but the latter on examination proved not to be in full, but only for the work done. It was, however, contended that no contract had been entered into, as the resolution to give the contract to the plaintiff was not passed by the Board nor entered on the books, but the latter were not produced to prove this fact.

The Court charged that the Jury must look at the receipts to judge whether the two down town blocks were merged in the larger contracts; if so, the plaintiff's receipts were in full, and he could not recover the difference. Secondly, but for the work not performed the plaintiff was entitled to recover if the Jury should be of opinion the contract had been fully proven. In that case the plaintiff would be entitled to recover the difference between the contract price per square yard, and the sum it would have cost the plaintiff to lay down the concrete under the following rule: Take the market value of the material necessary for the work, of the labor on procuring the materials for the road, and further add, the time and labor necessary to do the work therewith, allowing also something for delays and contingencies, breakages, &c. The Jury must act on this as men of business, and use their good sense in coming to an equitable decision. The Jury after a short consultation found a verdict for the plaintiff; damages, \$3,000. For the plaintiff, James B. Silkman, and H. B. Cowles and Jones. For defendant, Schell, Slosson and Hutchins.

BRIDGING RIVERS.

A case likely to prove extremely important to all States in which there is or will be occasion to bridge navigable streams, is pending in the U. S. Circuit Court of Pennsylvania. It is an applica-

tion for an injunction against the Penrose Bridge, over the Schuylkill. The Circuit Judge has delivered an opinion expressing his strong conviction that the injunction should be granted. The District Judge, constituting the other member of that Court, has delivered a dissenting opinion. The case will be re-argued, and, if the conflict of opinion continues, carried up to the Supreme Court.

A WRONG TRIBUNAL.

In the case of *Illius vs. H. Redfield*, Collector of the Port of New York, and the *Harlem Railroad Company*, pending in the Superior Court, a motion was made to dissolve the injunction which was granted about a week ago, prohibiting the Collector from delivering to the Harlem Railroad Company 3,000 tons of Railroad iron. This iron had been imported by the plaintiffs, and the Schuylers had contracted to buy it by giving their notes secured by certain Railroad bonds, which they, however, had wholly failed to furnish. Relying on those delusive representations, the plaintiffs delivered to R. Schuyler duplicate bills of lading, and those had been transferred by the latter to the Harlem Railroad Company. The Court held that revenue officers, acting as such were only amenable to the United States Courts, and therefore dissolved the injunction.

BY-LAWS OF A CORPORATION—CLOTHING.

The case of *Williams vs. the Great Western Railway Company*, decided during the present summer, illustrates the necessity of framing the by-laws of corporations in conformity to their Charters; and also affixes to the term, "clothing," a meaning wide enough to include all the usual requisites of the toilet.

Cincinnati and Marietta Railroad.

The first division of this road, from its junction with the Little Miami, to Chillicothe, a distance of 70 miles, and 93 from Cincinnati, was opened to the public on the 4th instant.

We are glad to chronicle the steady progress, even in these hard times for railroads, of this important work. Every mile of railroad completed reduces the burden pressing upon the capital and industry of the country. The completion of a road may be regarded as placing the amount expended in its construction beyond the contingency of loss. To complete a road is to a certain extent, to achieve success. It is a gratifying evidence of the ability and perseverance of our people, that they are steadily pushing forward the works they have commenced, while they are showing their good sense by commencing few new ones, where the field has been already sufficiently occupied.

The completion of the first division of the Cincinnati and Marietta Railroad at once brings into profitable use the amount of money expended on the construction of the first 70 miles. This division would pay without carrying it any further. It has now reached the heart of the Scioto Valley, and the centre of an important trade. The trade and travel between Cincinnati and Chillicothe has been compelled to make the long detour of some hundreds of miles by way of the Ohio River, and Canal, requiring days for a journey is now reduced to a few hours, and less than one hundred miles in distance.

In a short time another division of the road will be opened to the south-western coal field of the State, from which Cincinnati draws its supply of this indispensable article. The road will then

have a business derived from one of the best agricultural, and the richest mineral portion of the State.

Cincinnati has thus far depended upon the Ohio River for her supplies of coal. The uncertain navigation of this river has proved a serious inconvenience, in leaving not only the people without fuel for the ordinary uses of life, but all the various branches of industry of that great manufacturing city without motive power. This inconvenience the above road will shortly remedy, by affording a constant supply independent of all the vicissitudes of the seasons.

We understand from good authority that the road is being rapidly pushed forward to the Ohio River at Marietta, and to Wheeling. When completed to both of these points, it will form the trunk to Cincinnati, both of the Baltimore and Philadelphia lines. The Pennsylvania Company has shown their appreciation of the value and importance of the Cincinnati and Marietta Railroad, by subscribing \$750,000 to its capital. The former Company regards Wheeling as one of its western termini equally with Pittsburgh. The former city is also the terminus of the Baltimore and Ohio Railroad. But Baltimore, for the purpose of securing the shortest route to Cincinnati, is building a railroad (the *North Western*) to strike the Ohio opposite Marietta. Both Philadelphia and Baltimore are aiding very largely in the construction of great lines of which the Cincinnati and Marietta Road forms an important link and look upon this as a part of their best route West.

The above connection will secure to the Marietta Road a good share of the business travel between the seaboard and the Great Valley. Locally, it occupies a position of the first importance, being the only line running east and west through the southern portion of the State, cutting off the great bend of the Ohio, and being sufficiently far removed from this river, and from any other road not to have its local business competed for. It will prove a most valuable work for the section traversed, and for the commerce of the country; and we see no reason why it will not prove productive upon its entire cost.

The road when completed will have a line of about 275 miles, and will cost we should judge something like \$30,000 per mile. It very fortunately commenced with a much larger than the usual amount of means provided for such a work in the work. We think that one-half of its cost will be provided by local stock subscription; a considerable portion of this being made up of County and municipal bonds, which, being Ohio securities, sell readily at high prices. We presume the subscription of the Pennsylvania Railroad will net the above Company *par*. The completion of the above road will go far toward supplying southern Ohio, almost the only portion of the State now in want of such, with all it needs in the shape of railroad facilities. When this, and the roads in progress are completed, we hope and expect, as we have already remarked in previous numbers of the JOURNAL, to see a disposition to let "well enough" alone, and cultivate and improve what they have, instead of reaching to what may be useless in itself, and ruinous to what they have. The Marietta Company is fortunately freed from the fear or danger of competition, but we want to see this matter of competition regulated by a

higher principle than the mere cost or inconvenience of constructing a rival line.

Ogdensburgh Railroad.

It was reported yesterday that the Directors of the Ogdensburgh Railroad had decided not to pay the October interest coupons of either the first or second mortgage 7 per cent. bonds, but to appropriate the net earnings of the year, about \$200,000 over everything, towards improving the property and liquidating floating debts. This course is undoubtedly good policy, although it will cause disappointment to the bondholders. Probably neither the Ogdensburgh, Central nor Rutland corporations will pay out any interest money for one year to come; but the coupons will be good against these companies, and be paid at no very remote period.—*Boston Courier of the 28th ult.*

The above announcement contains a moral which should not be unheeded by parties proposing, or engaging in the construction of railroads, the success of which rests upon an hypothesis of doubtful probability, instead of a business which can be shown to exist upon its line. For many years past the leading men of Boston have been laboring under the hallucination, that by means of railroads they would render their city the depot, and point of export of the produce of the country. The Western Railroad was the first experiment to accomplish such result. The road proved an acknowledged failure as far as its *through* business was concerned; but, luckily, turned out to be a profitable work from a very large *local* traffic. The result in this case, however, failed to correct the idea which led to its construction. That it did not accomplish its objects, was attributed to the fault of the route selected, rather than to any fallacy in the idea; consequently a new one was proposed, striking the St. Lawrence some 420 miles from Boston, and more than twice the length of the Western Road. By a sort of inversion of logic the cost of transportation was to be diminished by increasing the distance to be traversed. The new route was constructed, the money was furnished by the people of Boston, who had neither the time nor opportunity of looking after its expenditure. A very considerable portion was wasted, as is always the case, with illegitimate projects, or such as are of doubtful expediency. Singular as it may seem, just in proportion as a road is not called for by any existing want, it is certain to be mismanaged. The moment an individual or company feel that they are engaged in an unprofitable business, or are losing ground, do they become prodigal and indifferent to their duties. The conviction that one is acting upon sound premises, can only give an assurance of success, and summon to its aid whatever is calculated to secure it. Without such a conviction, a man loses both his *morale* and capacity. We think this will explain most of the instances of the failure of our public works, will go far to account for the enormous cost and wretched management of the above roads, particularly the Central and Rutland, and of the train of disasters which seem to have been inseparable from them from their very commencement.

The financial condition of the above roads is what might have been expected, considering their objects, and the manner in which the means were provided for their construction. The transportation of western produce, if carried at all, had to be

done at a *loss*. The local business was not adequate to the support even of a low cost road. They were consequently run without profit, till the depreciation of way and rolling stock has become so great, as no longer to be neglected. But by mismanagement, and want of success, the companies have entirely ruined their credit, and the only way in which the necessary repairs and improvements can be made, is by taking for these objects the money belonging to mortgagees. Necessity, which knows no law, may justify the act; but what cannot be helped in the above cases, should be a beacon to warn others of danger. Where it cannot be shown that the *local*, or probable *through* business of a road, will not pay a fair return upon its cost, it is never safe to undertake its construction. It will almost invariably turn out that *hypotheses* set up will not be realized, and that the road will be mismanaged from beginning to end. A moment consideration will convince any reflecting person that any other result is impossible, while all experience shows no successful one.

We presume all the above roads have or can earn sufficient sums to pay the interest on their funded debts. But certain improvements are necessary, such as the mortgagees would make, if the roads came into their hands. The low state of the credit of the companies, prevents their borrowing. They ask a loan from their creditors, to the amount of the interest on their debts.

It will be borne in mind that the above are *New England* roads (the Ogdensburgh being a part of the New England system). We shall discuss in an early number the causes of the want of success of the agricultural roads in this part of the country. In the mean time we are happy to state that the management of those now referred to, has recently undergone a radical reform, and that there is really a better hope of their success than at any previous period of their history.

Stonington Railroad.

The earnings of this road for the year ending 21st of August, 1854, have been as follows, viz;

Passengers.....	\$175,439 04
Freight.....	102,027 63
Mail service and rents.....	5,246 75
Interest.....	6,401 13

Total.....	\$289,115 55
Balance Aug. 31, 1853, viz., in cash..	4,373 98

Total.....\$293,489 53

The expenditures have been:

General expenses, &c.,.....	\$78,133 43
Repairs.....	31,759 78
Equipages, &c.....	11,655 16
Interest.....	29,838 50
Ext'n Road Bonds pd. during the year.	5,000 00
Six per cent. Mortgage Bd's. purchased by the Company, \$13,000.....	\$12,042 33
Dividends.....	105,204 42
Balance.....	16,855 91

Since the last annual statement, the debt of the Company has been reduced \$30,000. The entire indebtedness of the Company on the 31st August, 1855, was as follows:

Six per cent mortgage Bonds.....	\$348,700 00
Purchased, and now held by the Company.....	97,000 00

Total.....\$445,700 00

The company has no floating debt, and no construction book open.

Statement Showing the Length, Cost, Receipts, Expenses and Dividends of the Railroads in New Hampshire, on the 1st Day of June, 1853.

Name of road.	Length, miles.	Cost.	Receipts.	Expenses.	Dividend.
Northern Railroad, incl. Franklin and Bristol.....	81 3/4	\$2,768,400 00	\$292,762 25	\$138,768 62	5 per cent.
Boston, Concord and Montreal.....	92 1/2	2,400,000 00	141,204 48	68,880 80	5 per cent.
Cheshire.....	43	1,892,000 00	133,314 52	102,749 50	4 per cent.
Atlantic and St. Lawrence.....	52	1,560,000 00			
Concord.....	34 1/2	1,485,000 00	305,805 66	138,908 67	8 "
Sullivan.....	24 1/2	1,193,251 27	60,210 64	29,586 06	none.
Portsmouth and Concord.....	47	1,054,507 31	25,732 79	15,832 35	none.
Boston and Maine.....	37 3/4	979,060 00	169,759 00	111,204 00	7 per cent.
Manchester and Lawrence.....	24	850,000 00	120,000 00	60,000 00	7 "
Cocheco.....	28 1/4	757,367 38	34,228 11	21,349 74	none.
Merrimack and Connecticut River.....	65 1/4	1,169,999 26	72,588 54	37,755 09	"
Eastern.....	16 3/4	509,309 62	98,265 00	62,931 49	6 1/2 per cent.
Ashuel.....	23	483,807 17	30,000 00	10,917 00	6 per cent.
Wilton.....	15 1/2	225,000 00	25,857 27	10,917 00	8 "
Nashua and Lowell.....	6 1/2	262,557 77	12,122 26	86,008 05	6 per cent.
Concord Valley.....	14 1/2	922,452 37	16,096 74	15,076 19	8 "
Great Falls and Conway.....	12 1/2	211,797 87	11,798 80	6,361 97	none.
Peterborough and Shilley.....	10 1/2	210,000 00	4,649 52	3,520 00	"
Worcester and Nashua.....	6 1/2	116,092 16	13,523 40	14,658 01	4 1/2 per cent.
	624 3/4	18,346,086 64	\$1,768,455 98	\$949,567 54 net income.	\$818,888 44

*This road is leased to the Northern Railroad.

Ohio and Mississippi Railroad.

The Ohio and Mississippi Railroad is opened from St. Louis, to the point of junction with Illinois Central Railroad, a distance of 59 miles. The Central will soon be completed to the junction, 117 miles from Cairo; so that by the first of Jan'y there will probably be a railroad connection between this point and St. Louis, a distance of 176 miles. The balance of the line of the Ohio and Mississippi Railroad to Vincennes will not be completed much of any before July 1st, 1855.

The locomotive used on the occasion of opening the above road, was from the manufactory of Messrs. Palm & Robertson of St. Louis.

New York and Erie R. R.

On and after Wednesday, Sept. 20th, and until further notice

PASSENGER TRAINS

will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a.m. for Buffalo.
DUNKIRK EXPRESS, at 6 a.m. for Dunkirk.
MAIL, at 8½ a.m. for Dunkirk and Buffalo, and intermediate stations.
ROCKLAND PASSENGER, at 3½ p.m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAT PASSENGER, at 4 p.m., for Otisville, and intermediate stations.
NIGHT EXPRESS, at 5½ p.m. for Dunkirk and Buffalo.
EMIGRANT, at 6 p.m., for Dunkirk and Buffalo and intermediate stations.
 On Sundays only one Express Train—at 5½ p.m.
 These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.
 D. C. McCALLUM, General Sup't.

For Sale.

A STATIONARY Engine having cylinders 13 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
 Paterson, New Jersey,
 or 74 Broadway, New York.

Jun 14 29 tf.]

Rensselaer Polytechnic Institute.

DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS,—including railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the Annual Register, giving full information respecting the Institute, apply to

R. FRANKLIN GREENE, Director, R. P. I.
 Troy, New York.

32 8m

Lowell Machine Works.

ALDRICH & CALVERT (late ALDRICH, TYNO & Co.) manufacture and furnish to order, at short notice,

Machinists' Tools

of various description and with the latest improvements; as engine lathes, with swing 16, 20, 24, 28, 30, 36, 48 inches, up to 7½ feet, and bed made to turn any desirable length; planing machines, to plane 3½, 6, 8, 10, 12, 15, 20, 22 feet long, and 18, 24, 28, 30, 40, 48, 60 inches square; also hand lathes, compound planers, slotting and shaping machines, vertical drills, bolt cutters, and many other tools used in railroad, repair and machine shops.

Lowell, Mass., Jan'y 1, 1853.

41.1y

American Railway Guide.

BEST ADVERTISING MEDIUM EXTANT.

Circulation 28,000 Monthly.

WITH A NEW RAILWAY MAP.

THE "AMERICAN RAILWAY GUIDE" is the only work of the kind which contains information for all sections of the United States and Canada; and in every respect is a complete and accurate hand-book for the traveller. Besides the routes, distances, fares, and the times of starting and arrival of trains, the work furnishes in a condensed form, or in notes, a great amount of information respecting Steamboats, Canals and Stage Routes, connecting with the several Railroads. Issued on the first of every month, and is always thoroughly corrected from official information to date of publication. Six copies \$1 per annum; single copies 12½ cents; agents supplied at \$8 per 100 copies.

Published by DINSMORE & CO., No. 9 Spruce-st., N. Y.

THOS. M. CASH,

PHILADELPHIA RAILWAY AGENCY,

FOR THE PURCHASE OF ALL ARTICLES

required by

RAILROAD COMPANIES

ON COMMISSION.

Office No. 80 South Fourth Street, near Walnut,

PHILADELPHIA.

REFERENCES.

RICHARD NORRIS & SON, Locomotive Builders, Philadelphia.
 WM. D. LEWIS, Esq., Pres't Cataraugus R.R. Co., "
 CHARLES H. FISHER, Esq., "
 JOHN CALDWELL, Esq., Pres't S. Carolina R.R. Co., Charleston.
 J. PINCKNEY AUGER, Esq., Pres't N. East'n R.R. Co., "

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

Buffalo Machinery Depot.

BUFFALO, N. Y.

H. C. BROWN, Sup't. J. W. HOOKER, Proprietor.
 I AM prepared to furnish and will keep constantly on hand from the best manufacturers a full stock of Machinists' Tools for railroad and other shops; such as Engine and Hand Lathes, Large Driver Lathes, Car Wheel Boring Mills, Power and Hand Planers, Drill Presses, Punch and Shears, Axle Lathes, Power Wheel Presses, Bolt Cutters, &c.
 J. W. HOOKER, Buffalo, N. Y.

Fire! Fire! Fire!

Preserve your books in one of Duryee & Forsyth's celebrated Fire King safes. They are perfectly secure and excel in finish.

J. W. HOOKER, Agent, Buffalo.
 Railroad Track, Suspension and Depot Scales, Dormant, and Portable Warehouse Scales, Trucks, Baggage Barrows, and Manifest Presses.

Buffalo Machinery Depot.

General Agency for Rochester Scale Works.

H. C. BROWN, Sup't. J. W. HOOKER.

Port Morris Manufactory.

WESTCHESTER COUNTY, N. Y.

ARE prepared to execute orders for all kinds railroad work and have on hand the approved Railroad Box with the raised Journal; also Car Couplings (Lewie's Patent) and Hatchet Wrenches from \$5 to \$10 each.

All orders punctually attended to by addressing the above.

M. C. BAKER.

N.B. Long Iron Planing done on reasonable terms.
 37 6m. 108 Front street, up stairs.

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,
 RICHARD W. TYSON,
 No. 26 South Charles st.

Baltimore, July 1st, 1854.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,
 RICHARD W. TYSON.

Baltimore, July 1st, 1854.

33 3m

Notice of Copartnership.

MR. PETER MARIE, heretofore of the firm of DECOUPET & CO., has this day formed a copartnership with Mr. RUDOLPH KANZ, (for many years with the banking house of Messrs. L. Von Hoffman & Co.) under the firm of MARIE & KANZ, at No. 27 William street.

Their attention will be devoted to the purchase and sale on Commission of Stocks, Bonds and Foreign Exchange, and to the negotiation of Business Paper.
 New York, 1st September 1854.

36 8t

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to EDW. BECH & KUNHARDT, 62 Beaver st., or, A. TOWAR, Agent Poughkeepsie Iron Works, Poughkeepsie, N. Y.

23 tf

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
 M. of M., Baltimore and Ohio R. R. Co.,
 or, BRIDGES & BRO.,
 64 Courtland st., New York.

19 tf

Machinists' Tools.

SHRIVER & BROTHERS,
 Cumberland, Maryland,

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools. These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others repairing first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address SHRIVER & BROTHERS, Fulton Works, Cumberland, Maryland.

August 19th, 1854.

32 6m

Low Moor Iron.

A FULL ASSORTMENT of this superior brand, which for strength, soundness, and uniform quality, is confidently recommended for all work requiring good iron, consisting of Round, Square, and Flat sizes of all dimensions, constantly in store and for sale in lots to suit purchasers, by

W. BAILEY LANG & CO.,
 64 Cliff street.

Notice to Contractors.



CHIEF ENGINEER'S OFFICE,
 Columbus, Ga., Sept. 5th, 1854.

SEALED PROPOSALS, will be received by the undersigned at this office until the 1st day of December, for the clearing, graduation, Track-Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 180 miles.—The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work 5½ miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two rivers will be crossed with the common pile bridging, with Truss Pivot draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The country is healthy, with no swamps after leaving the Tensas River; from Mobile to the river (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third (⅓) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common stock of the Road, and relying upon the earnings of the same for dividends; the balance (⅓) to be paid in the (.08) per cent. Convertible Bonds of the Company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus, Ga., Mobile, Ala., or in N. Y., at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding (¼) the amount of the contract, for the timely and faithful completion of the same.

22½ miles of the Road from Girard west will be open for business the first of November, and 62 miles nine months thereafter. It is the intention to have the entire line of 245 miles open for business early in 1858.

8t.37.

GEO. S. RUNEY.

New York Locomotive Works, JERSEY CITY.

THIS COMPANY are prepared to execute with despatch, orders for Locomotive Engines, Tenders, and Railroad Machinery generally, embracing the latest improvements. The works being located near the water, and in the immediate vicinity of the New Jersey and Erie Railroads offers great conveniences for shipping.

BREESE, KNEELAND & CO.,
 Proprietors,
 38 Exchange Place.

E. P. GOULD, Superintendent,
 late Master Machinist on Hudson River R. R.

[40 tf]

500 TONS No. 1 Gleggarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

N. B.—The above Iron constantly imported

32 tf

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF ERIE CANAL—EASTERN DIVISION.

Scaled proposals will be received at the Engineer's Office in the city of Utica, until Monday, the 9th day of October next, at 10 o'clock, A. M., for the following described work:—

Description of Work.	Amount of Penalty in Bond.	Time of Completion.
Section No. 16.....	\$7,500.....	1st April, 1856.
" 36.....	3,300.....	"
" 37.....	5,200.....	"
" 57.....	7,000.....	" 1857.
" 58.....	9,500.....	"
" 59.....	6,000.....	"
" 60.....	6,000.....	"
" 61.....	6,000.....	"
" 62.....	12,400.....	"
" 75.....	5,100.....	" 1856.
" 78.....	5,800.....	"
" 131.....	5,300.....	" 1857.
" 132.....	5,800.....	"
" 133.....	6,000.....	"
Lock No. 34.....	5,600.....	1st July, 1856.
" 38.....	6,000.....	"
" 40.....	6,200.....	"
" 42.....	6,200.....	"
Waste Weir on Sec. 120.	1,200.....	1st April, 1855.
Bridge Abutments on Sections 15, 16 and 17.....	2,500.....	1st July, 1855.
Bridge Abutments on Sections 36 and 37.....	1,300.....	"
Bridge Abutments on Sections 57, 58 and 59 and Main street Bridge at Fultonville.	3,000.....	" 1855.
Bridge Abutments on Sections 60, 61 and 62.....	2,000.....	"
Bridge Abutments on Sections 75 and 78.....	1,500.....	" 1855.
Bridge Abutments on Sections 111, 115, 121 and 122.....	2,000.....	"
Bridge Abutments on Sections 132 and 133.	900.....	" 1856.
Culverts on Sections 59 and 60.....	1,200.....	"
Culverts on Section 75.	600.....	1st April, 1856.
Culvert at Van Vranken's on Section 18..	300.....	1st July, 1855.
Culverts on Sections 112 and 121.....	1,100.....	1st April, 1856.
Culverts on Sections 131, 132 and 133.....	1,200.....	1st July, 1856.
Completion of Phillips' Aqueduct.....	1,800.....	1st April, 1855.

BLACK RIVER CANAL.

Scaled proposals will be received at the Engineer's Office at Lyons Falls until Thursday, the 12th day of October next, at 10 o'clock A. M., for the following described work:—

Reservoir at Wood Hull Lake.....	\$3,700.....	1st Oct., 1855.
Reservoir at North Branch Lake.....	5,500.....	"
11 Lock Houses from Boonville to Lyons Falls.....	1,000.....	"
Sluices around Locks No's. 84 to 89 inclus.	2,900.....	1st Aug. 1855.

MIDDLE DIVISION.

Scaled proposals will be received at the Engineer's Office in the city of Syracuse until Saturday, the 14th day of October next at 10 o'clock in the forenoon for the following described work:—

Section No. 195.....	\$6,400.....	1st April, 1857.
" 196.....	4,300.....	"
" 197.....	7,200.....	"
Centre Port Aqueduct..	3,400.....	"
Port Byron do.....	7,000.....	"

OSWEGO CANAL.

Scaled proposals will be received at the En-

gineer's Office in the village of Fulton until Monday, the 16th day of October next, at 10 o'clock A. M., for the following described work:—

Section No. 3 below Salina.....	\$4,000.....	Ap'l 15th, 1857.
Section No. 4 below Salina.....	7,400.....	"
Part of Sections 14 and 15, Gascon Rapids....	12,700.....	"
Part of Sections 16 and 17, above Phoenix....	6,400.....	"
Part of Sections 17 and 18, above Phoenix....	7,700.....	"
Part of Sections 22 and 23, Morseman level..	6,500.....	"
Section 27 at Fulton...	6,000.....	"

CAYUGA AND SENECA CANAL.

Scaled proposals will be received at the Engineer's Office in the village of Seneca Falls until Tuesday, the 17th day of October next, at 10 o'clock A. M., for the following described work:—

Section No. 9.....	\$7,200.....	1st April, 1856.
" 10.....	8,500.....	"
Dam and Guard Gate on Section 10.....	5,600.....	"
Culverts on Sections 1 to 5 inclusive.....	2,200.....	"
Road and Farm Bridge Abutments on Sections 1, 4 and 10.....	2,300.....	"

ENLARGEMENT OF ERIE CANAL—WESTERN DIVISION.

Scaled proposals will be received at the Engineer's Office, in the village of Albion until Wednesday, the 18th day of October next, at 10 o'clock A. M. for the following described work, between Lockport and Rochester:—

Section 276, with penalty in bond of....	\$9,000.
" 277, " " " " " " " " " " " " " " " "	6,700.
" 278, " " " " " " " " " " " " " " " "	7,000.
" 279, " " " " " " " " " " " " " " " "	7,600.
" 280, " " " " " " " " " " " " " " " "	8,400.
" 281, " " " " " " " " " " " " " " " "	9,200.
" 282, " " " " " " " " " " " " " " " "	5,700.
" 283, " " " " " " " " " " " " " " " "	4,100.
" 316, " " " " " " " " " " " " " " " "	6,600.
" 317, " " " " " " " " " " " " " " " "	6,500.
" 318, " " " " " " " " " " " " " " " "	9,400.
" 319, " " " " " " " " " " " " " " " "	9,300.
" 320, " " " " " " " " " " " " " " " "	9,200.
" 322, " " " " " " " " " " " " " " " "	10,100.
" 323, " " " " " " " " " " " " " " " "	8,000.
" 324, " " " " " " " " " " " " " " " "	7,700.
" 325, " " " " " " " " " " " " " " " "	7,100.
" 326, " " " " " " " " " " " " " " " "	9,400.
" 327, " " " " " " " " " " " " " " " "	7,600.
" 328, " " " " " " " " " " " " " " " "	8,800.
" 329, " " " " " " " " " " " " " " " "	9,700.
" 330, " " " " " " " " " " " " " " " "	13,000.
" 331, " " " " " " " " " " " " " " " "	8,500.
" 332, " " " " " " " " " " " " " " " "	8,500.
" 333, " " " " " " " " " " " " " " " "	12,200.
" 334, " " " " " " " " " " " " " " " "	13,000.
" 335, " " " " " " " " " " " " " " " "	8,000.
" 336, " " " " " " " " " " " " " " " "	6,000.

Bridge Abutments on Sections 276 to 283, inclusive.....	3,600.
Bridge Abutments on Sections 316 to 329, inclusive.....	7,300.
Bridge Abutments on Sections 330 to 336, inclusive.....	5,400.
Culverts on Sections 276 to 283 inclusive.....	6,200.
" 316 to 320 " " " " " " " " " " " " " " " "	5,500.
" 322 to 329 " " " " " " " " " " " " " " " "	8,000.
" 330 to 336 " " " " " " " " " " " " " " " "	4,000.
" 306 " " " " " " " " " " " " " " " "	1,000.
Waste Weir on Section 330.....	500.

Iron superstructure of Genesee st. Bridge, Buff..... 1,500.

The superstructure of Genesee street Bridge and the Culvert on Section 306 to be completed by the 1st day of April, 1855, and the remainder of the above work by April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and

every kind of work; and no proposition not thus defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, Sept. 13th, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT,
CORNELIUS GARDINIER,) Canal Comm'rs
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

STATE OF NEW YORK, SECRETARY'S OFFICE, ALBANY, AUGUST 10, 1854. To the Sheriff of the County of New York.—Sir: Notice is hereby given, that at the General Election to be held in this State on Tuesday succeeding the first Monday of November next, the following officers are to be elected, to wit:

A Governor, in the place of Horatio Seymour;
A Lieutenant Governor, in the place of Sanford E. Church;

A Canal Commissioner, in the place of Henry Fitzhugh; and

An Inspector of State Prisons, in the place of Henry Storms;

All whose terms of office will expire on the last day of December next.

A Representative in the Thirty-Fourth Congress of the United States, for the Third Congressional District, composed of the First, Second, Third, Fifth and Eighth Wards in the City of New York; for the Fourth District, composed of the Fourth, Sixth, Tenth and Fourteenth Wards of the City of New York; for the Fifth District, composed of the Seventh and Thirteenth Wards in New York; and the City of Williamsburg, in Kings County; for the Sixth District, composed of the Eleventh, Fifteenth and Seventeenth Wards in New York; for the Seventh District, composed of the Ninth, Sixteenth and Twentieth Wards in New York; and for the Eighth District, composed of the Twelfth, Eighteenth and Nineteenth Wards in New York.

County officers also to be elected for said County:—

Sixteen Members of Assembly;

A Surrogate, in the place of Alexander W. Bradford;

A Recorder in the place of Francis R. Tillou;

A City Judge, in the place of Welcome R. Beobe;

A Mayor, in the place of Jacob A. Westervelt;

A Register, in the place of Garret Dyckman;

A Commissioner of the Streets and Lamps, in the place of George G. Glasier, who was appointed to fill a vacancy caused by the resignation of Henry Arcularius;

A Police Justice, for the Second District, in the place of Daniel W. Clarke, who was appointed to fill a vacancy caused by the death of John M'Grath;

Two Governors of the Alms House, in the place of Gustavus A. Conover and William Pinkney, appointed to fill vacancies;

A District Attorney, in the place of Lorenzo B. Shepard, who was appointed to fill a vacancy occasioned by the death of Nathaniel B. Blunt;

A Civil Justice and a Police Justice, for the Seventh Judicial District, composed of the Twelfth, Nineteenth and Twenty second Wards;

A Police Justice for the Eighth Judicial District, composed of the Sixteenth and Twentieth Wards.

Yours, respectfully,

E. W. LEAVENWORTH,
Secretary of State.

SHERIFF'S OFFICE,

New York, August 14, 1854.

The above is published pursuant to the notice of the Secretary of State, and the requirements of the statute in such case made and provided.

JOHN ORSER,

Sheriff of the City and County of New York.

All the public newspapers in the County will publish the above once in each week until the election, and then hand in their bills for advertising the same, so that they may be laid before the Board of Supervisors, and passed for payment. See Revised Statutes, volume 1, chapter 6, title 3, article 3d, part 1st, page 140.

JOHN ORSER, Sheriff.

Sept. 1, 1854.

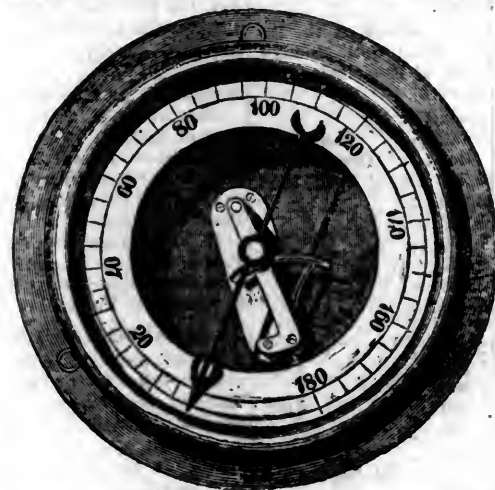
Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per lineal yard. For sale by

THEODORE DEHON,
26½ Broadway,
New York.

Contracts made as above for Rails delivered at English or American ports at lowest rates.

ASHCROFT STEAM GAUGE.



AMERICAN
STEAM GAUGE
COMPANY.
SOLE PROPRIETORS
AND
MANUFACTURERS
FOR THE
UNITED STATES.

THE COMPANY
ARE PREPARED TO
EXECUTE
ORDERS FOR THEIR
GAUGE
AT THEIR MANUFACTORY
No. 4 Charlestown Street,
BOSTON, MASS.

THIS Company purchased of Mr. E. H. Ashcroft the Patent for the above Gauge in February last, and they presume there is no necessity of stating the benefit of this celebrated Gauge, which has obtained so much repute throughout the Country during the last three years, as a matter of economy and safety for Railroads, Stationary Boilers and Steamers its equal has never been discovered. The Company also purchased of Mr. Ashcroft the Patent for the Fountain Moreau or India Rubber Gauge of which the Eastman, Lowe and German Gauge are considered by them to be infringements. They will furnish the India Rubber Gauge if desired, although they think it cannot be depended upon.

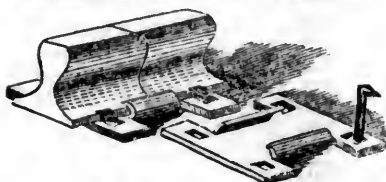
41 ly



LOCOMOTIVE TYERS made from one bar, and Low Moor Bar Iron of every description, Boiler Plates, Rivets, and Car Nails, English Iron Wire, Telegraph Wire, &c., for sale at the manufacturer's prices, by W. BAILEY LANG & CO., 54 Church st., New York, and 9 Liberty Square, Boston, sole agents in America to the Low Moor Iron Company.

42t

RAILROAD SPIKES.



WROUGHT IRON

Chairs and Fastenings.

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.

The best quality of Refined Iron is used, and all orders filled with despatch.

J. HOPKINSON SMITH,
No. 25 South Charles str.

Please direct the name in full.
Baltimore, July 1st, 1854.

33 tr

SEPTIMUS NORRIS,

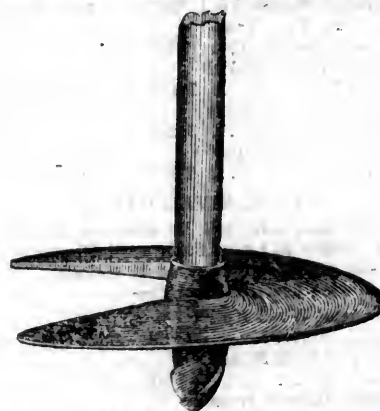
CIVIL, MECHANICAL & CONSULTING ENGINEER.

OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his New Patent Boiler for burning Anthracite Coal; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Sumner st., Philadelphia.

Screw Pile Foundations.



ALEXANDER MITCHELL'S

Patent Iron Screw Pile,

FOR obtaining permanent foundations on Rivers, Morasses, and Quicksands, for Railway Bridges, Viaducts, Depots, Wharves, &c.

I. W. F. LEWIS, C. E.

Agent in the United States,
No. 39 South 5th street, PHILADELPHIA.

NUGENT'S COLLEGE

OF

ENGINEERS AND MECHANICS,

Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 43.]

SATURDAY, OCTOBER 28, 1854.

[WHOLE No. 967, VOL. XXVII.

MR. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

Syracuse and Binghamton Railroad.....	673
Hudson River Railroad.....	674
New York and New Haven Railroad.....	675
Journal of Railroad Law.....	678
English Railways.....	679
Why State and City Securities are so low.....	681
Lowell Machine Shop.....	681
Sacramento Valley Railroad.....	681
New York and Erie Railroad.....	682
Dauphin and Susquehanna Railroad.....	682
Michigan Central Railroad.....	684
Railroads in Vermont.....	683
Cincinnati and Chicago Railroad.....	688
Earnings of Railroads for September.....	683
Lake Erie, Wabash and St. Louis Railroad.....	684

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, October 28, 1854.

Syracuse and Binghamton Railroad.

The 18th and 19th of the present month were devoted to a formal opening of this road to the public. We joined the excursion party which passed over the road from Binghamton to Syracuse on the 19th instant, and are thus enabled to give not only an account of the opening, but a description of the road, and its route.

The name indicates the points united by the Syracuse and Binghamton Railroad, but not the connections formed, nor their importance. Syracuse is one of the largest and most prosperous towns in the Central and Western New York; the great seat of the manufacture of salt, and contains a population of about 30,000 souls. Binghamton is a thriving town in the Susquehanna Valley, with a population of about 10,000, a large portion of which have been added since the opening of the New York and Erie Railroad. About 60 miles south of this town commence the coal fields of Pennsylvania, with which it is united by a railroad (the Delaware, Lackawanna and Western). This road now supplies the Valley of the Susquehanna with coal, and as far as Syracuse is concerned, the coal fields are practically reached at Binghamton. As this place is connected with New

York, and is speedily to be with Philadelphia and Baltimore, the above road opens to Syracuse, access to all these points, and secures to it all the advantages of a connection with them all. Syracuse as it will be known, is on the great Central Railroad, which has double line to Rochester, and also a railroad to Oswego, the most important American port on Lake Ontario.

Independent of the railroad connections formed, the Syracuse and Binghamton Railroad connects the two great geographical divisions of the western prolongation of the State,—the great Susquehanna Valley which lies for 150 miles upon its southern border, with the great plain that skirts the southern shore of Lake Ontario. The elevation of the Susquehanna Valley is about 800 feet above the sea, of Syracuse about 500. Between them, the dividing ridge reaches an elevation of about 1,200 feet above the sea. These two great vallies, or perhaps more correctly speaking, *plateaux*, are traversed by the Erie and Central Railroads, respectively, and in them are found the business and commercial centres of the western part of the State.

The objects of the Syracuse and Binghamton Railroad may be said to be three-fold: To open a new route between Binghamton and New York;—to open an outlet to market for the country traversed;—and connect Syracuse with the Pennsylvania coal fields.

Perhaps the most important of these objects, at any rate the one most readily appreciated at a distance, is the latter. Syracuse, as already stated, is the great seat of the manufacture of salt in New York. This is mostly produced by *evaporation*, by artificial means; and for this purpose it is estimated that at least 300,000 cords of wood, valued at four dollars the cord, are consumed annually. The constantly increasing high price paid for fuel is seriously reducing the profits of the manufacture, which would in time have to be abandoned, unless some less expensive fuel could be used. The evaporative effect of coal is estimated at 2½ times greater than the best kind of wood, and as by means of the above road, the former can be delivered at the salt works, at the price, per ton, now paid for a cord of wood, the saving effected will at once be understood; and as the supply can always be made to equal the demand,

the above road is a most important element in calculating the future growth of that city.

But immediately below Syracuse is Oswego, the most important port of Lake Ontario, the great entrepot of the Canadian trade, to be immensely augmented by the recent treaty of reciprocity. The tendency of the trade of the Upper Lakes is steadily toward Oswego, from its greater proximity to tide water, and the shorter extent of canal navigation to reach it. The shipments, eastward from Oswego, the past year, were equal to 7,000,000 bushels of wheat; 4,000,000 do. of corn, and 120,000,000 feet of lumber. The carriage of these immense bulks, gives employment to a vast commercial marine, a very considerable portion of which is made up of *propellers*. The vessels which bring this freight to Oswego return mostly in *ballast*, from the lack of *up* freights. Coal is just the article wanted for *up* freights, as well as for motive power for the steam marine of the Lakes. As it is well known that Canada is entirely destitute of coal formations, as well as the greater part of the country lying immediately upon the Upper Lakes. There is no doubt that 2 or 300,000 tons of coal would find a ready market at Oswego as soon as this amount could be supplied. It is well known too that Oswego possesses in an immense water power, great facilities for manufacturing, which is now chiefly confined to the manufacture of flour. The capacity of the mills in operation are equal to about 8,000 barrels per day. Taking both Syracuse and Oswego, it is easy to see that the road which is to supply these cities with coal, which must be the Syracuse and Binghamton, from its location, and the directness of its line, will have a business which alone would justify its construction.

If Syracuse and Oswego are to be supplied from the coal fields of Pennsylvania with fuel, over the Syracuse and Binghamton Railroad, it is easy to see that the same road will be in admirable position to do a heavy *return* business for which the exports of Oswego will afford abundant material. The coal trains may return loaded with western products, nearly as cheaply as empty. With suitable provisions for forwarding freight from the coal mines to New York, the northern trains may always count upon a full load in both directions; reducing in this manner the cost of

transportation, and increasing at the same time the profits of the road.

Near the northern terminus of the road are inexhaustible deposits of *gypsum*, for which a very extensive market exists, upon the line of the road, in the Susquehanna Valley, and northern Pennsylvania, all of which are destitute of this article of almost indispensable use in agriculture. A large income is anticipated from the carriage of this article.

The next great object of the road, and one perhaps of equal importance as the preceding, is its *local* business. It is well known that one of the sections of the State unaccommodated by any suitable public highway, was that portion of it between Cayuga Lake and the Chenango Canal. Its topography, not admitting the construction of a canal, it was not comprehended within the State scheme, which embraced canals only. For some years past a railroad was proposed, but one great inducement was lacking—access to the coal fields, which was only till recently supplied by the opening of the Delaware, Lackawanna and Western. This being secured, the above road was immediately commenced, though sufficient inducements undoubtedly existed for its construction in the business of its route.

From Binghamton the road follows up the Valley of the Chenango to its point of forking with the Tiogonoga, the western branch of which it pursues, to the summit, 14 miles south of Syracuse. Upon the Chenango, the valley is wide, beautiful, and well cultivated. Upon leaving the Chenango, the immediate valley of the Tiogonoga becomes more contracted, though the hills that inclose it are composed of excellent soil, and are well cultivated. On approaching Cortland County the road emerges upon the elevated plateau which occupies the central portion of the State, and which, on the line of the above road, we have never seen excelled, either in excellence of soil, culture, or beauty of scenery in any part of the United States. We do not believe that a better country of equal area, can be found in the United States. The whole line of the road runs through an admirable farming country, and through a succession of thriving villages, which, taken together would, we believe, supply to the road a remunerating traffic. If such a country cannot, no country in the United States can. The road has an abundant area for such local business which cannot be interfered with by any proposed or practicable work. A road to accommodate the same territory must follow the immediate route of the one constructed, which is so occupied upon several portions of its line as to preclude the construction of any rival line.

The Syracuse & Binghamton Road will undoubtedly command a fair share of the *through* travel between Syracuse and Oswego, and of the Central, and Western part of the State, and the City of New York. It offers as short a route between that City and Syracuse, as the Central, and we cannot imagine a more attractive one. Upon the opening of the lower division of the Delaware, Lackawanna and Western, it will form a part of a route some 30 miles shorter than the Central.

The construction of the above road was commenced a little less than two years since, and has consequently been built within a period of two years. The route is a favorable one as may be

inferred from the cost of the road, though upon some portions of the line, there is much heavy work. It is admirably constructed, and is well ballasted throughout; an abundant supply of material being fortunately met with upon almost every section. The road from this fact, and for the reason that there is but a small amount of bridging upon it, will be very easily kept up. It is well equipped, and by the first day of January next, will be in position to do a very large business.

Its cost up to the present time is about \$1,800,000; or \$22,000 per mile. Some additions to this sum will undoubtedly be needed, but with an increase of \$3,000 per mile, which will carry the total aggregate to \$2,000,000. We should say, the road will be able to earn \$500,000, without any increase of its construction account, one-half of which sum surely ought to go to profits. We should think the road would earn for one year commencing January 1st, 1855, \$300,000, at a cost for operating, not exceeding 40 per cent.

We refer particularly to the matter of the cost of the road, because we do not believe a road was ever constructed in the United States involving an equal amount of work, with so small an expenditure. We can point to no other road, which under the circumstances, has cost so small a sum. One reason for this is in the fact that the means for construction were furnished by the people upon its line. The whole amount of stock paid in is not far from \$850,000, divided among nearly 2,000 stockholders. It is therefore emphatically a *people's* road. The stockholders furnished the amount necessary for graduation, masonry, &c., &c., as fast as wanted, so that the company have at no time been compelled to make sacrifices to raise money. It was seen that the road would be a good thing, and no efforts were spared to make it so. The direction which embraces the richest and most influential men that could be found upon the line of the road, is composed of practical men, and who embodying the general sentiment in favor of the work, served it with the same zeal and assiduity they would bestow upon their own business, and without any charge, or compensation. The result was that the road could not have been built at less cost, had it been a private, or individual enterprise, as one of the directors assured, and of which the cost of the road is full proof. The south portion of the line presents few difficulties, but the Syracuse portion of it a very serious one. The engineer who preceded Mr. Gilbert, reported that the summit could not be crossed without a grade of 70 feet to the mile. This report led to a delay in the construction of the road, which was not commenced till after. Mr. Gilbert took charge of it. The total ascent from Syracuse to the summit in a distance of 14 miles, is a little more than 700 feet. This ascent is now brought into one plane, having an uniform inclination of 52 feet to the mile. To distribute the grade equally throughout the whole distance was a problem of no easy accomplishment, as the work shows. The wonder to us is, how it could be done at so slight a cost.

We are more particular to refer to the manner in which this road has been built, for the reason that it contrasts so strongly with the course usually pursued, and of the sacrifices submitted to; sacrifices which are too apt to overload our roads

with fictitious capital, and which, from the demoralizing influence which improvident conduct is sure to exert, unfits those who submit to them, for the proper superintendence of the operations of their road.

The opening was of course the occasion of general rejoicing on the part of the entire community interested. The excursion train numbered 27 long passenger cars, gaily decorated, and containing, we should think, about 2,000 people. At any considerable station the common joy was testified by a plentiful consumption of gunpowder, ringing of bells, &c., &c. At Cortland, midway between Binghamton and Syracuse, an excellent lunch, prepared by the ladies, was served up. At Homer, a very pleasant episode occurred in the shape of the *presentation* by the ladies of that place of an elegant and massive silver pitcher, to the chief engineer of the road, W. B. Gilbert, Esq. At Syracuse, a sumptuous dinner was served up at the St. Charles Hotel, to the company and invited guests, of which some 150 partook. At the dinner, toasts and speeches appropriate to such occasions were given. In the course of the evening several very interesting statements were made by a number of the directors, particularly by the President, Mr. Stevens, and Messrs. Lawrence and Murray, illustrative of the history and progress of the work, the position of the Company's finances, (which were stated to be in a favorable condition, the Company having sufficient assets to meet all its floating liabilities,) &c. &c. Honorable mention was made by several of the directors of the services rendered by Mr. Gilbert, the chief engineer, not only in his official, but in other capacities. Of his capacity as an engineer the road is sufficient evidence.

Both days passed off without the slightest accident, the great cause of all mischief, intoxicating drinks forming no part of the entertainment. The excursion party separated, highly delighted with the result, while the satisfaction of the direction was largely increased by the conviction which is the common reward of those, who in serving themselves, confer an equal advantage upon their neighbors, and who are actuated by a higher aim than the mere personal gain.

Hudson River Railroad.

This company have made a new issue of Bonds to the amount of \$2,000,000, secured by a third mortgage on their road. The previous funded debt of the company is as follows:

1st Mortgage Bonds	\$4,000,000
2nd " "	2,000,000
Convertible " "	2,000,000
	<hr/>
	\$8,000,000

The second mortgage bonds are due in 1860, and the convertible in 1867. The new mortgage provides for a further issue to the amount of \$4,000,000, to take the place of the *convertibles*, under certain conditions, and of the second Mortgage Bonds. The new issue is for 30 years. Of the whole amount, \$1,000,000 is to pay off the floating debt, amounting to \$902,840, and an equal sum for such additional improvements as the road may require. The new issue is offered to the *stockholders* at 80 cents on the dollar.

The circular of the company offering the Bonds, states that up to the present time the income of

the road has been *insufficient* to meet the interest upon the indebtedness of the company.

The earnings for the year ending Sept. 30th, 1854, were.....\$1,753,986
Expenses.....1,300,000

Net earnings.....\$453,986
Interest on funded and floating debt, say \$630,000.

The earnings for 1855 are estimated at \$2,200,000; expenses \$1,300,000 leaving, \$900,000, for interest and dividend, equal to 7 per cent. on a funded debt of \$9,000,000, and nearly 6 per cent. on the stock.

The statement put forth certainly does not, in these times, invite the public to a very attractive feast. But as the Bonds are offered to the *stockholders*, it may be that they, being well satisfied of their value, are indifferent as to what the *public* think. But we think that this is not a proper explanation of the *manner* in which this new loan is presented. This company belong to the *old foggy* school, and take particular delight in seizing hold of the *butt* end of the log, when they might have thrown that upon the public, taking the lightest end themselves. To say that a road, which has been opened for three years has not earned interest upon its debt, is very frank; but without attempting to account for such deficit, certainly evinces more courage than judgment. The company *expect* to do better for the future, but is this expectation more reasonable than such as have been previously disappointed. We think the company on coming before the public, should have attempted to have shown *why* success has not yet been fully realized, and *why* the future may realize what the past has failed to do. Now, whatever the Company think of the Hudson River Road, of its position and prospects, we are satisfied that the *public* know next to nothing about them. Hence the low price of the stock, and the necessity which forces the company to offer their bonds at 80 cents on the dollar. We have never seen the first attempt to place this project properly before the public. We have never seen a report calculated to throw the least light upon the merits of this work, or the causes of its apparent want of success. The inferences naturally to be drawn from the meagre statements made from time to time, are, that the directors themselves were uncertain as to the future, or incapable of estimating their present position. They consequently have not been able to enlarge the area of the friends and supporters of the road; the burdens resulting from the construction of which still rest upon the original shoulders. Now if the owners of the Hudson River Railroad are desirous of continuing to be the owners of it, and to become the purchasers of the *new* issue of Bonds, *then* we certainly have no wish to criticize them. But if they would like to have the *public* lend a helping hand, then we think the better policy would have been to have educated the public up to the *merits* of the road, to have secured such cooperation. We think that on appearing before it for money, the public should have been informed "that when the Hudson River Railroad was first opened, it found its business in possession of the river steamers, which moved at the rate of 20 miles the hour, a speed equal to the average speed of most of our roads, and affording to the traveller nearly all the luxuries and conveniences

of a private residence;—that to secure this business was as much more difficult task than to retain it, as the storming of a castle is more difficult than its defense. The Hudson River Railroad had to reverse the ordinary method pursued by other companies, of adapting their service to the amount of business offering; increasing such service in proportion to the gradual increase of such business,—by performing the greatest amount of service, displaying the greatest vigor and capacity, securing the highest efficiency to the road, and making the same time and running the same number of trains to accommodate a business yielding \$1,000,000, as one yielding \$2,500,000." No impression could be made upon the *ordinary* mode of travelling, but by showing, by extraordinary contrast, the superior advantages of the railroad. Any *ordinary* demonstration would have been equivalent to failure. No road commands even the appropriate business of its route, the first, or second year of its operation. It was inevitable that the Hudson River Road, under the circumstances, would have to be run, if not at a loss, without profit. The success of the road was not to be measured, by the amount of *net* profits, for the first, second, or third year, but upon the ability of the road to command, in opposition to steamers, the business of its *route*. In this contest after years of arduous struggle the road has been so far successful, that it is seen what the result *must* be,—that the road will, in time, carry the travel between New York and Albany. This being admitted, or proved, renders success certain. The past, therefore, is no criterion for the future, except so far as the past indicates what the future is to be, which it has done. Now we think that the public should have been made to know what is *peculiar* in the case of the Hudson River Railroad. We think too, if the managers of this road had ordinary sagacity, they would lose no opportunity of making its position fully understood; but we presume they belong to that class of tacticians who prefer to *lose* a battle in obedience to certain rules sanctioned by tradition, than to *win* one in violation of them.

The company offer at the present time only \$1,000,000 of bonds, at 80, making a sacrifice in the outset of \$200,000. This sum put out on compound interest would produce at the maturity of the bonds, nearly \$1,600,000, a sum sufficient, not only to pay off the loan, but to leave \$600,000 in the company's treasury. Now it strikes us that had the company taken the appropriate means to render the merits of their project thoroughly understood, and appreciated, and had set apart \$200,000, now proposed to be sacrificed in discounts, as a sinking fund the new loan might have been sold at, or nearly, *par*. The difference in the result is the making of \$1,600,000, or losing such a sum. It is by such results that the soundness of a particular course or policy is to be measured; and measured by such, we ask if the Hudson River Company have not remained long enough in their *shell*, if it would not have been for their advantage to have *sunned* themselves a little in the popular air, and to have educated the public up to a competent idea of the value and resources of their great work, instead of maintaining a stolid silence which by some is attributed to distrust, and others, to incapacity.

We cannot understand the necessity of placing

the bonds of the company at so low a figure. It will be answered we presume, that other securities are selling as low; consequently the Hudson River must follow suit. Now if the securities offered are *good*, they are worth *par*, and would command it in a short time. The company are only aggravating their condition, and that of other railroads, by offering their securities at ruinously low rates. The convertible bonds sold at 90. The company now offer a *third* mortgage bonds at 80, ten per cent. less, though they may take precedence of the former. The company in this way take the first and most effective step toward discrediting their own securities, and of increasing that distrust which is now pressing so heavily upon the railroad interest. A sinking fund of only \$100,000 would have produced in 30 years, \$800,000, nearly equal to the entire amount of the loan, and with it, the bonds would have sold much more readily at 90 than at 80, without it; showing what sacrifices are submitted to for the want of a little forethought. Such mistakes, by *such* a company as the Hudson River are the more culpable, for the reason that the high financial position of its managers causes them to be taken as examples for imitation. But as already shown, men may be too wise for their day and generation, which estimate measures only by *results*.

New York and New Haven Railroad.

Below we give the opinion of Hon. C. P. Kirkland, that the New York and New Haven Railroad Company are liable for the over issues of stock, by its late transfer agent, Mr. Schuyler.

My opinion has been requested by parties interested, on the subject of the liability of the New Haven Railroad Company for the stock issued by Robert Schuyler, in excess of the capital authorized by the Act incorporating the Company. I do not use the term "fraudulently" issued:—that term is applicable only as between Schuyler and the Company; as between the company and the honest holders of the stock thus issued, it has no application, practically or legally, in fact, or in law.

In investigating this matter, it is quite as necessary to ascertain what is *not*, as what *is* the question. The question is *not* as to the *power* of the Company or any of its agents to issue stock beyond the amount allowed by the Act of Incorporation. On this point, there cannot be two opinions; neither the Company nor its agents have or had any such powers: this proposition is elementary;—it is on all hands conceded—it never has been, it never will be disputed by any judicial tribunal, or by any lawyer. As was well said by the Courts of Pennsylvania, in pronouncing judgement in the case of the Bank of Kentucky *ag't* the Schuylkill Bank, "were this point of any *practical* value in the case, the decision would be in favor of the defendants; but it is *not*."

The real and only question in the case arises under the law of principal and agent.

How far, to what extent, is a principal liable for the acts of the agent?

Do corporations in this respect, differ from natural persons? Are they subject to a different rule? These and these only, are the questions in this case.

It becomes necessary, first, to ascertain the facts and circumstances in reference to Schuyler's agency for the Company, the nature, extent, "scope" of that agency; the position of Schuyler relatively to the company; the duties, the power confided to him; the aspect in which they held him out to the world; fortunately on this subject there is no dispute or doubt. We have the highest and most satisfactory evidence in an authentic and conclusive shape; namely, in the Report of the Board of Directors, made to the Stockholders

at their meeting in New York on the 3d of October, instant. In that document it is stated that "Robert Schuyler was appointed President of the Company on the 19th day of May, 1846, and by successive and uninterrupted elections, held the office up to the third day of July last;" that while President of the Company, he was its chief executive officer, exercising the principal powers of the corporation, enjoying the full confidence of the Company and of the Directors";—"that a meeting of the Stockholders in November 1849, the following Resolution was unanimously passed: *Resolved, That the Stockholders have entire confidence in the President and Board of Directors, believing them to have executed the important trust committed to them, not only with zeal and fidelity, but with high intelligence.*"

"Mr. Schuyler was also the Transfer Agent of the Company from the commencement of its operations:—the principal part of its business was transacted in the city of New York; its offices were practically there, its principal stock account was kept there, and Mr. Schuyler when acting in that capacity (i. e. of Transfer Agent) exercised the office and duty usually entrusted to the highest officers of all such corporations. The provisions for the transfer of shares in New York are such as obtained generally in that city, except the greater security that the Transfer Agent was a Director and President of the Company, possessing its unlimited confidence and that of the Stockholders, and was not a mere clerk or agent employed at a salary."—It appears also from the paper annexed to the report, and forming a part of it, "That he was appointed Transfer Agent in New York, by virtue of the express authority contained in the act of incorporation, permitting the Stock to be transferred at such places as the by-laws of the company should direct; that he was furnished with blank certificates of Stock, and that all the certificates issued by Schuyler, (as well as those admitted to be valid as those claimed to be invalid,) were signed in the same manner, with the name of R. Schuyler Transfer Agent, it having been the uniform course of the Company to affix no names to the certificates, other than that of the Transfer Agent at the place where the transfer was made."

Schuyler was thus presented to the public as a Director and the President of the Company, as its Transfer Agent in New York, exercising the office and duty usually entrusted to the highest officers of such Companies, and as possessing its unlimited confidence, and as exercising his Transfer Agency at the place where the offices of the Company practically were, and where its principal stock account was kept.

It is quite unnecessary to enquire what the "office and duty" of this Transfer Agent were as between himself and his principals, the Railroad Company; such an enquiry would be irrelevant and useless. He doubtless owed them "certain duties" and so far as they were concerned, he could not properly execute his office without performing those "duties,"—for instance, he was bound to them to keep accurate accounts, not issue new scrip until the surrender of an equivalent amount of old scrip, to see that all transfers were duly entered and the like. But all this is wholly immaterial here;—what we have to do with, in this inquiry, is the business of this Transfer Agent, so far as the public are concerned; what were his "office and duty" so far as related to them. On this point there cannot I apprehend be any difficulty or doubt.—His business simply was to sign, as Transfer Agent and to deliver and thus to issue certificates of stock. By the very terms of his appointment and the nature of his office, this was what he was to do, and all he was to do in regard to the public; this was, and necessarily must be the extent of his transactions, so far as third parties were concerned. The Company by this his appointment invested him with plenary power in this respect; among other things they from the very nature of the appointment, and from the necessity of the case, gave him full power, as Transfer Agent, to issue certificates to himself, as an individual, or to the firm of R. & G. L. Schuyler, and such certi-

ficates when issued had all the *indicia* of genuineness which any certificates had, and no more badges or marks of fraud than certificates issued to others. As we have seen, the Company had entrusted him with their blank certificates, they had given him the power to exercise the office and duty usually confided to the highest officer of such a corporation; they had solemnly and publicly, in November 1849, announced to the world his "fidelity"—his fitness for the trust; and to give to the public what may well be said to have been absolute and entire reliance on him as the transfer agent, they had appointed him a Director and also President of the Company, so that that public could plainly see that his power was not committed—as it usually is, and generally must be—to "a clerk or agent employed at a salary." It would be difficult for ingenuity to devise a state of things better calculated to lull the public into security, and to inspire them with entire confidence as to the issues of Stock by Schuyler, as Transfer Agent than that which was contrived and adopted by this Company, as set forth by its Directors in their report above referred to. Who, under the admitted facts and circumstances, could hesitate to receive as genuine and obligatory, the certificates issued by him, whether issued in the form of certificates to R. & G. L. Schuyler, or even to R. Schuyler himself, with blank powers endorsed, or whether issued directly to and in the name of the holders of such certificate, on the surrender by them of the certificates originally received by them of Schuyler or of others. As has been stated, and as cannot be contradicted, Schuyler's legitimate and only business and duty as Transfer Agent, so far as the public was concerned, were to sign as was agent and deliver the blank certificates with which he had been entrusted by the Company; and all that was requisite for the security of any person receiving such certificates was the fact of the genuineness of his signature.—The Company, by its own acts, answered for and guaranteed every thing else. The receivers of the certificates prior to their reception, had no power over the books of the Company; they had no legal right to inspect, or demand an inspection of them; they were up to that period, so far as the Company, its books and records were concerned, in every legal and practical sense *strangers*. The law cannot be so tyrannical, so unjust and unreasonable, under such circumstances, as to charge any negligence or default, any want of diligence, on the recipients of the certificates for not knowing what the books of the Company contained or omitted. If any person not owning any stock in a given corporation should apply to the officers of that corporation for an inspection of its stock books, they would very properly inform him that they had no legal power to grant and that he had no legal right to demand such inspection, though such inspection might be permitted, in some instances as a matter of mere courtesy. The statute authorises the inspection of stock books only by a Stockholder. 1 R. R. 601. (1st. ed.) See also Laws 1848, p. 60.

It seems to me, then, an indisputable proposition that, under the facts as expressly stated and declared by the Company itself, through its President and Directors, Schuyler as its Transfer Agent, was invested, so far as the public are concerned, with full power to issue certificates of stock, that this was, as to them, his legitimate and sole business as such agent; that the Company put into his hands additional, if not conclusive evidence of his power and authority in the blank certificates furnished him;—that in addition to all this (though no addition was required) they by their deliberate resolution published to the world, not only justified, but invoked and demanded the implicit confidence of all parties in him as such agent. He had in every legal and practical sense for the purpose of the issue of stock, concentrated in himself the power of the President and Directors acting at a lawful and duly convened meeting; and an issue of stock authorized at such lawful meeting would give the party receiving it no greater or better right than its issue by Schuyler, as Transfer Agent.

The foregoing considerations establish the proposition that in issuing of stock certificates, Schuyler was acting within the "scope" of his authority, nay more, that he was performing the precise and only business he, as Transfer Agent, had to do, or could do with the community at large. The community was in no manner bound to know—it had no power or means of ascertaining, whether, in the performance of this legitimate business with them, he was violating his duty to his principals; they had given him the full power to issue certificates; they had in the most authentic and impressive manner invited and solicited the confidence of the community in him as their delegated representative; and thus they emphatically declared that the consequences of his conduct were on them and not on those thus led on, and induced to deal with him. Strip this case of the irrelevant and idle discussion of the question as to the power of a corporation to issue stock beyond the amount authorized by its charter, and keep steadily in view the manifest and vital distinction between Schuyler's duties and liabilities to his principals, on the one hand, and his legitimate powers as to the public, on the other, and the doubts and difficulties apparently surrounding this subject, disappear. The same act may be (and in this case is) grossly fraudulent as to the principals, and yet perfectly bona fide and valid as to third persons dealing with the agent.

The liability of the principal for the acts of the agent, when acting within the "scope" of his authority, when performing the business embraced in and contemplated by that authority, is established by the uniform current of authorities, and has become a maxim, an elementary proposition in the law. We have seen that the issuing of stock was not only within the "scope" of his authority, but was all, and the only business he was to do or could do under that authority; it follows inevitably that it can never be a question between the company and the bona fide holders of the stock issued by Schuyler, whether the issue exceeded or fell short of the authorized capital; and it is a clear sophism to argue that there is any distinction between stock issued beyond or stock issued within the chartered limits; and yet great stress has been laid on the fact that Schuyler's issues were in excess of the capital. This has been relied on as the fatal defect, in the claim of the holders, whereas it scarcely requires argument to show that an issue within the authorized limit, might have been equally fraudulent, as between him and the company, as an issue beyond it, and consequently that the fact of over-issue, per se, is in no sense material to the question between the company and the present holders of the stock alleged to have been over-issued.

The liability of the principal for the conduct of the Agent as above stated, is so well established, so repeatedly adjudicated in every variety of form, that it is a work of supererogation to cite authorities in support of the proposition; and I shall therefore limit myself to a reference to the well established doctrine as stated by one of the most eminent of American Lawyers and Judges, and whose authority will be not questioned.

Judge Story, in his admirable treatise on agency, (§ 17) says that "a general agency exists where there is a delegation to do all acts connected with a particular business or employment," and (§ 452) "the principal is held liable to third persons in a civil suit for the frauds, deceits, concealments, misrepresentations, torts, negligences, and other misfeasances and omissions of duty of his agent in the course of his employment, although the principal did not authorize or justify, or participate in, or indeed, know of such misconduct or even if he forbade or disapproved it." Authorities on this subject might be multiplied indefinitely; to do so would be merely to make an idle parade of cases and to show a useless diligence in the search of digests and the abstracts of *indices*. No case has been, none can be, cited in behalf of the company impeaching in the slightest degree the rule as above stated; and the cases that have been referred to in their behalf for that purpose will, on

examination, be found to wholly fail in affording them exemption from the operation of the rule so well and so correctly stated by Judge Story. I should proceed to analyze and criticize those cases and to demonstrate how entirely they fail to sustain the principle they are cited to establish; but that, easy as is the task, is quite unnecessary on this occasion, however suitable it may be on another.

There is not, and necessarily there cannot be any distinction between corporation and natural persons as to the application of the rule. If there is any difference it is clearly against the corporation, for while a natural person can act by and for himself, corporations can from their very nature and constitution act *only by agents*: "Persons natural and artificial (corporations) stand in this respect on the same broad platform: each is under the same measure of responsibility: no less, no more. The natural person may contract and perform personally; the artificial person contracts and performs through its corporate functionaries. A corporation is compelled by the incorporeal nature of its essence to act by others." "Corporations are liable for the frauds and torts of their servants and agents done in the course of their employment in the same manner as individuals are responsible for the acts of their servants transacting their business." Numberless cases on this point also might be cited; and multitudes of illustrations of the correctness of the general rule as above laid down, drawn from the every day business of life and intelligible and convincing to the commonest understanding, whether that understanding belong to lawyer or "layman," might be introduced; but this would only be the endeavor to make that plain which is already too plain to admit of contradiction from any disinterested quarter.

If the preceding views are not totally erroneous, and were there no adjudicated case on the subject, the conclusion would of necessity follow, that the New Haven Railroad Company are liable to the bona fide holders of the Stock issued by Schuyler.

But the exact question has been decided in one of the most important cases that ever came before a judicial tribunal in this or in any other country—a case involving one million and a quarter of dollars,—a case which was conducted on each side by the ablest Counsel of the land, among whom were John Sergeant on the part of the Plaintiffs and George M. Dallas on the part of the Defendants, two names standing among the highest at the American bar; a case in the argument of which twenty entire days were occupied, and in which every consideration of State pride, of local influence, of deep felt sympathy for friends and neighbors, were pressed on the Court with unsurpassed ingenuity and eloquence, and made to bear against the Plaintiffs.

This was the case of the Bank of Kentucky against the Schuylkill Bank, and which will be found reported at large in Parson's select Equity Cases, pages 180 to 269, above briefly referred to. This case was in every essential particular the exact counterpart of that which I am now considering, and in no important respect is it possible to distinguish the one from the other. It was brought originally in the Court of Common Pleas of the First (Philadelphia) Judicial District of Pennsylvania, a Court corresponding in dignity and in jurisdiction with the present Supreme Court of the State of New York. Notwithstanding all the adverse influences under which the plaintiffs labored, the Court gave judgment in their favor, and thereby established every principle for which we now contend. They adjudicated, as a substantive and material part of the case, and an absolute prerequisite to the plaintiffs right to recover, that a Corporation is liable to the bona fide holders of stock issued by its Transfer Agent in excess of its capital; an excess which amounted in that case, as above stated, to a million and a quarter of dollars.

The judgment thus pronounced by the highest Court of original jurisdiction in the city of Philadelphia was carried by writ of error to the Su-

preme Court of Pennsylvania, the Court of ultimate resort in that State, and corresponding with the present Court of Appeals in this. The case was again elaborately argued by the same eminent counsel before that high tribunal, and on the 7th of March, 1849, the judgment was unanimously affirmed. The case as decided by the latter court has never been reported; but in the original record on file in the clerk's office of the court in Philadelphia, it is stated, "that the judgment is affirmed for the reasons, among others, given by the Court below;" thus showing the unqualified adoption of those reasons by the appellate court. A case of such magnitude thus argued and thus decided, sustained too as the decision is, alike by the clearest principles of law, and by justice and common sense, will at all times be a prevailing authority, and will forever remain as a light and a guide to all other judicial tribunals, before whom the same questions may be presented.

It cannot be amiss to embody here a few extracts from the opinion of the Court in pronouncing judgment in that case, deciding as it does in favor of the holders of the stock over issued by Schuyler every material proposition for which they contend; and establishing, for reasons which will successfully withstand the test of the severest scrutiny, the liability of the New Haven Railroad Company to those holders. The Court say: "While it is true that in making a regular transfer of the stock of the Corporation, the Corporation, and all its transfer agents, wherever situated, were required to receive the surrender and assignment of the preceeding certificate from the holder thereof, it is not true that the purchaser of the Stock is under any obligation to see that such surrender is made by the seller. The obligation to surrender the old certificate is not a limitation on the power of permitting transfers so far as respects the Corporation. It is a provision intended for the security of the corporation. How then can it be pretended that a purchaser of stock has any obligation imposed on him to see to the surrender of the old certificate, when that is a matter for the interest and consequent supervision of the Corporation itself. When he receives his new certificate, has he not the right to assume that the Corporation has attended to all things in the transaction necessary to its own protection. Who conducts the preliminaries resulting in the issue of the new certificate? Why, the Corporation itself, or what is the same thing, on this occasion, its Agent lawfully constituted for this purpose. The idea that the purchaser of Stock is to lose the property he has honestly paid for, because the Corporation has not done its duty to itself, is unreasonable to the last degree. It would seem strange indeed to an unsophisticated understanding, if such a notion could be invoked successfully to save the Corporation from the results of its own misapplied confidence in a faithless Agent. The true doctrine on this subject is that where one of two innocent persons is to suffer for the tortious act of a third, he who gave the aggressor the means of doing the wrong must alone bear the consequences of the act."

Again:—"To the existing holders of these certificates, the Corporation (the Bank of Kentucky) must respond, whether the certificates were issued by the Philadelphia, New York, or any other transfer agency." "The bona fide holder of every certificate issued by either of these transfer agents has a pecuniary and direct claim against the Corporation, (the Bank of Kentucky,) either to be admitted as a Co-operator of the Bank, or, if that is IMPRACTICABLE FROM THE EXCESSIVE ISSUE OF STOCK, TO BE COMPENSATED BY THE BANK FOR THE FRAUD PRACTICED UPON THEM."

Many more equally pertinent extracts might be made, but the above will suffice. It is not in my power to add by comments to the strength, the clearness, the convincing force and the pure justice of the doctrines thus deliberately declared by those distinguished tribunals of our sister State.

I deem it scarcely necessary to allude to another very serious objection to the ground of non-liability assumed by the New Haven Railroad Company. I mean the utter impracticability of

determining, by any certain or definite rule, which of the certificates of stock now outstanding are for *over-issues*. In some cases this probably may be done; but in multitudes it certainly cannot be. Thus, if A., owning fifty shares of stock admitted to be properly issued, and fifty alleged to be improperly issued, sells the whole to B., to whom one certificate for the one hundred shares is delivered; B. sells fifty shares to C., (and a certificate is issued to him,) and fifty shares to D., (to whom also a certificate is issued,) does C. or does D. hold the stock lawfully issued? A satisfactory answer to this question would require, I apprehend, a more scientific "book-keeper" than the world has yet produced, or will produce, so long as the intellect of man remains finite. And certainly this Company cannot contend for exemption from liability, when, from the nature of the case, there is no rule by which their liability or non-liability can be determined.—Other instances might be mentioned, in which it would be equally impossible to determine within which class the stock fell; but it cannot be necessary to enlarge on this point.

I am strongly confirmed in the correctness of the opinion I now advance by its entire consonance to honesty and good morals. It is the beauty and the boast of the common law that its foundations are laid deep in integrity, that it is imbued with a strong and abiding sense of justice, and tolerates no cheat or deception.—These benign principles would manifestly be disregarded, and continued, if a principal is permitted to cast on *innocent third persons* the injuries consequent on the fraudulent conduct (fraudulent as to the principal) of his agent in the conduct of his (the principal's) business. These are principles too, which commend themselves instinctively to the conscience and to the approval of all disinterested persons. And I venture to say that there is no one in the commercial and financial circles of this metropolis who values his character for integrity and who stands impartial between these parties, who would not decisively reject the doctrine contended for in behalf this Railroad Company.

Sir Mathew Hale, in his history of the common law (p. 51) says:—"The common law is the just, known and common rule of justice and right between man and man,"—and in another place, that "the guide for ascertaining the rule of the common law is the common reason of the thing." In these sentiments I entirely concur; and on them the honest holder of the stock in question may safely rest their claims for indemnity against the Company.

It cannot have escaped the observation of the most superficial and indifferent, that the ground assumed by the Company, if successfully maintained, would materially injure the value of the hundreds of millions of stocks of corporations existing in this country and held by persons in every condition of life.—No man could be safe in the possession of this species of property, its transfer would be seriously impeded if not entirely checked; and financial evils and troubles would arise in ruinous abundance. I will not dwell on this point; its truth and its seriousness must be manifest to all.

This opinion is already too extended. The importance of the case is my apology for its length. Its result is, that the New Haven Railroad Company are liable to the bona fide holders of the stock over-issued by Robert Schuyler as their Transfer Agent; and that as the holders cannot be admitted as co-operators of the Company in consequence of the excessive issue of stock, they are to be compensated by the Company for the fraud practised on them, by the payment of such sums as will fully indemnify them.

It will be observed that throughout this opinion, I have used the terms "bona fide holders"—"honest holders,"—all entitled to apply to the Company for remuneration must be of that description. It is possible that there may be "holders" who have taken the stock under such circumstances as to render them legally chargeable with notice of Schuyler's fraudulent conduct; if so, they are

not in a legal sense, "bona fide" or "honest" holders" and would not be entitled to indemnity. I do not know, nor have I heard of any such case; and I mention this matter merely to show that the terms "bona fide" and "honest" have been used by me intentionally and carefully.

CHARLES P. KIRKLAND,
Jauncey Court, 39 Wall street.

New York, October 14th, 1854,

Journal of Railroad Law.

THE RIGHT OF LAYING RAILROADS IN CITIES.

The Courts of Ohio as well as those of our own State seem disposed to look with favor upon City Railroads. The subject was lately discussed in the Superior Court of Ohio, at its General Term, in the case of *Sargeant vs. the Ohio and Mississippi Railroad Company*. A petition had been presented to enjoin the defendants against laying their track on West Front street, Cincinnati, as authorized by the City Council of that city.

The Court held that the City Council had full authority to grant the privilege in question, and that they were the proper judges as to whether it was expedient so to do. And, although the original grantor of the street, may have dedicated it to the public, for the purpose of an ordinary thoroughfare, still the City Council were not precluded from appropriating to a new use, provided the new use was just and proper in itself and nowise inconsistent with the use originally contemplated by the party who had ceded the land in question, to the city of Cincinnati. The grant which the defendants had obtained from the City Council did not secure them any exclusive use of the street, but only a privilege of tracks, which as it was shewn by proofs, rather improved than injured the road as a highway. In other cities railroads had been found conducive to public convenience, and the Common Council had the power to authorize them at their discretion. Injunction denied.

DAMAGES FROM THE DEATH OF A PARTY INJURED BY A RAILROAD CAR.

The Superior Court of our city, last week tried the vigorously contested case of *Becker against the Third Avenue Railroad Company*, in which no little difficulty was experienced in determining whether the fatal injury sustained by the party whose death on the Railroad gave occasion to the action resulted from the negligence of the deceased, from that of the defendants, or from that of the deceased and the defendants together. The question of damages was also very fully discussed in connection with the following statutory provision by which, in our State, actions for recovering compensation for death caused by the wrongful acts of Railroad agents is regulated.

"Every such action shall be brought by and in the names of the personal representatives of such deceased person, and the amount recovered in any such action shall be for the exclusive benefit of the widow, and next of kin of such deceased person, and shall be distributed to such widow and next of kin of such deceased person, in the proportion provided by law in relation to the distribution of personal property left by persons dying intestate; and in any such action the jury may give such damages as they shall deem a fair and just compensation not exceeding \$5,000 with reference to the pecuniary injuries resulting from such death to the wife and next of kin of such deceased person, provided that such action shall be

commenced within two years after the death of such person. Laws of 1844.

Slosson, Justice, charged the jury, that the plaintiff could not recover if the death of the party injured had been occasioned either wholly or in part by his own negligence. And also, in order to ascertain the appropriate amount of damages they must inquire solely how far the bereaved family has been pecuniarily injured by the death in question without in any way taking into consideration the grief or the loss of society to which it had subjected them. The jury should also consider that the children of the deceased had attained an age and capacity which relieved them from dependence on paternal support, and this fact must materially affect the question of pecuniary damage.

The jury rendered a verdict for six cents for plaintiff.

INFRINGEMENT OF VESTED RIGHTS BY A COMBINATION OF RAILROAD COMPANIES.

Boston and Lowell R. R. vs. Boston and Maine Salem and Lowell, and Lowell and Lawrence Railroads.—This was a bill equity by which the plaintiff corporation seeks to enjoin the defendant corporations from combining certain sections of their roads, so as to form a continuous line of travel from Boston to Lowell, for the purpose of transporting passengers and merchandise without change of cars. The defendants filed a general demurrer. Chief Justice Shaw delivered the opinion of the court, which was substantially as follows: The plaintiff Corporation was chartered June 5, 1830, to construct a railroad from Boston to Lowell. By section 5, a toll was granted, for the sole benefit of said corporation, upon all passengers or merchandise conveyed, at such rates as agreed on by the directors, with the proviso, that at the expiration of four years, and every four years thereafter, if the profits exceeded 10 per cent, the Legislature might alter and reduce the tolls. By section 7, the Corporation was held to pay all damages for land taken for the road. Section 12 provided that no other railroad, within 30 years, leading from Boston, Charlestown, or Cambridge to Lowell, or from those places to any place within five miles of the northern termination of said B. and L. Railroad, should be made; providing (among other things not now material to be considered) that the Legislature, after the expiration of 10 years, might purchase said road upon certain conditions set forth in the act.

This was one of the earliest acts, and the power supposed to be necessary was granted in very general terms. The restrictions were not so great then as at present. The plaintiffs in their bill proceed to aver that they accepted the charter and constructed the road for the carrying of passengers and merchandise; that they have an interest in the just and reasonable gains and profits of their road, and so they ask that the provisions of section 12 in their favor may be enforced. The bill then sets out the several acts by which the defendants were incorporated, and alleges that by the construction of nearly parallel lines between Boston and Lowell, through Charlestown and other places, their property has been injured and their chartered rights infringed. That the defendants arranged to carry passengers and merchandise from Boston to Lowell,—advertised their route as the railroad route between these cities—sold season tickets and tickets in packages,—engaged agents to decry the plaintiffs road and induce passengers to go upon their road, &c., &c. The plaintiffs further allege that in addition to what they have already done, they now propose to run entirely through without change of cars, and aver that they will be injurious to their rights. The plaintiffs ask for an account of tolls, &c., pray for discovery, account and relief, &c. By agreement of parties the case will be determined as if a supplemental bill and demurrer had been filed, and upon

the construction of the several acts of the Legislature, incorporating the several roads.

The main question is, what are the rights of the plaintiffs under their act of incorporation? This was one of the earliest acts concerning railroads, and there was no little foresight of the nature of railroads that they were regarded as *Iron Turnpikes*, upon which any person could travel with his car, subject to rules, &c., and the directors were authorized to erect tollhouses, establish gates, appoint toll gatherers, and demand toll upon the road. When the Western railroad was chartered this had been found to be impracticable, and for the purpose of preventing frightful collisions, the legislature placed the number and use of cars under the entire control of the directors. It is obvious also that the legislature had no idea of the cost of such a road, whether \$500,000 or \$1,800,000. Under such circumstances, it would be natural for the legislature to offer such terms as would induce capitalists to embark in such an untried enterprise. The directors were authorized to prescribe tolls, subject to the limitation of 10 per cent. profit; this was an extraordinary power. In construing this act, we ought to bear in mind the time when it was passed, and consider the whole and all its parts. It is a contract between the legislature and the undertakers, and the terms they used makes the bargain between them. That the authority to construct a railroad from Boston to Lowell, was regarded as a public and not a private contract, is evident from the grant to take private property in its construction, which can only be done for public uses. The corporation are said to be the owners of the road, and so they are in a certain sense, but it is to be regarded as a public road. In no other view, could the Legislature authorize them to take private property—not if they were a private corporation in the sense that a Bank is private. Turnpikes are held to be of the same public nature, so that it is not in the power of the corporation to determine who shall, or who shall not use their turnpike, provided they (those who use it) comply with the rules established. It is evident then that this is a public corporation, and at the time of the charter, it was also evident that a large amount of capital would be required. How were the owners of this capital to be reimbursed? By taking toll, and this is a public right—it is one of the *indicia* of public franchises.

We come then to the section upon which the stress of the argument is laid—the section by which grants to other railroads are restricted. It was the whole act—all its liabilities and all its rights—which was to determine the petitioners to accept or to reject it. They were not bound by it until they accepted it. The first act in 1792 which incorporated the West Boston Bridge made it a condition of their charter and right to take toll, that they should pay a certain sum or proportion to Harvard College. It was supposed that this would be so onerous that it was not accepted until a second charter relieved them so that they were only to pay such sum in connection with the Charles River Bridge. In the present case, the enhanced value of the road from its exclusive right to run between Boston and Lowell, was a part of the contract between the petitioners and the Legislature. We must now consider the situation of the parties to this contract—the subject matter, legal effect and operation of the contract. It was made between the government and its subjects, putting certain restrictions upon the power of the government. It was a stipulation that no similar grant should be made by the Legislature. This is said to be an *executory* contract; but in some sense it may be both executed and executory. So far as it is a present grant it is executed; so far as it gives further rights, it is executory. The same may be said of a deed of real estate. The same rule holds with government as individuals, as was decided by the S. C. U. S. in the case of the sales of land by Indians in Georgia, which was held to be a contract. A contract made by statute has the same solemnity and effect as a grant of exclusive rights in terms. We think that under this

act no other direct railroad between B. and L. could be made under the authority of the Legislature, having already granted all their powers to this effect. In the Charles River Bridge and the Warren Bridge, it was held that the charter gave exclusive right to the travel: but it was to some extent, a question of fact as to what was the line of travel. The act by which the plaintiffs were incorporated intended to bind the hands of the Legislature from authorizing any other parties taking the same toll, provided they complied with section 5, and also provided the Legislature might purchase. That section (5,) gave other parties the right to enter said road, but upon condition that they pay such tolls as were demanded. It is manifest that this restriction was for the benefit of the corporation. If purchased by the Government then the Government had the control of the right again. We think, then, the Legislature intended to grant an exclusive right, to some extent, for the term of 30 years. Have the Legislature a right to make a law which shall bind their successors? Within reasonable limits we think they may make grants binding them and their successors. They may make laws, but it does not follow that they may repeal contracts which are binding on people. This is well supported by reason and authority. A grant of land is generally in the form of a law, but still it is a contract; and the legislature has no right to repeal it. The constitution of the U. S. imposes that restriction on Legislative power. The case of the Piscataqua Bridge, 7, N. H. Reports, is in point; so *Livingston v Van Ingen*, 9 Johnson R. Within reasonable limits, the legislature has a right to limit the public rights. This is recognized in the case of *Chas. R. Bridge v. Warren Bridge*. In that case there was a question of fact, whether the Legislature had granted an exclusive right. It was not doubted, that the Legislature might grant toll on the travel for limited recompense for the risk, expense and trouble. In such cases, it is evident that both parties have this in their minds. In the vast variety of acts passed, it has been considered as binding between governments and subjects. But how binding? Not that the government can be used—but binding in honor and good faith. In so many instances have the legislature been called to modify charters, that it is now generally provided that the legislature may alter or modify.

The Legislature has the right to take property by the right of eminent domain. It has right because it is necessary to its existence. But this right does not interfere with the rule that it cannot repeal or impair contracts. This year, the Legislature grants land; this year, it may resume it—but it must pay for what it takes, and so does not revoke its grant. The right to exercise this right of eminent domain is undeniable, but the exercise of power is coupled with the obligation to pay. This the bill of rights requires—that is, that Government make adequate compensation.—How? It is not for the government to say we will estimate—will take \$10,000 and estimate it at \$1000. This was held in one of the earliest cases—the case of the bridge across the Merrimac at Haverhill. The act by which the property was taken made no provision for a jury to estimate the value, but appointed commissioners of its own choosing. The grant was held to be void because there was no jury called to estimate the value of property taken. We see no reason why personal property as well as real—intangible as well as tangible—or even *choses in action*—may not be taken under this right, provided compensation be made; Vide the case of *Dixon v. West River Bridge*, of 7 Howard R. where the Commissioners laid out a road over a corporate bridge. This was held to be a violation of contract, but the case recognizes the right to take the franchise by the right of eminent domain.

But in the several acts passed in incorporating the defendant corporations, did the Legislature intend to exercise its right of eminent domain by taking the franchise of the plaintiffs? We think not.

It is said that if the defendants have done as is alleged, they have acted under the act of 1852, and so that the plaintiff's remedy is in damages, and not by injunction. If they are acting rightfully, under the authority of the Legislature, exercising its right of eminent domain, then damages are to be applied for. It is said that under the several acts of the Legislature, they have united to form a single road, and that the taking of the plaintiff's property under these acts is an exercise of the right of eminent domain by the government, and so the remedy is by damages. But it is a question of the intention of the Legislature to exercise this right. This is no contract that the Legislature may exercise this right, and if it take by that right without compensation, such an act is simply void by the Bill of Rights. If this right is not exercised, then no right is given and no damages can be claimed. The act of 1852 says the respondents may enter plaintiffs' road according to law. Now the 12th section of the plaintiffs' charter provides the terms upon which the respondents may enter. That is the law according to which they may enter. The act expressly negatives the right of the respondents to take or impair the rights of the plaintiffs.

We think the plaintiffs obtain some just rights to the exclusive use of a continuous railroad from Boston to Lowell. The result is, that the respondents have no right to run a continuous road under an agreement to share profits, by one continuous train from one terminus to the other—to advertise to take passengers in such manner—or to issue tickets for this course. The plaintiffs are entitled to a decree, which must be drawn with care. Demurrer overruled.

The Management of English Railway Property.

If one man in the same station of life, and having to sustain like charges, possess a much larger income than another, and yet is constantly in difficulties, while the other is in affluence, we have no doubt as to the cause of his misfortunes—mismanagement. He may be extravagant or ambitious to unduly enlarge his possessions. In some way he mismanages.

The English railways have a much larger income per mile than the French, and yet their dividends are much smaller.

There is but one cause for the marked superiority of the French railways considered in a dividend point of view. *Management* expresses the cause of difference. The French railways are managed commercially well; the English badly.

In France they treat a railway as a commercial undertaking. The first question is its capital cost; the next its revenue, working expenses, and profit. If it is not very clear that the annual profit will bear a good per centage of the capital cost, the project finds little favor at the hands of the French Government and speculators. The business of railways generally is naturally so excellent that it is seldom the highest estimate of traffic is not fully borne out. The rule that the actual traffic exceeds the estimated in the first, second, or third year, and afterwards goes on increasing as if the nature of it were perpetual youth, forever progressing towards, but never reaching maturity. The expansive properties of railway traffic has in no case, not on the oldest line, yet reached a limit. Half-year upon half-year, and year upon year, it rises; and the older a line gets, the more evident are its unbounded powers to expand its trade. This year there shall be a Great Exhibition; the traffic rises to an unusual extent. In the next shall come war and cholera, but though the traffic be depressed, it will yet overtop to some extent the traffic of the preceding year; while the succeeding year's traffic shall advance greatly on the second year's. Circumstances may occur to unusually raise and depress, causing some irregularity, but still the course is universally upward. We know of no exception. The calculations of the French, like those of the English, are amply sustained in the traffic department. It is in the capital account

the French manage so much better than we. They are more careful in this most important respect. Gold may be purchased too dearly, and a railway, however rich its traffic, may be made at so high a cost as to preclude the possibility of a remunerative return from it in the course of the present generation. French railways seldom exceed their estimated cost, and they are, in the second place, generally so judiciously selected, that much of the heavy work too often noticeable in England is avoided. Like ourselves, the French are not without dare-devil engineers who would rather tunnel through the backbone of England than lay the rails on an even surface, but inasmuch as they look more to cost, their dividend-destroying inclinations are restrained. It is with them a principle of action to build to pay as well as to show the world the genius in works of art they possess. A glance at the cost of railways, as stated in our traffic table, will show that the French trunk lines cost about £25,000 per mile, while ours cost £50,000. Had they half our traffic per mile, the percentage of working expenses, being as it is about the same, they would have the same amount of dividend. They enjoy traffics much more than half ours, but not as much, mile for mile. Consequently, they return considerably higher dividends. In England we have one solitary instance of a trunk line costing about the French average, namely, the Lancaster and Carlisle, which has cost £22,000 per mile. The traffic of this line per mile falls very far short of that of the London and North Western, Great Western, and other trunk lines in England, but its capital cost per mile being less than half that of the trunk lines named, accounts for its dividend being 8 per cent. per annum, while the dividends of the lines of larger traffic are 5 and 4 per cent. per annum.

The English railways have not been managed commercially well. Their managers have generally taken a higher flight, and directed the affairs of a company according to a certain policy as admirable for acquiring increased territory as it is deplorable for reducing dividends. The old London and Birmingham line used to pay 10 per cent. per annum; the Grand Junction, 10 per cent.; the Liverpool and Manchester, 10 per cent.; the York and North Midland, 10; the Berwick, 9; the Great Western, 8, &c. Notwithstanding the errors of the English system, our railways paid admirably after a few years' opening. The costly injustice of Parliament, the robberies of landowners, the long bills of lawyers, the follies of engineers, the frightful prices of contractors, the jobbing of speculators, were all covered, in addition to the fair cost of a line.

The dividends were, as we have said, 10 and 8 per cent. on the full cost. At length, however, the speculators and projectors began their work of introducing new lines wholesale; the Directors of the old Companies being both weak and ambitious enough to fear the competition of such lines, and to be desirous of grasping an increased territory; and Parliament was wicked enough, or so ill-judged, as to aid and abet the speculation, extracting at the same time from the railway Companies new concessions for the public. Thus branches and extensions, three or four times as long as the trunks, poor in traffic, but nearly as costly, were made, purchased, or guaranteed: amalgamations commenced; competition raised its spiteful head; millions were spent in parliamentary warfare; and dividends fell to 5, 4, 3, 2, and 1 per cent. Some Companies, such as the York and North Midland, which formerly paid 10 per cent. during many years, ceasing to pay for a time any dividend whatever, and is now paying a miserable dividend of $2\frac{1}{4}$ per cent.

The Companies wasted millions of ready cash in Parliament to purchase and obtain lines that inflict annual losses on them. They burnt the candle at both ends. Except the Lancaster and Carlisle Company, the companies generally pursued this course. We may cite a case recently brought prominently before the public, but it is only one case out of hundred. Read a paragraph in the present South Eastern Directors' Report:—

"Large sums have already been lavished in promoting losing branches and lines, entailing a heavy annual reduction of your (the Shareholders') dividends, and your parliamentary and law expenses for nine years, from 1845 to 1853, amounted to £479,711 7s. 11d., averaging the enormous sum of £53,301 per annum, exclusive of the cost of conveyance of land, which are merged in the land accounts." Now, what did this parliamentary and law expenditure by one English Railway Company, amounting to the enormous sum of £479,711, purchase? Why, it purchased a host of heavy losses. The South Eastern Company lose £108,000 a-year from their guaranteed branches, besides more for other undertakings, the subjects of life and death contentions in parliament. The South Eastern paid before the era of their successful, but expensive campaigns in parliament, dividends of 6 per cent. per annum, and 6 per cent. is a remunerative rate. But in this day of enjoying the fruits of their parliamentary labors, what do they pay? Six per cent.? No. Last year the dividend was $8\frac{1}{4}$ per cent.; this year it may be raised to three and a-half ($3\frac{1}{2}$) per cent.!! That is the result. And yet, ever since the 6 per cent. dividends were paid, the revenue of the old line, which yielded the 6 per cent., has been largely increasing. The financial history of the South Eastern is but a page in a large book, telling the same tale over and over again of nearly every Railway Company in England.

American Railroad Journal.

Saturday, October 28, 1854.

Caution.

As we understand a man named Crawford has been presenting bills to several of the advertisers in the *Journal*, purporting to emanate from this office, and to be for sums due the *Journal*, we deem it our duty to put our patrons on their guard.

Monies due this office should be paid to no one outside the office except the editor, proprietors, or Mr. N. DAVIDSON, their business agent; or some person showing their written authority to receive them.

The "Times."

The condition of monetary affairs, contrary, we are sorry to say to what appeared to be a reasonable expectation, do not materially improve; and although there is some recovery in the market price of securities from the lowest point of their recent depression, caused to some extent by a feeling approaching a panic, securities, in the soundness of which no flaw can be picked, are selling all the way from 15 to 30 per cent. below the standard of ordinarily easy times, and such whose value is in any way hypothetical, cannot be sold at any price. As a necessary consequence railroads are in great want of money, which is kept at very high rates by their necessities. The stringency thus created reacts upon the commercial classes, who suddenly find trade in all its branches, reduced to nearly one-half of its former bulk by an almost universal curtailment of purchases, particularly of luxuries, and by the discontinuance, as far as possible, of work upon all our public improvements. Capital is scarce, business very dull, and confidence in almost every kind of investment wanting. To aggravate the present state of things, the public mind is kept in constant anxiety and alarm by new developments; by failures or speculations, the results of overtrading, and overliving, which are al-

most daily taking place, and which indicate that some time must yet elapse before the current of business affairs shall again run clear.

The present condition of affairs in this country is peculiar, because the depression of railroad securities, for instance, is not that we have in the whole built more railroads than are needed, or that these works are not productive; but because the accumulated, or available capital of the country is not adequate to the opportunities for investment. Now, it would naturally be supposed that railroads by opening an outlet to the farmer or planter would, by increasing vastly the value of their products, increase in a like degree the abundance of capital, or of money, its representative. Such would be the case, did the influence of railroads stop here. But assuming that a railroad pays for itself in a given number of years, in the manner stated, yet immediately upon its opening it creates a demand for capital three or four times exceeding its cost. To see how it does this, a person has only to travel over any new work. The development of whatever resources the route possess immediately commences, calling for machinery and labor, in many cases to an immense extent, and creating a demand for capital that never would have existed but for the road. Suppose a road penetrate a district abounding in iron and coal, upon an acre of which a million of dollars perhaps may be well expended. If through an agricultural section, it may stimulate the productive capacity of such district, involving treble the former outlay. No matter what the character of the country, the fact is the same. It must be borne in mind that this is an undeveloped country, and where to day is a wilderness, in a year from this time may be the seat of a large, active and flourishing commercial, or manufacturing community. In addition to the demand for capital created by causes stated, the cost of our railroads, which keeps pace with their earnings, increases with extraordinary rapidity, aggravating the demand for money for the objects described.

The present abundance of securities and their low price, is not the result of the over-construction of railroads in the same sense as we understand over-trading, or over-manufacturing, or the over-construction of railroads, of which England furnishes an example. Our railroads are well enough in themselves, but we want something beside. We have expended so much of our capital in them that we have not enough for those enterprises or objects to which railroads give birth. Our progress has to a certain extent been one-sided. We have not sufficient capital to make it a harmonious one. Had this been sufficiently abundant, prices of railroad shares and bonds would have been maintained, but which are now sacrificed to meet the pressing calls caused by the construction of our roads.

We think this explanation of the existing state of affairs is sustained by the fact, that our railroads in the aggregate, are earning a fair income on the cost; that there are a few lines whose construction in themselves is not proper; and by the fact which is apparent without argument, that every railroad creates an immediate demand for capital three or four times greater than its cost. The cause of the present demand for capital and of low prices is not that this capital has been wasted, or injudiciously expended. Had it been

wasted, then it would not have been followed by the sequences which we now witness. The demand it creates shews it to be alive and active.

The cause being explained, the remedy for hard times, and low prices is plain—it is more capital. The State of Ohio has expended something like \$75,000,000 in railroads. She now has a pressing necessity for three times this sum to meet the wants that railroads create. Look at the astonishing increase of Cincinnati, Cleveland, Columbus, Dayton and other towns; an increase due mainly to railroads, and see what an immense expenditure such increase involves. Look at any part of the State and see how production is stimulated, the new accommodations that are required to meet the increasing volume of business; steamboats, warehouses, lands, rolling stock for railroads, &c., &c. This new demand has raised the use of money to two per cent. per month throughout the State, which without railroads would have been a drug at 7, the ordinary rate of interest. This demand will continue, and with it a depression of securities, till the wants of the people are supplied by the creation, or importation of an amount of capital equal to existing wants.

While the present stringency in the money market, and low prices of securities, is satisfactorily explained without impeaching the general condition of the country, or the extent to which our public works have been carried, there is no doubt that certain evils, or excesses have grown out of the rapid progress of our railroads which a state of affairs like the present was necessary to disclose and correct. Over-trading was stimulated by the sudden increase in the ordinary volume of trade, due in part to the business developed by our roads, and to the enormous sums expended in their construction. These expenditures have to a great extent ceased. The demand for capital operates to check the consumption of luxuries, consequently the preparation of the mercantile classes for an enormous increase of business has not been met. To a greater or less extent country traders, we think, have been led to invest a portion of their means in real estate speculations. A certain amount of improvidence, too, in the excessive feeling of confidence which prevailed, crept in to the management of our railroad companies, which as it comes to light, is exerting a depressing effect. The offspring of prosperity is adversity. We have to be chastized into good conduct, and we are now in some degree paying the penalty for a period of good fortune of unexampled continuance.

With these views, but with a sincere desire to look at things as they are, we do not see anything in the present state of affairs to impair confidence in our railroad enterprises. We think that they will in the main be as productive as it was supposed they would be. Prices may continue to be depressed for the causes stated. Railroad companies from the difficulty in borrowing, may be compelled to expend earnings in construction, but the remedy is a healthy and natural one, and is helping railroads as much as the general condition of business affairs. When it has worked out its cure, it will give a strength and value to our roads which they never before possessed, while its application will correct evils and mistakes, that with an apparent, but fallacious prosperity, might have proved ruinous to the whole system. There is

therefore nothing in the present state of affairs to create distrust but everything to inspire confidence. The necessary correctives are being steadily applied, though it may yet require some little time to have their effect seen.

Why State and City Securities are too low.

The securities of several of the States, and of some of our leading cities are very much depressed at the present time, for no other cause than the indiscreet manner in which they have been issued. There is certainly no reason even in these times, with a plethora of securities upon the market, why the six per cent. bonds of such States as Virginia and Missouri should be at a large discount, or of such cities as Pittsburgh, St. Louis, Louisville, Philadelphia, New Orleans, and Milwaukee, &c., &c., should be from 10 to 20 per ct. below *par*. The securities of such cities are usually beyond the influence of hard times, or periods of distrust, the tendency of which is often to increase the value of what may be considered unquestioned. The depreciation of all the securities named, is chiefly owing to their indiscriminate issue to parties who have no particular interest, nor means of maintaining their value. There is a sufficient demand for such securities, properly managed, at the present time, to keep them at *par*, and most of them at a premium, and they will in time recover these figures. Had the States or the Cities themselves undertaken the sale of their securities, there would have been no difficulty in keeping up prices, because if they cannot be had at less rate the public will take them as readily at *par*, as at 85. But they are now issued to railroad companies. These again pay them out to *contractors*, who being in want of money, and having a large margin for profit, sell on the spur of the occasion for what they can get. In this way any uniform standard of value is destroyed, the market quotations depend upon the necessities of every petty holder who may sell at a discount of 20 per cent., and still make a profit on his contract. Competent parties will not become the purchasers, nor undertake the sale of large parcels over the price of which they can exercise no control. The result is that these securities become a mere football in the market, to which every body gives a kick, and none purchase, save at enormous shaves.

No State, nor municipal body, should on any account, hand over to railroad companies, nor *contractors* their bonds, but should always pay in *cash* the amounts of their subscriptions for the reason that they can maintain the value of their securities, by selling them only at their value and in such quantities as the market will take. It would be thought the height of folly for a State to employ *contractors* to sell their bonds, when the money was to be used for ordinary municipal purposes. Still this is done every day when such State is as directly interested in the result. All such practices ought at once to be discontinued, otherwise prices will remain at a ruinously low figure. The six per cent. bonds of the cities of Pittsburgh, St. Louis and Louisville ought in the present State of the money market, to command *par*. yet they can be had at a trifle over 80. Missouri sixes are also very much depreciated from the causes stated, while even those of "old Virginia" at going at 95.

We trust that the evil is only to be pointed out to be remedied. We are glad to be able to state that a movement is being made by the railroad companies of the State of Tennessee, who will soon come into possession of the bonds of that State to the amount of some \$10,000,000, for the placing all the bonds issued into the hands of competent parties, and not to allow them to come through various channels, in small lots, upon the market. By so doing they can probably keep the bonds at a premium, while without such union and concert of action, they will certainly fall to 90, if not to a lower figure. When we see six per cent.'s of such a city as Philadelphia selling at little over 90, we want no better evidence of bad management somewhere. In fact, no inconsiderable amount of the depreciation of most of our securities is owing to the improvident and unskillful manner in which they are brought out and disposed of.

Lowell Machine Shop.

Lowell, Mass., has long been famous for the excellence of its manufactures of machinery. Originally, the machinery for the manufacture of cottons and wollens in the mills at that place was imported from England, but in a very few years it was found that superior machinery could be turned out of the shops belonging to the Corporation. Many improvements were introduced and Lowell was soon as widely known by the efficiency of its machinery as the superiority of its muslins. The pioneer in the manufacture of machinery was the Lowell Machine Shop. This establishment was commenced by the proprietors of Locks and Canals on Merrimack River in 1824 for the purpose of building cotton and other machinery for the use of the factories erected by them in this city. In 1834 they commenced building locomotives for the use of the few railroads the built and being built in New England and other parts of the country. These locomotives, although they would be now considered of a very small class, having mostly cylinders of 11 or 12 inches diameter and 18 inches stroke, were very successful and proved to be very serviceable. In 1845 the manufacturing companies of this city having purchased all the water power of the "Locks and Canals," the machine shops and foundry were sold to a new company which was incorporated with the title of "The Lowell Machine Shop." This company has a capital stock of \$600,000 and succeeded the "Locks and Canals" Co. in the business of building locomotives, machinists tools, cotton machinery &c., &c. The Treasurer and general Agent is J. T. Stevenson Esq., whose office is at No. 8 Tremont St., Boston, the Superintendent at Lowell is W. A. Burke. About 900 hands have been employed the past year in the shops and foundry. The locomotive shop is under the immediate direction of Mr. S. F. Gates who is thoroughly conversant with all that pertains to this part of the business. The machine shop is under the charge of Mr. A. Moody, and foundry under that of Mr. A. Peavey. About 3600 tons of castings are made annually in the foundry, about 2400 tons of which are required for the use of the locomotive and machine shops. The facilities and means for building locomotives and machinery are equal to those of any other establishment in this country.

Sacramento Valley Railroad.

The first railroad that will be constructed in California, is one with the above title, commencing at Sacramento and running west toward the gold region. The section now under contract is from Sacramento 22 miles to Negro Bar, on the south side of American River. The characteristics of its route, cost, prospective income, &c., &c., will be seen from the following abstract of the report of the Chief Engineer recently made to the Company.

The route to Negro Bar is very favorable, lying over open, and nearly level prairie. The principal earth work will be *embankment* of from 3 to 5 feet high, and in one or two instances 12 feet.

In the estimates of the construction, labor is put down at \$3 per day, freights from New York, locomotives, &c., at \$25 per ton. The following summary is for twenty miles. It does not include the bridge over the American River, nor, as we understand the report, the cost of the road within the city limits of Sacramento, viz :

Grading	\$101,000
Masonry	11,500
Structures of wood	10,800
Superstructure	285,075
Equipment	81,550
Buildings	44,000
Engineering and Superintendence	20,000
Sand Damages and Fencing	56,075
Contingencies	50,000

\$660,000;

or, \$33,000 per mile, fully equipped and in running order.

In relation to the prospective income of the road, it is stated that the counties of Sacramento, El Dorado and Placer among the most populous in the State, and containing within their borders many large and thriving towns, will contribute permanently to the support of the road; and in the dry season, Nevada and Yuba counties will afford a large business. The Sacramento River is navigable for vessels for large drafts to Sacramento City, and the Feather River to Marysville, at high water, for boats drawing four or five feet.

In the immediate vicinity of the terminus of the road at Negro Bar, are many valuable gold diggings; also, along the line of the eastern half of the road; where large numbers are now engaged. The granite at Negro Bar, which costs now \$20 in Sacramento, could be transported thither for \$3; and a great variety of products would find their way over the road, which now do not pay the cost of transportation.

A statement of the number of passengers and tons of freight passing a point in Sacramento on the route of the proposed road, exhibits the following results:

	For one week.	Average per day.
Stage passengers both ways	863	109
Wagon " " " "	1640	236
Riders " " " "	619	88
Footmen " " " "	470	67
Wagons	2178	311
Stages	105	15
Saddle horses and mules, both ways	619	88
Pack mules, both ways	163	23
Cattle	15	2
Tons Freight	971	144

Of this travel nearly the whole passes over the route of the proposed road. A statement of the passengers and freight, passing another point lead-

ing to the line of this route, exhibits results on passengers equal to about half the above, and on freight a trifle more. The trade passing the latter point would mostly be secured to the road by building a bridge over the river, and in any event, perhaps one-half of it. The above figures are quite moderate, in consequence of the dullness of business at the time they were compiled. From them, after making allowance for diversion, &c., the following figures are arrived at:

	Per day.	Per week.	Per year.
Passengers	505	3,535	183,820
Freight, tons.....	200	1,403	72,950
For through passengers it is proposed to charge \$2, and for through freight \$5 per ton, which would make the receipts.....			\$732,420
Current expenses			152,124

Balance.....\$580,296
or about 90 per cent. on the cost of the road.

The estimate of the cost of operating the road, is at the rate of $1\frac{1}{2}$ cts. per mile per passenger, and $2\frac{1}{2}$ cts. per mile per ton of freight, above three times the amount of similar expenses on railroads in New York, and the whole estimated current expenses are about twice the amount of those of the Albany and Schenectady Railroad.

The report before us concludes with comparing the enormous estimated profits of the proposed roads, showing that many other investments of capital in California pay approximate dividends.

Erie Railroad.

We publish in another column the plan adopted by this company for the payment of the floating debt and income bonds, and for raising such additional sums as their immediate necessities may require.

Whatever differences of opinion may have existed as to the better course to be pursued to meet the present crisis, it is certainly creditable to the company that they have determined to devote nearly half a million yearly, for ten years at least, to the liquidation of the funded debt. Their determination must go far toward removing any apprehension on the part of the holders of the Bonds that their interests will not be properly guarded, and will do much to inspire confidence in the disposition of our railroad managers to meet any emergency in a proper spirit. If the Erie Company, influenced as their action has necessarily been by Wall street, the stock of which has in a short time fallen from 90 to 45, come forward voluntarily, and devote a large portion of their earnings to the payments of their indebtedness, certainly as much may be expected from other companies, who have not the same influences to contend against, nor sacrifices to make.

By good management the Erie may be made a profitable road upon its cost. Although the holders of the stock forego the immediate prospect of dividends, whatever is paid on account of the indebtedness of the company inures to their benefit, and as they will have full dividends or in stock, they may find this to be worth *par* in the course of a few years, receiving larger dividends from the diminished amount of debt.

On the whole we think we may say that a brighter day is dawning upon this company. The reverses to which they have been subjected were a discipline necessary to correct the mistakes that have been committed, and to secure a correct policy for the future. We think the directors under-

stand their duties, are actuated by a sincere desire to discharge them, and are now in a path, which, whatever obstructions may be found in it, will in the end lead to the right conclusion.

If the negotiations succeed, as we trust they will, we shall take respectful leave of a company which has occupied much of our attention, and no small space in our columns for two years past, in hope that it has no further need of our services, for which may be found plenty of employment in other quarters.

Dauphin and Susquehanna Coal Company.

The following is a statement of the affairs of this company up to Sept. 1, 1854.

Capital Stock.	RECEIPTS.
43,807 Shares.	10,000 Dauphin shares for 9,717 acres land-----
	14,807 Dauphin shares sold for \$413,905
	16,000 Pequa shares for 32,084 acres land-----
	3,000 Pequa shares sold at par..... 150,000 \$563,905 00

Bonds.	
6 per ct. \$97,000 produce.	\$72,750 00
7 per ct. 903,000 produce.	771,180 00
7 per ct. 1,960,000 produce.	686,000 00

\$2,960,000 produce.	1,529,930 00
Temporary loans. at par...	277,840 00
Special loan..... at par...	100,000 00

Sales of Dauphin lots.....	337,840 00
	836 00

Railroad receipts.....	75,907 52
Sales of coal.....	248,512 38
Rents of houses and lands.	8,671 61
	333,091 51

Excess of cash payments and commitments over cash receipts, to Sept., 1854.....	2,805,602 51
	164,152 25
	2,969,754 76

EXPENDITURES.	
Railroad, shipping basin.....	1,519 264 29
Rolling stock, locomotives and cars..	214,622 34
Mines and improvements.....	623,373 84

Telegraph line to mines.....	2,357,260 47
Coupons and interest	3,673 81

\$178,627 42 paid } 83,525 14 unpaid } ..262,152 56	
Mining expenses.....	160,290 14
Repairs account.....	17,766 52
Taxes on land and capital.	8,790 47
General expenses.....	61,161 24
Railroad running expenses.	46,396 11
Commission account.....	9,962 91
	566,519 95

Individual accounts and balances in hands of agents for distribution, not yet distributed to the above accounts	42,300 53
---	-----------

Total.....	\$2,969,754 76
------------	----------------

RECAPITULATION OF LIQUIDATED DEBT.	
Six per cent. Bonds.....	\$97,000 00
Seven per cent. Bonds.....	903,000 00
Seven per cent. Bonds.....	1,960,000 00
Temporary loan.....	277,840 00
Special loan.....	100,000 00
Floating debt.....	164,152 25

Total	\$3,501,992 25
-------------	----------------

Cincinnati and Marietta Railroad.

Cincinnati has added to her congeries of railroads a new one, second to none other, in intrinsic importance. Every mile of the route, thus far, passes through agricultural districts of surpassing fertility, and the present eastern terminus, Chillicothe, is at the head quarters of the *provision district* of Ohio. * * * At Chillicothe depot we observed piles of mineral coal, carted from the Ohio canal, (which passes through Chillicothe) intended for transportation westward. We are told that a considerable trade is already driven in this article between Chillicothe and the towns and country between that city and Little Miami Railroad. But as soon the M. and C. Railroad shall be completed to Charleston, Vinton County, a *free opening* will have been made by it into the heart of the coal and iron regions of Southern Ohio.—The grading and bridging of the line eastward from Chillicothe, if fully completed ready for the iron, twenty-four miles, and the most of the work has also been done thence (eight miles further) to Charleston. These eight miles are the roughest part, probably of the whole road between Cincinnati and Wheeling. The line runs almost straight through mountains and rocks, and crosses valleys, with such a reference to directness and durability as has called into exercise the highest engineering skill, and the expenditure of large sums of money. But, with a view to a final profit and use, such as the builders of the great central Pennsylvania line have entertained, the engineers and directors of our great eastern road—the M. and C.—are content to let time demonstrate the wisdom of their financial and scientific skill.

Illinois and Michigan Canal.

The receipts of this work for the month of September, for several years, show a steady decrease since 1851, viz:

Sept. 1850.....	\$9,531 49
" 1851.....	16,012 16
" 1852.....	11,822 86
" 1853.....	9,143 04
" 1854.....	6,014 22

The decrease is owing, we presume, to the completion of railroads.

Michigan Central Railroad.

HISTORICAL NOTICE.

The Michigan Central Railroad was originally undertaken by the state by whom it was constructed to Kalamazoo a distance of 141 miles, at a cost of about \$2,500,000. The state becoming embarrassed, the road was conveyed to a private company chartered for this purpose by the Legislature of Michigan, in 1846. The sum paid to the state for the road by the new company, was \$2,000,000. It was taken possession of on the 23 of September, 1846, and immediate measures taken for its prosecution to Lake Michigan at New Buffalo, a distance of 218½ miles from Detroit. This point was reached in 1849. In 1850 it was extended to Michigan City, a distance of 228 miles from Detroit. In 1850 to Chicago, a distance of 282 miles from Detroit. The road is built under its own charter, only to Michigan city. In Indiana the road was built and is operated under the charter of the New Albany and Salem Railroad of Indiana, and in Illinois, under the Illinois Central Railroad charter, the two latter states refusing charters to the company.

The length of line in the several states is as follows:

Length of line in Michigan.....	232
" " Indiana.....	36
" " Illinois.....	14
	282 miles.

ROUTES AND CONNECTIONS.

The opening of the Great Western of Canada

constitutes the Michigan Central a part of a convenient route between Chicago and the Eastern States. Its immediate route is a favorable one with respect to grades and curves, and it traverses one of the best agricultural portions of the state.

Statement showing the Cost; Mileage; Cost per mile; Gross Receipts; Current Expenses; Net Receipts; rate of Dividend; Receipts from Passengers; Receipts from Freight; Miscellaneous; Earnings per mile; per centage of gross Earnings; Do. of net Earnings, of the Michigan Central Road since the opening of the first division to the present time.

Year.	Cost of Road and Equipment.	Length in Miles.	Cost &c., per Mile.	Gross Receipts.	Current Expenses.	Net Receipts.	Dividend.	Receipts from Passengers.	Receipts from Freight.	Miscellaneous.	Earnings per Miles.	Per cent. Gross Earnings.	Per cent. Net Earnings.
1847*	\$2,200,000	141	\$16,600	\$209,300	\$86,167	\$123,133	8	\$60,760	\$146,063	\$1,687	\$1,485	9.5	5.55
1848	3,867,416	141	27,357	401,047	288,025	113,022	8	152,053	234,649	1,345	2,861	10.4	2.96
1849	5,584,922	218 1/2	25,677	427,429	229,234	188,195	8	197,767	214,439	1,232	1,908	7.6	3.58
1850	5,968,444	218 1/2	27,321	698,876	301,649	397,227	8	375,696	270,056	44,125	3,198	11.9	6.66
1851	6,709,187	228	29,485	967,105	400,840	566,265	9	605,964	412,862	48,778	4,242	14.4	8.5
1852	8,166,700	282	28,570	1,075,294	470,930	604,364	14	580,187	418,939	76,918	3,813	13.2	7.4
1853	8,869,884	282	31,416	1,149,638	566,722	682,916	8	590,998	497,183	61,357	4,076	12.9	6.7
1854	9,951,999	282	35,291	1,588,995	903,944	684,651	8	840,477	663,809	84,309	5,538	15.95	6.9
Totals...	\$51,286,501	.....	.....	\$6,517,184	\$3,257,512	\$3,259,673	8.87	.....	.....	.....	.....	.....	6.02

* For 7 months and 22 days.

The Michigan Central Railroad Company in General Account.

Dr.	
1854.	
June 1.	To Capital Stock.....\$5,681,000 00
	" Bond Account,
	6 per cent.
	Sterling
	Bonds,
	uncon-
	vertible, 463,513 33
	8 per cent.
	Bonds,
	uncon-
	vertible, 1,202,450 00
	8 per cent.
	Bonds,
	convertible.....2,319,000 00
	3,985,063 33
	" Income account, bal-
	ance of this ac-
	count.....12,191 89
	" Bills payable and re-
	ceivable, balance
	of this account....294,569 85
	" Unpaid Dividend...488 00
	\$9,951,999 36
Contra.	Cr.
1854.	
June 1.	By Construction No. 1,
	Purchase of Road..\$2,000,000 00
	" Construction No. 2, Ex-
	penditures since pur-
	chase.....7,134,286 81
	" Cash on Hand.....56,829 71
	" Cash in hands U. T.
	Howe.....140,386 81
	" Cash in hands E.
	Noyes.....97,264 77
	" New Albany and Sa-
	lem Railroad Com-
	pany.....405,883 03
	" Steamboats.....138,661 94
	\$9,951,999 36
BOSTON, JUNE 1, 1854.	

Railroads in Vermont.

We understand that application is to be made to the Legislature of Vermont, which assembles at Montpelier to-day, for a charter of a Railroad from Island Pond to St. Johnsbury. We have seen notice of such application in the Vermont papers, which proposes to obtain a charter with authority to construct and maintain a Railway "from some point or place on the line of the Atlantic and St. Lawrence Railway at or near Island Pond, in the county of Essex, to a point of junction and connection with the line of the Connecticut and Passumpsic Rivers Railroad, at or near the village of St. Johnsbury in the county of Caledonia. The distance between the two termini thus named is 29 miles.

Those familiar with the railway system of New England will readily understand the importance of this movement, and perceive at a glance the relation it has to the railroads of Vermont and New Hampshire. Any one, by looking at a map of New England, will readily understand the connections which will thus be made.

In 1851 the Legislature of Vermont authorized the Atlantic and St. Lawrence Railroad to extend its line across the State of Vermont, and to form a junction with the St. Lawrence and Atlantic Railroad of Canada. By the same Act, the Passumpsic Railroad was allowed to extend its line northward, and to form a connection therewith at Island Pond. The Passumpsic Company, instead of doing this, have made a location of their line by the way of Barton, keeping west of Island Pond, in order to effect a connection at Derby line with the Shefford and Chambly Railroad of Canada.

One motive in making the location of the railroad between Portland and Montreal as far west as Island Pond, was to secure a connection with

the Passumpsic at that place, and the Canadian Company, we are told, offered to build this link of twenty-nine miles, in case the Passumpsic Railroad Company would locate their line on the direct route thereto by the way of Lynden and East Burke. It is claimed that by extending the Passumpsic road to Island Pond, and thence following down the valley of the Clyde to Derby, a shorter line could be had than by the way of Barton, as now located.

In 1850 the Legislature of Vermont granted a charter under the name of the Missisquoi Railroad Company, with authority to extend a line from Lake Champlain to a point of junction with the Passumpsic Railroad, and in 1854 further authority was granted to extend this line to Island Pond and form a common junction with the Portland line and the Passumpsic.

Last winter this Missisquoi Railroad Company was organized, and the road put under contract to a company of rich contractors, which it is understood includes Messrs. Galt and Holton, both of whom are known as members of the Parliament of Canada, and contractors on the Grand Trunk Railway of Canada.

The Grand Trunk Company want a direct connection with Boston and New York. This can only be secured by filling in the link from Island Pond to St. Johnsbury. From Island Pond to Boston is 222 miles by this route, and from thence to Montreal by the Missisquoi Railroad line is 100 miles more, making the distance between Boston and Montreal 322 miles only. From Portland to Montreal by the present line is 292 miles. This distance can be reduced by the building of the Missisquoi Railroad from Island Pond to Montreal, as before mentioned. The same interests, we are informed, are prepared to build this line of 29 miles in addition to the 100 miles of the Missisquoi, the roads of Northern Vermont would be quoin line, so that upon the grant of this charter, as put in connection with the line of the Grand Trunk Railway, completing the link in the chain to Montreal.—*Boston Journal*.

The earnings of the various roads for September, as far as received, have been as follows:

	1853.	1854.	Inc.
Baltimore and Ohio	\$239,300	\$308,370	\$69,069
(main stem).....			
Washington Branch...	31,729	37,826	6,145
Michigan Southern...	197,520	36,439	38,918
Michigan Central....	182,590	225,382	42,792
Macon and Western...	24,427	18,622	—
Cleveland & Pittsburgh	32,871	42,983	10,112
Chicago & Rock Island	53,251	182,762	79,511
N. York & New Haven	84,245	87,172	3,927
Norwich & Worcester	33,588	31,283	—
Pennsylvania Central..	200,036	294,476	34,440
New York Central....	571,322	610,585	69,263
New York & Erie....	526,585	516,019	10,566
Ohio & Pennsylvania..	80,839	123,441	42,612
Hudson River.....	184,079	149,143	15,064
Milwaukee & Miss.,...	35,431	60,233	24,802
Sixth av.....	22,324	19,219	—
Eighth av.....	25,317	25,036	—
Galena & Chicago....	88,250	150,090	61,840
Cleveland & Toledo..	36,751	51,500	14,749
Virginia & Tennessee.	13,157	21,477	9,310
Indianapolis & Cin...	—	31,948	—
Lexington & Covington	—	15,007	—
Chicago and Miss.....	—	119,552	—
Terre Haute & Rich'md	16,293	22,293	5,946
Harlem.....	92,835	99,831	7,006
Long Island.....	225,630	34,330	8,700

Cincinnati and Chicago Railroad Company.

An election of Directors for the Ohio Division of this company was held in Cincinnati on Monday the 9th inst., when the following Board was elected:—C. B. Smith, Sam'l L'Hommedieu, R. M. Corwin, Thompson Neave, S. B. W. McLean, Cincinnati; M. G. Bright, Madison, Indiana; James Sample, Butler county, Ohio; Sam'l Martin, Isaac Bates, Hamilton county, Ohio. The Board was organized by the election of C. B. Smith, President; Stanhope S. Rowe, Secretary.—*Cincinnati Times*.

Michigan Central Railroad.**A CASE INVITING ATTENTION.**

We invite attention to a statement in another column showing the cost, earnings, dividends, etc., etc., of this road, for a series of year. The data are all drawn from the published reports of the company. From the statement referred to, it would seem that while the net earnings of the company have been only about six per cent. for the past 8 years, they have declared dividends equal very nearly to nine per cent., or about 50 per cent. annually, more than has been earned. It will be borne in mind also, that nearly all the funded debt carries 8 per cent. interest, rendering it, impossible to increase dividends above the rate of earnings from low rate of interest paid.

The case is an extraordinary one, and we think, deserves the immediate attention of the stock and bond holders. If, as appears, the directors are systematically in the habit of declaring dividends that are not earned, there must be some extraordinary reason therefor which should be immediately enquired into; whether it is for the purpose of sustaining the stock till the holders of it are reimbursed their original outlay, or for the purpose of raising money for schemes of the directors, not made known to the public. The suspicions naturally excited by a naked statement of facts, are confirmed by the extraordinary increase of construction account for several years past, without any apparent cause, and without any attempted explanation therefor. In the whole course of our experience we never met with a similar case of such vast expenditures without explanation of their necessity or objects, and of dividends entirely irrespective of earnings.

The manner in which the Michigan Central Company have gone on, illustrates the astonishing apathy on the part of our people to everything that relates to the management of our railroads: an apathy that nothing short of a Schuyler explosion, it would seem, can disturb.

As a matter of curiosity—we give in full the last annual report of the President of this company, premising that it is a *fac simile*, with the necessary change of figures, of the seven that have preceded it.

"Report of the Directors of the Michigan Central Railroad Company, to the Stockholders.

We present herewith the report of Mr. Upton Treasurer, and Mr. Noyes, Superintendent, giving the details of our operations for the year ending 31st May, 1854. Our gross receipts have been—

For passengers,...	\$840,477 56	Against 1853.	\$590,997 57
" Freight.....	663,808 76		407,183 35
" Miscellaneous	84,309 02		61,356 79
	1,588,595 34		1,149,537 71
Operating Ex.,...	903,944 38		566,721 98
	674,650 96	surplus	582,815 73
Less Balance of		of year	
last year.....	14,335 45	before.	2,158 39
	660,315 51		581,974 12
Less Interest paid	269,587 62	Divi-	279,309 57
		dend	
	400,727 89	8 per	305,664 55
Dividends 8 per ct.	388,536 00	cent..	320,000 00
		Balance	
Balance in favor..	\$12,191 80	against..	14,335 45

Upon a settlement of account with the Illinois Central Company, there will be some deductions to be made from the above balance.

In analyzing the sources from which our revenue is derived, it is satisfactory to observe the con-

tinued increase of our Local Passenger and our entire Freight business, which show \$1,050,170 73, being nearly as much as we received last year, say \$1,094,455 11 for our entire Freight and Passenger earnings.

After much disappointment in regard to the time of completion of these important connections we have now to congratulate our stockholders upon the opening of the Great Western Railroad from Detroit to Niagara Falls, and of the New Albany Road from the Ohio River to our line at Michigan City. The former was opened for business late in January, and although it had to contend with more than the usual obstacles in running a long line of new road in mid winter, our receipts show a very decided benefit from it, which promise to be materially increased as the Road-bed becomes improved, and the bridge at the Falls of the Niagara finished.

The trains are now running 228 miles in 8½ hours, giving a connection between Chicago and New York, of about 36 hours, including ferries and all stops. This road is capable of being run as rapidly and safely as any one in this country, and we count upon a daily increase of business from it.

The new Albany Road is about 298 miles long—through a magnificent country. The rails are all laid over it now, and the first regular trains commence on the fifth of July.

The Chicago Branch of the Illinois Central is now running trains 106 miles south of Chicago, and in a few weeks will extend its trains to Urbana, and within less than a year to Cairo.

The Aurora Road now gives us a connection with Bloomington 162 miles, but its usefulness has been much impaired by the gap at the La Salle Bridge,—which it is believed will be filled by the first of August.

The Military Tract and Oquawaka Company now promise to give us a connection with the West at Burlington and the Northern Cross Road to Quincy, within a year.

On the 8th and 10th of July, our new boats—Plymouth Rock and Western World, take their places in our line. They are larger than any other boats on those waters, and are believed to be equal in speed, strength and safety, to any steamers in this country.

We confess to some disappointment in the result of the year's business. The receipts have not been so large as we had hoped, while the expenses stimulated by a competition with other companies, carried on by us at considerable temporary disadvantage, have been larger than we expected, and larger than we think will be the proportionate rate again.

With our new boats upon Lake Erie, and our connecting roads daily improving in value, we hope to see better results next year. Upon one point in Mr. Upton's report, some explanation may be needed. In order to secure a connection with Chicago, our charter authorizes us to extend pecuniary aid to other corporations in Indiana and Illinois. We accordingly were obliged to make certain investments in the securities of those Roads, which we can have no doubt can eventually be resold, without much if any loss, while the advantages derived from their connection, promise, when fully developed, to give us large annual returns.

Owing to the pressure of private engagements, our late Treasurer, Mr. Upton, resigned his office on the first of June, and was then succeeded by Mr. Isaac Livermore. We cannot pass by the resignation of Mr. Upton, without expressing our appreciation of his long and valuable services, from the organization of our company.

He has retained his seat in our Board, and will continue to lend his valuable aid to his successor.

By order of the Board,
J. M. FORBES.

June, 1854. President M. C. R. R. Co."

During the year the capital was increased nearly 1,400,000. The only explanation in the whole report is the following paragraph in the report of the Treasurer.

The proceeds of the sales arising from the increase of stock, have been appropriated in payment as follows,—to account of "Construction No. 2," seven hundred and eighty-two thousand, eight hundred and thirty-four dollars and seventy-one cents; to reducing the balance of the "Bills Payable and Receivable Account," in the sum of three hundred and thirty-six thousand, six hundred and six dollars and ninety-nine cents; to a further payment to the New Albany and Salem Railroad Company, of one hundred and fifty-two thousand, eight hundred and seventy-three dollars and three cents; to payment on account of new steam boats, of one hundred and thirty-eight thousand, six hundred and sixty-one dollars and ninety-four cents, and by an increase of the cash on hand the remaining balance.

If here is not a case calling for immediate enquiry and investigation, we cannot imagine one that does.

Lake Erie, Wabash & St. Louis Railroad Company.

This company held its annual election of Directors at Lafayette on the 3d inst. The old Board were re-elected with the single exception that Joseph S. Hanna, of Lafayette, takes the place of Hugh Hanna, of Wabash, who retires on account of other engagements. The Board now consists of Albert S. White, James Spears, Joseph S. Hanna, George Cecil and Allen Hamilton, of Indiana, Isaac C. Colton of Toledo, Albert H. Tracy, Elias B. Holmes, Azariah Boody, Joel Rathbone, John F. A. Sanford, Joseph B. Varum and Edward Whitehouse of New York.

This Road, with its consolidated work, the "Toledo & Illinois," is under a single management.—Among its stockholders and managers are several wealthy men of New York and other Eastern cities. It is 345 miles in length, to the Illinois State Line, where it connects with the Terre Haute & Alton, to St. Louis, and with the "Great Western," to Hannibal, Quincy and St. Joseph. It pursues a track now active with commerce and populous with villages. The great success of the "Michigan Southern," running west from Toledo through a country not heretofore tributary to that city, is a fair augury of what this road will do, running through valleys whose commerce has already made the business of Toledo scarcely second to that of any harbor on the Lakes.

The work was commenced about a year ago and has had to encounter the usual hardships of the present season. The energy of the Company however, has pushed it steadily forward. The rails (28,000 tons,) chairs and spikes, are all purchased and delivered on the line—seventy per cent. of the cost of the road-bed has been finished ties provided, and the laying of the track is now nearly ready, which for the sake of a proper economy will be prosecuted from the eastern end.—The rolling stock is engaged deliverable as needed.

The stock subscriptions amount to \$2,900,000. The installments have been all called in and met with unusual promptness. The whole issue of 7 per cent. mortgage bonds is \$3,400,000, of which \$800,000 yet remain to be sold. The Company also own \$300,000 worth of choice lands, which lying near the road will soon be available. They are free from floating debt and have made no sacrifice to raise money.

We have regarded this as one of the strongest new Companies in the West. It combines a great deal of Railroad skill and experience. The contractors are widely known as among the most extensive and successful builders in the Union—and although the combined influences of a prevailing epidemic and a tight money market have postponed the expectations of the Company for the very rapid completion of the work they had intended, still it is designed to proceed with but little abatement by concentrating forces on the Eastern Division, at the same time notwithstanding the necessary labor from all important points in the Western Division. By this process, the track may be laid from Toledo to Wabash by the early part of next

season, and to Lafayette and Attica before its close.—*Lafayette American.*

To Railroad Contractors.

We have been requested to state that the American and Foreign Emigrant Protective and Employment Society, an Institution organized in March last under the auspices of some of the leading men of our city, is now prepared to make arrangements for the supply of railroad laborers. Contractors will do well to avail themselves of this opportunity, as they will be certain of dealing with reliable and responsible parties. Communications, post-paid, addressed to the General Agent, D. R. Thornoson, 27 Greenwich street, will have due attention.

Illinois Central Railroad.

The following statement show the completed portions of the road, and the probable date for the opening of such as are in progress.

Completed from Galena to Freeport..... 50 miles.
Thence to Sublette, by 1st January..... 55
Thence to Temora, already running.....144
Thence to Duvoisin, probably by 1st Jan. 63
Thence to Cairo, a single bridge wanting. 67—384

On Chicago Branch.

Chicago to Urbana, running.....129
Urbana South, running..... 54
In progress to Junction.....164—317

Total.....701

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and PASSENGER LOCOMOTIVES of different classes, with the most modern improvements,—

also MACHINISTS' TOOLS, especially adapted to Railroad Repair Shops, and to the construction of machinery generally. These Tools are of the most approved construction and consist in part of Engine Lathes, Hand Lathes, Vertical Drilling Lathes, and Planers of various sizes and lengths, Compound Planers, Shaping Machines, Slotting Machines, Bolt and Nut Machines, Gear Cutting Engines, Chucks, Compound Slide Rests, Machines for boring Crank Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c.

COTTON MACHINERY of all descriptions, BOILERS, SHAFTING and MILL WORK, CASTINGS, and all work usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Supt., Lowell, Mass.

J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

NEW YORK AND ERIE RAILROAD LOAN.

—The Committee appointed to report in regard to the financial affairs of the New York and Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed proposals, to be opened on the 10th of January next, for the purchase of \$4,000,000 7 per cent. Bonds, redeemable in twenty years, with interest, coupons payable 1st February and 1st August.

And that for the purpose of gradually reducing the debt of the Company, the New York and Erie Railroad Company pledge themselves in said Bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of Trustees, to be by them invested, as well as the accruing interest on the investments, in the Bonds of the New York and Erie Railroad Company of the new issue, as long as they can be purchased at or under par. And that whenever the said Bonds of the new issue cannot be purchased at or under par, then the said Trustees to invest the said monthly payments and the accruing interest in any Bonds of the New York and Erie Railroad Company which can be purchased at or under par.

And whenever it shall be impossible to purchase any of the Bonds of the New York and Erie Railroad Company at or under par, then the said Trustees shall invest the said monthly payments and all accruing interest in such Bonds of the New York and Erie Railroad Company as can be purchased at the lowest rate.

And all Bonds on being purchased by said Trustees shall be canceled, by writing or printing on the face "Held by the Sinking Fund of the New

York and Erie Railroad Company," but that the interest warrants on said cancelled Bonds shall be collected by said Trustees, as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest or the conversion of convertible Bonds into Stock of this Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in said Trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to the Company.

And the Committee would further recommend that the Board of Directors adopt the following resolutions:

Whereas, The period has arrived when it is expedient and necessary to close the construction account of this Company, to be reopened only when the imperative necessity of the increasing traffic on the road, and the state of the finances of the Company will render it perfectly evident that it is proper and justifiable to reopen it, so as to increase the present capacity of the Road.— Therefore

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after reimbursing the Income Bonds due 1st February next, be charged to transportation expenses.

Resolved, That as often as the Bonds purchased by the Sinking Fund amount to 10 per cent. on the Capital Stock, this Company will, upon receiving due authority from the Legislature of this State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in the daily papers, so that the public have cognizance of the future policy of the Company.

(Signed.)

CHARLES MORAN.

SHEPHERD KNAPP.

WILLIAM E. DODGE.

NELSON ROBINSON.

GEORGE F. TALMAN.

Special
Finance
Committee.

New York, Oct., 21, 1854.

Sealed proposals will be received at the office of the NEW YORK AND ERIE RAILROAD COMPANY in the City of New York, until the 10th of January, 1855, for the purchase of \$4,000,000 of the bonds of the Company, bearing 7 per cent. interest payable semi-annually on the 1st day of February and August, redeemable in twenty years.

The NEW YORK AND ERIE RAILROAD COMPANY pledge themselves in said bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And whenever it shall be impossible to purchase any of the bonds of the NEW YORK AND ERIE RAILROAD COMPANY at or under par, par, then the said trustees shall invest the said monthly payments and the accruing interest, in such bonds of the NEW YORK AND ERIE RAILROAD COMPANY as can be purchased at the lowest rates. And all bonds when purchased by the said trustees shall be cancelled by writing or printing on their face: "Held by the Sinking Fund of the NEW YORK AND ERIE RAILROAD COMPANY," but the coupons on such cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the NEW YORK AND ERIE RAILROAD COMPANY, and the accruing interests, or the conversion of convertible bonds into stock of the Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments

shall cease, and the trust vested in such Trustees be closed, and all cancelled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay 10 per cent. in cash on the notice of the acceptance of their bids; 20 per cent. on the 20th of January; 30 per cent. 1st February; 20 per cent. 15th February, and the balance on the 1st of March.

The Income Bonds of the NEW YORK AND ERIE RAILROAD COMPANY will be received in part payment at par, and the accrued interest till day of surrender to the Company.

The Directors of the NEW YORK AND ERIE RAILROAD COMPANY, in offering the present loan to the public beg leave to state that it will be amply sufficient to pay the Income Bonds redeemable on the 1st February next, and the entire present floating debt of the Company, as well as to complete all the unfinished work now under way.

By a resolution of the Board of Directors, all future outlays of every kind beyond the proceeds of the present loan, will be charged to expense account, and paid from the income of the Company, after payment of the interest on the funded debt, and the monthly payment to the Sinking Fund.

After the negotiation of the present loan and the redemption of the Income Bonds, the position of the Company will be—

Stock.....	\$10,024,000
Bonds of 1867, First Mortgage.....	3,000,000
Bonds of 1859, Second Mortgage.....	4,000,000
Bonds of 1883, Third Mortgage.....	6,000,000
Bonds of 1862, Convertible.....	3,500,000
Bonds of 1871, Convertible.....	4,351,000
Bonds of 1875, present loan.....	4,000,000

Total.....\$24,875,000

In the opinion of the Directors it is perfectly safe to estimate the gross earnings of the Road, for the coming year, at \$6,000,000, from which must be deducted:

Expenses 55 per cent.....	\$3,300,000
Seven per cent. on debt \$24,851,000.....	1,739,570
Sinking Fund.....	420,000
	\$5,459,570

Net revenue equal to over 5 per cent. on stock applicable to cash dividends and contingencies..... 540,430

The Directors of the Company are confident these estimates will be fully realized. The gross receipts since the Road has been in operation to Dunkirk, have been for passengers and freight alone—

1851 to 1852	\$3,047,748	INCREASE.
1852 to 1853	4,138,424	\$1,690,676, say 35½ per cent.
1853 to 1854	5,122,666	934,242, say 23½ per cent.

The business of the road depending mainly on the local traffic, must inevitably increase in the same ratio as the population of the Counties through which it passes. In the opinion of the Superintendent, Mr. McCollum, the road in its present position and with its present equipment, can earn \$8,000,000. If the future increase in the receipts be estimated at only 15 per cent. per annum, which is not much over one-half of the average increase of the past the above utmost capacity of the road will be tested in 1858.

As to the running expenses, as they were only 53½ per cent. in 1853 and 1854, there is every probability that with rigid economy and an increase in the traffic, they can be reduced to 50 per cent., but they have been estimated at 55 per cent., so as to leave ample margin for contingencies.

The effect of the monthly purchases by the Trustees, of the Bonds of the present issue on their market value, cannot fail to be immediate, and will insure to the original purchasers a certain profit within a moderate time; for whilst the amount outstanding will decrease each month, the absorption by the Sinking Fund will constantly increase by the accruing interest on the Bonds in the hands of the Trustees. In 8½ years the Sink-

ing Fund will absorb \$1,768,053, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among our most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie-place.

HOMER RAMSDELL, President.
NATHANIEL MARSH, Secretary.
New York, Oct. 23, 1854.

New York and Erie R. R.

On and after Wednesday, Sept. 20th, and until further notice
PASSENGER TRAINS
will leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a.m. for Buffalo.
DUNKIRK EXPRESS, at 6 a.m. for Dunkirk.
MAIL, at 8 1/2 a.m. for Dunkirk and Buffalo, and intermediate stations.

ROCKLAND PASSENGER, at 3 1/2 p.m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p.m., for Otsville, and intermediate stations.

NIGHT EXPRESS, at 5 1/2 p.m. for Dunkirk and Buffalo.
EMIGRANT, at 6 p.m., for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 5 1/2 p.m.
These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

For Sale.

A STATIONARY Engine having cylinders 18 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New York.
jul.14 29 tf.]

Rensselaer Polytechnic Institute.

DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS,—including railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the Annual Register, giving full information respecting the Institute, apply to
R. FRANKLIN GREENE, Director, R. P. I.
32 3m Troy, New York.

Lowell Machine Works.

ALDRICH & CALVERT (late ALDRICH, TYNO & Co.) manufacture and furnish to order, at short notice,

Machinists' Tools

of various description and with the latest improvements; as engine lathes, with swing 18, 20, 24, 28, 30, 36, 48 inches, up to 7 1/2 feet, and bed made to turn any desirable length; planing machines, to plane 3 1/2, 6, 8, 10, 12, 18, 20, 22 feet long, and 18, 24, 28, 36, 40, 48, 60 inches square; also hand lathes, compound planers, slotting and shaping machines, vertical drills, bolt cutters, and many other tools used in railroad, repair and machine shops.

Lowell, Mass., Jan'y 1, 1853.

41 ly

THOS. M. CASH,

PHILADELPHIA RAILWAY AGENCY,

FOR THE PURCHASE OF ALL ARTICLES

required by

RAILROAD COMPANIES

ON COMMISSION.

Office No. 80 South Fourth Street, near Walnut,

PHILADELPHIA.

REFERENCES.

RICHARD NORRIS & SON, Locomotive Builders, Philadelphia.

WM. D. LEWIS, Esq., Pres't Catawissa R.R. Co., "

CHARLES H. FISHER, Esq., "

JOHN CALDWELL, Esq., Pres't S. Carol'a R.R. Co., Charleston.

J. PINCKNEY HUGGER, Esq., Pres't N. East'n R.R. Co., "

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

Buffalo Machinery Depot.

BUFFALO, N. Y.

H. C. BROWN, Sup't. J. W. HOOKER, Proprietor.
I AM prepared to furnish and will keep constantly on hand from the best manufacturers a full stock of Machinists' Tools for railroad and other shops; such as Engine and Hand Lathes, Large Driver Lathes, Car Wheel Boring Mills, Power and Hand Planers, Drill Presses, Punch and Shears, Axle Lathes, Power Wheel Presses, Bolt Cutters, &c.

J. W. HOOKER, Buffalo, N. Y.

Fire! Fire! Fire!
Preserve your books in one of Duryee & Forsyth's celebrated Fire King safes. They are perfectly secure and excel in finish.

J. W. HOOKER, Agent, Buffalo.

Railroad Track, Suspension and Depot Scales, Dormant, and Portable Warehouse Scales, Trucks, Baggage Barrows, and Manifest Presses.

Buffalo Machinery Depot,

General Agency for Rochester Scale Works.

H. C. BROWN, Sup't.

J. W. HOOKER.

Port Morris Manufactory.

WESTCHESTER COUNTY, N. Y.

ARE prepared to execute orders for all kinds railroad work and have on hand the approved Railroad Box with the raised Journal; also Our Couplings (Lewis' Patent) and Ratchet Wrenches from \$5 to \$10 each.

All orders punctually attended to by addressing the above.

N.B. Long Iron Planing done on reasonable terms.

37 6m. 103 Front street, up stairs.

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,

RICHARD W. TYSON,

No. 25 South Charles st.

Baltimore, July 1st, 1854.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,

RICHARD W. TYSON.

Baltimore, July 1st, 1854.

33 3m

Notice of Copartnership.

MR. PETER MARIE, heretofore of the firm of DECOUPET & CO., has this day formed a copartnership with Mr. RUDOLPH KANZ, (for many years with the banking house of Messrs. L. Von Hoffman & Co.) under the firm of MARIE & KANZ, at No. 27 William street.

Their attention will be devoted to the purchase and sale on Commission of Stocks, Bonds and Foreign Exchange, and to the negotiation of Business Paper.
New York, 1st September 1854.

36 8t

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to
EDW. BACH & KUNHARDT, 62 Beaver st.,
or, A. TOWAR, Agent Poughkeepsie Iron Works,
Poughkeepsie, N. Y.

23 tf

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

or, BRIDGES & BRO.,

64 Courtland st., New York.

19 tf

Machinists' Tools.

SHRIVER & BROTHERS,

Cumberland, Maryland,

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools. These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others repairing first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address
SHRIVER & BROTHERS, Fulton Works,
Cumberland, Maryland.

August 19th, 1854.

32 6m

Low Moor Iron.

A FULL ASSORTMENT of this superior brand, which for strength, soundness, and uniform quality, is confidently recommended for all work requiring good iron, consisting of Round, Square, and Flat sizes of all dimensions, constantly in store and for sale in lots to suit purchasers, by

W. BAILEY LANG & CO.,

54 Cliff street

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Columbus, Ga., Sept. 5th, 1854.

SEALED PROPOSALS, will be received by the undersigned at this office until the 1st day of December, for the clearing, graduation, Track-Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 130 miles.—The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work 5 1/2 miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two rivers will be crossed with the common pile bridging, with Truss Pivot draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The country is healthy, with no swamps after leaving the Tensas River; from Mobile to the river (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third (1/3) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common stock of the Road, and relying upon the earnings of the same for dividends; the balance (1/3) to be paid in the (.08) per cent. Convertible Bonds of the Company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus, Ga., Mobile, Ala., or in N. Y., at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding (1/4) the amount of the contract, for the timely and faithful completion of the same.

22 1/2 miles of the Road from Girard west will be open for business the first of November, and 52 miles nine months thereafter. It is the intention to have the entire line of 245 miles open for business early in 1858.

8t.37.

GEO. S. RUNEY.

New York Locomotive Works, JERSEY CITY.

THIS COMPANY are prepared to execute with despatch, orders for Locomotive Engines, Tenders, and Railroad Machinery generally, embracing the latest improvements.

The works being located near the water, and in the immediate vicinity of the New Jersey and Erie Railroads offers great conveniences for shipping.

BREESE, KNEELAND & CO.,
Proprietors,
38 Exchange Place.

E. P. GOULD, Superintendent,
late Master Machinist on Hudson River R. R. (40 tf)

500 TONS No. 1 Gleggarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

99 and 101 John st.

N. B.—The above Iron constantly imported

32 tf

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF ERIE CANAL—EASTERN DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Utica, until Monday, the 9th day of October next, at 10 o'clock, A. M., for the following described work:—

Description of Work.	Amount of Penalty in Bond.	Time of Completion.
Section No. 16	\$7,500	1st April, 1856.
" 36	3,300	"
" 37	5,200	"
" 57	7,000	" 1857.
" 58	9,500	"
" 59	6,000	"
" 60	6,000	"
" 61	6,000	"
" 62	12,400	"
" 75	5,100	" 1856.
" 78	5,800	"
" 181	5,800	" 1857.
" 182	5,800	"
" 183	6,000	"
Lock No. 34	5,600	1st July, 1856.
" 38	6,000	"
" 40	6,200	"
" 42	6,200	"
Waste Weir on Sec. 120.	1,200	1st April, 1855.
Bridge Abutments on Sections 15, 16 and 17	2,500	1st July, 1855.
Bridge Abutments on Sections 36 and 37	1,300	"
Bridge Abutments on Sections 57, 58 and 59 and Main street Bridge at Fultonville.	3,000	" 1855.
Bridge Abutments on Sections 60, 61 and 62	2,000	"
Bridge Abutments on Sections 75 and 78	1,500	" 1855.
Bridge Abutments on Sections 111, 115, 121 and 122	2,000	"
Bridge Abutments on Sections 132 and 133.	900	" 1856.
Culverts on Sections 59 and 60	1,200	"
Culverts on Section 75.	600	1st April, 1856.
Culvert at Van Vranken's on Section 18.	300	1st July, 1855.
Culverts on Sections 112 and 121	1,100	1st April, 1856.
Culverts on Sections 131, 132 and 133	1,200	1st July, 1856.
Completion of Phillips' Aqueduct	1,300	1st April, 1855.

BLACK RIVER CANAL.

Sealed proposals will be received at the Engineer's Office at Lyons Falls until Thursday, the 12th day of October next, at 10 o'clock A. M., for the following described work:—

Reservoir at Wood Hull Lake	\$3,700	1st Oct., 1855.
Reservoir at N'rth Br'nch Lake	5,500	"
11 Lock Houses from Boonville to Lyons Falls	1,000	"
Sluices around Locks No's. 84 to 69 inclus.	2,900	1st Aug. 1855.

MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse until Saturday, the 14th day of October next at 10 o'clock in the forenoon for the following described work:—

Section No. 195	\$6,400	1st April, 1857.
" 196	4,300	"
" 197	7,200	"
Centre Port Aqueduct	3,400	"
Port Byron do.	7,000	"

OSWEGO CANAL.

Sealed proposals will be received at the En-

gineer's Office in the village of Fulton until Monday, the 16th day of October next, at 10 o'clock A. M., for the following described work:—

Section No. 3 below Salina	\$4,000	Ap'l 15th, 1857.
Section No. 4 below Salina	7,400	"
Part of Sections 14 and 15, Gascon Rapids	12,700	"
Part of Sections 16 and 17, above Phoenix	6,400	"
Part of Sections 17 and 18, above Phoenix	7,700	"
Part of Sections 22 and 23, Morseman level	6,500	"
Section 27 at Fulton	6,000	"

CAYUGA AND SENECA CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Seneca Falls until Tuesday, the 17th day of October next, at 10 o'clock A. M., for the following described work:—

Section No. 9	\$7,200	1st April, 1856.
" 10	8,500	"
Dam and Guard Gate on Section 10	5,600	"
Culverts on Sections 1 to 5 inclusive	2,200	"
Road and Farm Bridge Abutments on Sections 1, 4 and 10	2,300	"

ENLARGEMENT OF ERIE CANAL—WESTERN DIVISION.

Sealed proposals will be received at the Engineer's Office, in the village of Albion until Wednesday, the 18th day of October next, at 10 o'clock A. M. for the following described work, between Lockport and Rochester:—

Section 276, with penalty in bond of	\$9,000.
" 277, " " " "	6,700.
" 278, " " " "	7,000.
" 279, " " " "	7,600.
" 280, " " " "	8,400.
" 281, " " " "	9,200.
" 282, " " " "	5,700.
" 283, " " " "	4,100.
" 316, " " " "	6,600.
" 317, " " " "	6,500.
" 318, " " " "	9,400.
" 319, " " " "	9,300.
" 320, " " " "	9,200.
" 322, " " " "	10,100.
" 323, " " " "	8,000.
" 324, " " " "	7,700.
" 325, " " " "	7,100.
" 326, " " " "	9,400.
" 327, " " " "	7,600.
" 328, " " " "	8,800.
" 329, " " " "	9,700.
" 330, " " " "	13,000.
" 331, " " " "	8,500.
" 332, " " " "	8,500.
" 333, " " " "	12,200.
" 334, " " " "	13,000.
" 335, " " " "	8,000.
" 336, " " " "	6,000.
Bridge Abutments on Sections 276 to 283, inclusive	3,600.
Bridge Abutments on Sections 316 to 329, inclusive	7,300.
Bridge Abutments on Sections 330 to 336, inclusive	5,400.
Culverts on Sections 276 to 283 inclusive	6,200.
" 316 to 320	5,500.
" 322 to 329	8,000.
" 330 to 336	4,000.
" 306	1,000.
Waste Weir on Section 330	500.
Iron superstructure of Genesee st. Bridge, Buff.	1,500.

The superstructure of Genesee street Bridge and the Culvert on Section 306 to be completed by the 1st day of April, 1855, and the remainder of the above work by April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and

every kind of work; and no proposition not thus defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner, until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, Sept. 18th, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT,
CORNELIUS GARDINIER,
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

STATE OF NEW YORK, SECRETARY'S OFFICE, ALBANY, AUGUST 10, 1854. To the Sheriff of the County of New York.—Sir: Notice is hereby given, that at the General Election to be held in this State on Tuesday succeeding the first Monday of November next, the following officers are to be elected, to wit:

A Governor, in the place of Horatio Seymour;
A Lieutenant Governor, in the place of Sanford E. Church;

A Canal Commissioner, in the place of Henry Fitzhugh; and

An Inspector of State Prisons, in the place of Henry Storms;

All whose terms of office will expire on the last day of December next.

A Representative in the Thirty-Fourth Congress of the United States, for the Third Congressional District, composed of the First, Second, Third, Fifth and Eighth Wards in the City of New York; for the Fourth District, composed of the Fourth, Sixth, Tenth and Fourteenth Wards of the City of New York; for the Fifth District, composed of the Seventh and Thirteenth Wards in New York, and the City of Williamsburg, in Kings County; for the Sixth District, composed of the Eleventh, Fifteenth and Seventeenth Wards in New York; for the Seventh District, composed of the Ninth, Sixteenth and Twentieth Wards in New York; and for the Eighth District, composed of the Twelfth, Eighteenth and Nineteenth Wards in New York.

County officers also to be elected for said County:—

Sixteen Members of Assembly;
A Surrogate, in the place of Alexander W. Bradford;

A Recorder in the place of Francis R. Tillou;
A City Judge, in the place of Welcome R. Beebe;

A Mayor, in the place of Jacob A. Westervelt;
A Register, in the place of Garret Dyckman;

A Commissioner of the Streets and Lamps, in the place of George G. Glasier, who was appointed to fill a vacancy caused by the resignation of Henry Arcularius;

A Police Justice, for the Second District, in the place of Daniel W. Clarke, who was appointed to fill a vacancy caused by the death of John M'Grath;

Two Governors of the Alms House, in the place of Gustavus A. Conover and William Pinkney, appointed to fill vacancies;

A District Attorney, in the place of Lorenzo B. Shepard, who was appointed to fill a vacancy occasioned by the death of Nathaniel B. Blunt;

A Civil Justice and a Police Justice, for the Seventh Judicial District, composed of the Twelfth, Nineteenth and Twenty second Wards;

A Police Justice for the Eighth Judicial District, composed of the Sixteenth and Twentieth Wards.

Yours, respectfully,
E. W. LEAVENWORTH,
Secretary of State.

SHERIFF'S OFFICE,
New York, August 14, 1854.

The above is published pursuant to the notice of the Secretary of State, and the requirements of the statute in such case made and provided.

JOHN ORSER,
Sheriff of the City and County of New York.
All the public newspapers in the County will publish the above once in each week until the election, and then hand in their bills for advertising the same, so that they may be laid before the Board of Supervisors, and passed for payment. See Revised Statutes, volume 1, chapter 6, title 3, article 3d, part 1st, page 140.

JOHN ORSER, Sheriff.

Sept. 1, 1854.

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per lineal yard. For sale by

THEODORE DEHON,
28½ Broadway,

New York.

Contracts made as above for Rails delivered at English or American ports at lowest rates.

ASHCROFT STEAM GAUGE.

AMERICAN
STEAM GAUGE
COMPANY.
SOLE PROPRIETORS
AND
MANUFACTURERS
FOR THE
UNITED STATES.



THE COMPANY
ARE PREPARED TO
EXECUTE
ORDERS FOR THEIR
GAUGE
AT THEIR MANUFACTORY
No. 4 Charlestown Street,
BOSTON, MASS.

THIS Company purchased of Mr. E. H. Ashcroft the Patent for the above Gauge in February last, and they presume there is no necessity of stating the benefit of this celebrated Gauge, which has obtained so much repute throughout the Country during the last three years, as a matter of economy and safety for Railroads, Stationary Boilers and Steamers its equal has never been discovered. The Company also purchased of Mr. Ashcroft the Patent for the Fountain Moreau or India Rubber Gauge of which the Eastman, Lowe and German Gauge are considered by them to be infringements. They will furnish the India Rubber Gauge if desired, although they think it cannot be depended upon.

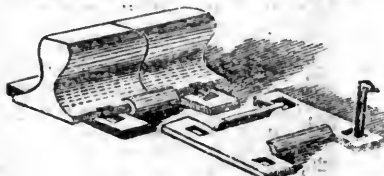
41 ly



LOCOMOTIVE TYERS made from one bar, and Low Moor Bar Iron of every description, Boiler Plates, Rivets, and Car Axles; also, Wrought Iron Wheels, Spring, Tool, and Machinery Steel, Iron and Brass Tubes, Locomotive Balances, Horse Nails, English Iron Wire, Telegraph Wire, &c., for sale at the manufacturer's prices, by W. BAILEY LANG & CO., 54 Cliff st., New York, and 9 Liberty Square, Boston, sole agents in America to the Low Moor Iron Company.

42 ly

RAILROAD SPIKES.



WROUGHT IRON Chairs and Fastenings.

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.

The best quality of Refined Iron is used, and all orders filled with despatch.

J. HOPKINSON SMITH,
No. 25 South Charles str.

Please direct the name in full,
Baltimore, July 1st, 1854.

33 ly

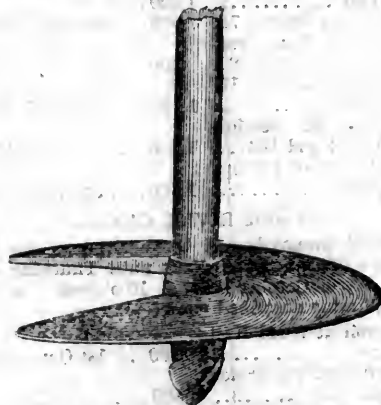
SEPTIMUS NORRIS,

CIVIL MECHANICAL & CONSULTING ENGINEER
OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his New Patent Boiler for burning Anthracite Coal; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

Screw Pile Foundations.



ALEXANDER MITCHELL'S

Patent Iron Screw Pile,

FOR obtaining permanent foundations on Rivers, Morasses, and Quicksands, for Railway Bridges, Viaducts, Depots, Wharves, &c.

I. W. F. LEWIS, C. E.,

Agent in the United States,
No. 30 South 5th street, PHILADELPHIA.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 44.]

SATURDAY, NOVEMBER 4, 1854.

[WHOLE No. 968, VOL. XXVII.

Mr. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

American and European Securities contrasted.....	689
Georgia Railroad Company.....	690
Reforms in Railroad Management.....	692
Railroad Convention at Buffalo.....	693
Railroad Law.....	693
Management of English Railroads.....	695
Alabama and Tennessee Railroad.....	695
Michigan Central Railroad.....	696
New York and Erie Railroad.....	697
Railroads vs. Erie Canal.....	697
Fictitious Stock in Railroads.....	697
Pennsylvania Railroad.....	698
Ohio Central Railroad.....	699
Western and Atlantic Railroad.....	700
Cincinnati and Chicago Railroad.....	700

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, November 4, 1854.

The Character of European and American Securities Contrasted.

It is characteristic of, and peculiar to this country, that all their institutions and every collective act of our people are the result of *agreements* or *contracts*. In adapting themselves to their *new* conditions, tradition or prescription were of little, or no use, except to regulate their social intercourse. The *political* relations which they previously sustained being changed, it necessarily led to an abandonment of those laws and regulations by which those relations were maintained. The early pioneers came to this country as adventurers and equals. They all possessed an equal right to the *soil*. Ever since the first settler landed upon our shores have we yearly re-enacted, in the great march of our people across the continent, what took place at the first attempt at social and political organization at Plymouth or Jamestown. These organizations were, and are, simple *contracts*, binding only during the *pleasure* of the parties. Hardly a year elapses that does not witness the abrogation of *old* contracts and the formation of *new*, commonly expressed by the term, "change of the constitution" of a State. We cannot name a State where several of such chan-

ges have not taken place. The change, of course, is not one of *essence* but of *form*. Where time discloses any *friction* in the machinery of society, or any defect, or wrong in the organic Law, it is changed so as to adapt its working to the present exigency, with as little ceremony as men change the structure of their houses, or the mode of conducting their business. Of course, such changes cannot be made upon the frivolous pretext of a *faction*, nor by the majority save in obedience to the provisions of the organic law. But when change is *improvement*, it is adopted as readily as was the original law it supercedes.

From what has been said it will be seen that every public, or collective act of our people is a matter of *contract*. Owing no obligation to the *past*, our people impose none upon the *future*. The peculiarity of this country in this respect, and its great contrast to all others, is no more strikingly seen than in the manner in which our public debts are created and treated. When the general government seeks to borrow money, it makes it a regular *business* transaction, agreeing to pay a certain rate of *interest*, and return the *principal* at a day certain. Immediate measures are adopted to place in the hands of Government the means to meet the obligations at maturity. Already has the General Government once paid off its entire indebtedness, and is fast liquidating another more recently contracted. There is no principle or feeling more strongly imprinted in the minds of our people, than that in their collective capacity they should owe *nothing*. The reason is that the government and the people are the same, and it is felt that there is no more reason why *government* should have a hanging over it, than the individuals who compose it. This feeling is strengthened by the fact that *government* in this country has limited powers and functions, which, in theory, are only exercised for the good of the *governed*. The policy and tendency therefore is, to divest it equally of responsibility and power. The same tendency manifests itself in the subordinate organizations of the States. The debts of these from the limited power they retain, are created almost entirely for works of public improvement. The debts are *contracts* upon *time*, and with one or two exceptions, are in rapid progress of liquida-

tion, and in a few years, most of them will be paid by means provided by existing laws.

What we have said will explain the character of the public indebtedness of this country and will show how it contrasts with the debts of European States. The latter are in most cases payable at the pleasure of government; a pleasure of which there seems no probability that it will be ever exercised. The probable payments of the debt of European States do not seem to come into the category of *chances*. But this is not all. The relations that the European nations sustain to each other impose upon them the necessity of consuming a large part of the annual increase of the capital of their subjects, in *maintaining* such relations; which increase is annually added to the amount of their existing debt. There seems to be no more ability to check such increase than to pay off the obligations previously incurred. What the result is to be is an interesting problem which we have never seen much discussed. It can be well imagined that in *time*, the annual charge of the public indebtedness of some of the European States may become greater than the ability of the people to meet, and the machinery of political organizations cease from sheer exhaustion. Such a result in some cases appears not to be far distant. Certainly there must be an *end* to the policy of the *past*. It cannot last always, unless we are to believe that the productive power of society keeps pace with the increasing demands of governments, which is hardly supposable. Modern civilization has enormously increased the expenses of all governments, particularly such as are forced to maintain large armaments. Such necessity operates very heavily upon some States, who with less means and resources, are obliged to keep up the greatest force. A financial crisis therefore appears to be hanging over some, if not most of the European States, and it is hardly possible to believe that they can, with their old ideas, adapt themselves to the *new* order of things, without revolutions which may change the whole aspect of society. Nations may work out their ideas, though under great burdens, by harmonious action; but it is hardly possible, and we believe there never was an instance, where the reception of *new* ideas, a

new life, or new principles of action did not involve a subversion of the existing order.

But our last remarks are not exactly in place, nor were they intended. Our design was to contrast the nature of the public indebtedness of this country with that of European States, and to draw an inference favorable as far as might be to the superior value of our own, and also to explain the unwillingness of our people to create perpetual funds, and make them chargeable upon our railroads as suggested in a recent communication in our paper. Our companies prefer to raise money upon contracts, which expire by their own limitation, rather than create obligations which can never be modified nor avoided. They are too impatient of restraint to favorably entertain such ideas; and too careful of their posterity to limit them to any obligation which they may not have the right to discharge. We are not expressing opinions favorable to American ideas only explaining the ground and the reasons upon which they are based. That in the science of government, and in political organizations our people are far in advance of other States will not, we presume be questioned. We think too they may claim a superiority in the manner in which they conduct their public works. But in the details of their management, and in making financial arrangements we may undoubtedly learn much from our older and more experienced neighbors. In all such matters a pride of opinion should by no means come in our way of improvement. Nor should the existence of a particular mode of doing things ever be allowed to sanction its use.

Sussex and Warren Railroad.

A company has been organized in New Jersey under the above name to construct a line of road from a point on the Delaware River to Chester, New York. The object is to form a direct opening from the coal fields of Pennsylvania, through the richest iron sections of New Jersey, to the Hudson River at Newburg, whence the products of both the iron and coal mines may be sent with facility in any direction. On the Delaware it will intersect the road from Easton to Scranton, and at Chester, connect with the Erie and its Newburg Branch. At Newburg it will find a virtual extension East, in the Providence, Hartford and Fishkill road to Hartford, Providence, Boston &c. To our city it will furnish easy transportation for both coal and iron, and also cheap carriage for the same articles to Albany and Troy.

We are pleased to know that the building of this road has been taken in hand by the iron interests and the citizens of New Jersey with great confidence in its ultimate value, and that the means have been provided for its immediate construction. The company in New Jersey has a capital of \$500,000; JOSEPH EDSALL, Esq., of Hamburg, N. J., is President, Mr. LAWRENCE, Secretary, S. FOWLER of Port Jervis, Treasurer, and Mr. HAINES, of New Jersey, Engineer. The preliminary surveys show the length of the whole line to be about 58 miles; maximum grades 22 feet and average grades 7 feet per mile.

We understand that the iron men of New York and Boston are doing much to aid in the construction of lateral roads for the development of the coal and iron resources of the section above alluded to and we think the citizens of New York

generally should look with favor upon a project which promises an easy transit for coal. This City must, soon have several very important "coal roads," and we see no reason why the Warren and Sussex Railroad may not be one of them.

Georgia Railroad Company.

HISTORICAL NOTICE.

The Georgia Railroad Company was chartered in 1833, with authority to construct and maintain a railroad from Augusta, Georgia, to a convenient point for branching to Athens, Madison and Eatonton. The charter confers the usual powers guaranteed to railroad corporations, and is perpetual in its duration. In 1838, the charter was amended by authorizing the company to extend the Madison Branch, which was the main line, to a junction with the eastern terminus of the Western and Atlantic Railroad, near Atlanta. Subsequent authority was also obtained for the construction of the Warrenton Branch, and Wilkes County Railroad, which now form a part of the company's line.

The charter of the company confers Banking privileges, which have been exercised; but as the accounts of the Bank are entirely distinct from those of the road, any reference to the former is unnecessary.

The work of construction was commenced in 1835, and in 1837, 40 miles of the road were opened for traffic; in 1839, 74 miles; in 1840, 88 miles; in 1841, 105; in 1842, 147½; in 1845, 155; in 1846, 196; in 1847, 213, and in 1854, 231 miles.

The road was originally laid to Union Point, a distance of 76 miles, with a plate rail upon stringers. From that place to Madison, 28 miles, with a rail of 46 lbs. to the yard. The Athens Branch was laid with a light T rail upon stringers. From Madison to Atlanta, a light Ω rail of 42 lbs. to the yard, laid on stringers was used. The other branches were laid with a flat rail, 8-10th by 2½ inches. The road to Union Point, 76 miles, has since been relaid; 53 miles with an Ω rail of 60 lbs. to the yard, on stringers, & 23 miles with a T rail of 60 lbs. to the yard, on ties, two feet from centre to centre. The company are now reconstructing the whole road upon this plan.

The original estimated cost of the road was \$3,450,000. When completed, the cost, with the equipment amounted to \$3,212,676. The amount now charged to road and outfit is \$4,097,048 40. The increase has been for depots, machine shops, additional outfit, improvement of the track and structures, and for a portion of the heaving iron to take the place of the flat bar already removed from 76 miles. For several years past all expenditures have been charged to the expense account, it being the fixed policy of the company not to increase the capital, or to place anything to the credit of the reserved fund, not available for dividends.

For four years from 1842 to 1846 in consequence of the embarrassed state of the company's affairs, the net earnings were expended in construction. In May 1849 a dividend of 50 per cent. in stock, upon a capital of \$2,262,497 16, was declared. The stock was further increased by calling in 25 per cent. on the same amount. The stock created in this manner was equal to \$1,696,873, which added to the old, made an aggregate of \$3,959,

369. The balance of the \$4,000,000 was placed to the credit of the company. In 1851 the stock was further increased to 4,156,000 by the consolidation of the Wilkes County Road.

The following statement will show the amount of capital stock, and the amount and rate of dividends paid by the company since 1836. For several years after the company commenced operations interest in the capital stock paid was allowed.

	Capital.	Dividend.	Rate.
Nov. 1836..	\$858,615	\$26,018	3
Feb'y 1837..	1,170,715	41,452.80	4
Oct. 1837..	1,434,405	53,962.54	4
April 1838..	1,910,215	70,492.90	4
Oct. 1838..	2,011,895	80,300.96	4
April 1839..	2,116,810	84,178	4
Jan'y 1840..	2,143,317	86,234.68	4
April 1840..	2,193,952	86,513.48	4
April 1842..	2,201,612	220,161.20	10 in stock
Jan'y 1846..	2,288,449.92	45,768.88	2
Oct. 1846..	2,289,199.92	45,783.99	2
April 1847..	2,289,199.92	45,783.99	2
Oct. 1847..	2,289,199.92	68,675.99	3
April 1848..	2,293,118.36	68,807.01	3
Oct. 1848..	2,262,497.16	67,874.91	3
April 1849..	2,262,497.16	79,187.31	3½
Oct. 1849..	4,000,000	140,000	3½
April 1850..	4,000,000	140,000	3½
Oct. 1850..	4,000,000	140,000	3½
April 1851..	4,000,000	140,000	3½
Oct. 1851..	4,000,000	140,000	3½
April 1852..	4,000,000	140,000	3½
Oct. 1852..	4,000,000	140,000	3½
April 1853..	4,000,000	160,000	4
Oct. 1853..	4,000,000	160,000	4
April 1854..	4,156,000	166,240	4

ROUTE AND CONNECTIONS.

The route of the Georgia, as is the case with most of the southern roads, is very favorable to cheap construction. The maximum gradients are only 37 feet to the mile, and the shortest radius 1,900 feet. The gauge of the road is five feet. At Augusta, the Georgia Railroad connects with the South Carolina Railroad, reaching to Charleston, and with the Waynesboro Road, which with the Georgia Central opens a communication with Savannah. The S.C. Railroad brings the Georgia R.R. upon the great line of travel between the Northern and South Western States, embracing at the present time Tennessee among the number. The Savannah River which is navigable to Augusta, affords a convenient outlet to tide water of all the produce brought to that place.

At Atlanta, its western terminus, the road connects with the Macon and Western, the Atlanta and Lagrange, and the Western and Atlantic. The Atlantic and Lagrange connects with the Montgomery and West Point Railroad extending from the Western boundary of Georgia to the navigable waters of the Mobile River, at Montgomery. These roads now form a part of the great line of passenger travel between Mobile and New Orleans, and the Northern States. The connection formed with the Western and Atlantic Road throws upon the Georgia Railroad a large amount of travel from Tennessee, there being a line of railroad the entire distance between Augusta and Nashville. The position of the Georgia Railroad is very favorable in reference to other roads, and the rapid increase of its passenger traffic shows the value and importance of such connections.

The road traverses one of the best portions of the State of Georgia, which furnishes a very large local business as the receipts from freight show. The most important article transported is raw

cotton, which from its high value, and the convenient bulk in which it is placed for transportation, is a very profitable freight. The amount of this article transported over the road in 1854, equalled 154,727 bales; in 1853, 194,742 bales.

EQUIPMENT.

The road is well equipped, having 39 locomotives, 16 eight wheel passenger cars, 5 baggage and mail cars, 297 box freight, 232 platform and 43 stock cars; all in good repair.

The following extract from the report of the President will show the results of the operation of the road for the past year, the condition of the company's affairs and their prospects for the future.

It appears by the report of the Superintendent that the gross earnings of the road for the year ending 31st March, have been.....\$931,767 59
And the expenses of management, and all expenditures for and on account of Road..... 588,552 86

Leaving net profits from Road...\$343,214 73
By the statement of the Cashier, the gross earnings of the Bank have been.....\$93,093 62
Charged, with interest on bonds, taxes and expenses..... 74,647 61

Leaving net profits from Bank... 18,546 01
Net profits of the Company from all sources.....\$361,760 74
Add amount standing to credit of surplus profits on 31st March..... 80,480 35

Makes a total of surplus profits on that date of.....\$142,241 09
From this two dividends have been declared of \$4 per share each, amounting to.....\$326,240 00

Leaving to credit of reserved fund.....\$116,001 09

It will be perceived that the Board has continued dividends at the rate of 8 per cent. The net profits have clearly justified that policy since it was commenced. The extra expenditures of the last year, however, have necessarily been very large, and it will be seen by the report of the Superintendent that large outlays must be made for new iron, and increased outfit for some time to come. As these outlays, and the instalments on our funded debt, must be met from the surplus profits of the Company, it may be deemed good policy by the Board to be elected for the next year, to return at least for a time to the former accustomed dividend of 7 per cent. This, however, will depend on the future resources of the Company, and the Board for the time being will doubtless act with a wise discretion. The subject is only mentioned here, that if such policy should be adopted, it may not produce any apprehension of the diminished prosperity of the Company.

The extra outlays for the road for the past year have been large, but not larger than the stockholders were led to expect from the last annual report. They have been for new work, and therefore add to the permanent value of the property of the Company. It is not, however, purposed to increase the capital stock, or make new loans, and they have therefore been charged upon the income, and diminish the surplus profits to that extent. It will be seen that these extra expenditures amount to \$163,589 62, which, deducted from the amount of expenses and expenditures charged upon the income, leave a balance of \$424,963 18 for the ordinary current expenses of the year. This shows a decrease of ordinary current expenses compared with the previous year of \$7,796 78. Thus:

Ordinary current expenses for
1852-'53.....\$432,759 96
Do. do. for 1853-'54..... 424,963 18
\$7,796 78

The Directors had hoped that the outfit in cars and engines would be fully sufficient for the actual or prospective business, and that no further demand upon our income would be made on this account, except for repairs and renewals sufficient to keep up the existing stock. This hope, however, was partly based on the assumption that that other connecting roads, would, before this, have furnished their full quota of rolling stock, which, as yet, they have failed to do. It is, therefore, very desirable that our outfit should be increased, for reasons stated by the Superintendent, and absolutely necessary that liberal outlays should be made for the renewal of the iron beyond Madison. For the latter purpose, the Board believe that the estimate of the Superintendent is full low, and should be rather increased than diminished.

Since the last meeting the Washington branch has been completed and received by this company at a cost of \$156,000. Exchanges of stock have been very nearly completed as will be seen by reference to the stock account. This branch has not been long enough in use, to form a correct estimate of its value as an investment, but the Directors have no reason to believe that it will fall short of the estimate made at the time it was undertaken.

The Nashville and Chattanooga, and Atlanta and Lagrange Roads have also been completed since our last annual convention, and we have now continuous lines of Railroad communication from Maine to Montgomery—Alabama, and from the same point to Nashville—Tenn. From these important extensions, great advantages to our Road have been anticipated, and an increase of about 33 per cent. in the business of the last month over that of April 1853, may be mainly attributable to these important extensions. The unsurpassed fertility of Middle Tennessee, must always furnish a heavy tonnage to the Nashville and Chattanooga Railroad and its eastern connections, and we may well congratulate the stockholders of that company; who after encountering many difficulties and delays in their mountain sections, have, at length, reached a consummation of their labors.

It will be seen that the gross earnings of this Road the last year have decreased as compared with the previous year the sum of \$2,356 49.—This result is highly encouraging when we consider that the decrease on the article of cotton alone was equal to \$54,000, as will be seen by the report of the Superintendent. This falling off in cotton was alone occasioned by a short crop in that section tributary to our Road. That this large item should have been nearly made up by a healthy increase in other branches of traffic, was, perhaps, scarcely expected by the stockholders.

In July last, the Board agreed on certain conditions to recommend a subscription of \$100,000, to a proposed road leading from Warrenton to Macon. The route has been surveyed, and proves favorable, as to curvature and grades, but more expensive than anticipated. There has evidently been a great change in the financial condition of the country since the additional action of the Board and the Board is not apprized of the probable extent, to which contributions may be expected from other quarters. The subject is submitted to the stockholders for such action as they may think proper to take on it.

Condensed statement of the condition of the Georgia Railroad & Banking Company, April 1st, 1854.

ASSETS.
The Road and its outfit.....\$4,097,048 40
Wilkes Railroad company..... 147,200 00
4,244,248 40
*Materials on hand for Road..... 62,615 04

Salaries, \$12,313 00;
Incidentals, 2,687.57. 15,000 57
Agents' commissions \$7,266 95; Taxes, \$1,952 12..... 9,219 07
Interest on Bonds \$50,315 97; Protests \$12 00..... 60,327 97
74,647 61
Road expenses and payments for and on account of Road..... 613,280 84
Banking house and lot. 29,568 88
Real Estate \$75,886 13
Negroes \$34,242 00 110,128 13
139,697 01
Dividends..... 152,264 45
Assessment on stock... 11,298 30
Balances in the hands of Agents..... 147,410 30
Claims in the hands of Attorneys..... 8,486 67
320,469 72
Nashville and Chattanooga Railroad Company..... 250,000 00
Western and Atlantic Railroad..... 90,992 88
Rome Railroad Company..... 80,550 00
East Tennessee and Georgia Railroad Stock..... 10,000 00
Atlanta and LaGrange Railroad Stock..... 310,000 00
Augusta and Waynesboro Railroad stock. 102,000 00
Augusta and Nashville Telegraph Stock.... 7,000 00
East Tennessee and Georgia Railroad Bonds..... 17,848 98
Western and Atlantic Railroad Bonds..... 10,500 00
Nashville and Chattanooga Railroad Bonds 17,500 00
896,886 86
Discounted notes..... 294,428 61
Bills receivable..... 636 45
Discounted bills—New York, Baltimore, Charleston Savannah 172,174 62
467,238 63
Suspense account..... 11,948 89
SPECIE AND SPECIE FUNDS.
Due by banks..... 79,237 69
Notes of other banks.. 71,871 15
Gold and silver coin... 229,385 92
380,494 76
Total assets.....\$7,210,922 81
LIABILITIES.
Capital stock..... 4,147,200 00
Profit and loss..... 80,380 35
Income from Railroad. 871,985 87
Mail transportation... 42,360 32
991,826 54
Dividends on stocks... 24,519 25
Discounts \$29,987 42;
Interests \$34,238 14 64,225 47
Premiums \$3,436 40;
Rents \$912 50..... 4,348 90
93,093 92
Company's bonds..... 671,784 50
Dividends unpaid..... 11,633 31
633,381 81
Due to banks, Corporations, &c..... 10,180 53
Due to depositors..... 104,163 11
Due for circulation....\$1,178,076 80
1,292,420 34
Total liabilities.....\$7,220,922 81

*This account is increased \$11,951 76 more than stated, and the Road expenses will be diminished in the same amount.

Statement showing the Cost; Mileage; Cost per mile; Gross Receipts; Current Expenses; Net Receipts; rate of Dividend; Receipts from Passengers; Receipts from Freight; Miscellaneous; Earnings per mile; per centage of gross Earnings; Do. of net Earnings, of the Georgia Railroad since the opening of the first division to the present time.

Year.	Cost.	Mileage.	Cost per Mile.	Gross Receipts.	Current Expenses.	Net Receipts.	Rate of Dividend.	Receipts from Passengers.	Receipts from Freight.	Miscellaneous.	Earnings per mile.	Percentage of gross earnings.	Do of net earnings.
1839.....	\$1,659,335	75	\$22.144	\$134,929	\$63,362	\$71,567	4	\$66,140	\$68,789	...	\$1,800	8	5
1840.....	2,088,665	88	23.733	184,603	70,246	114,357	8	63,505	121,098	...	2,008	9 3/4	5 1/2
1841.....	2,256,089	105	21.486	158,225	67,283	90,942	10*	66,292	86,963	...	1,608	7 3/4	4 1/2
1842.....	2,242,136	147 1/2	16.082	224,256	97,618	126,637	0	71,450	152,195	...	1,521	10	5 1/2
1843.....	2,511,022	141 1/2	16.752	248,096	109,819	138,277	0	61,965	186,091	...	1,682	9 3/4	5 1/2
1844.....	2,511,022	147 1/2	16.752	248,096	109,819	138,277	0	61,965	186,091	...	1,682	9 3/4	5 1/2
1845.....	3,165,126	155	20.426	271,750	117,212	154,538	0	77,635	178,765	...	1,746	8 1/2	6
1846.....	3,324,866	196	16.750	316,346	136,204	180,142	4	93,642	221,700	...	1,608	9 1/2	5 1/2
1847.....	3,423,514	213	16.072	409,985	157,902	252,083	6	136,560	273,875	...	1,994	13	5 1/2
1848.....	3,461,639	218	16.251	477,053	175,553	301,500	6	157,635	319,368	...	2,289	13 1/2	5 1/2
1849.....	3,561,976	218	16.676	581,815	196,583	385,232	6	166,484	415,531	...	2,782	16 1/2	5 1/2
1850.....	3,848,303	213	18.067	628,807	228,282	398,525	7	180,650	437,157	...	2,942	16 3/4	11
1851.....	4,064,900	213	19.080	722,863	303,487	426,426	7	214,029	484,894	...	3,422	18	10 1/2
1852.....	4,231,779	213	19.914	756,811	365,508	440,303	7	265,201	530,631	...	3,745	18 3/4	10 1/2
1853.....	4,276,185	213	20.071	931,124	477,655	453,468	8	297,909	636,214	...	4,385	22	10 3/4
1854.....	4,416,991	231	19.121	931,767	568,552	363,216	8	310,005	691,761	...	4,029	21	7 1/2
Totals.....	\$61,213,627	...	...	\$7,272,405	\$3,244,689	\$4,027,716	8.13	...	...	...	...	15	7.45

* Seven per cent. in cash, and 5 per cent. in stock.

New York and New Haven Railroad.

Our next will contain a notice of the late meeting of the stockholders of this company.

How Reforms in Railroad Management are to be Effected.

As a general rule, the turning point in the success of a railroad is *after* its completion. With sufficient means, its economical construction is a comparatively easy task. The greater part of the work is done by *contract*, which secures an immediate oversight of the expenditure by competent parties having a *personal* interest in the result, while competition is certain to bring prices down to a reasonable point. In all cases where our companies are not scant of money, our roads leave the hands of the contractors at fair cost.

But upon the *completion* of a railroad, the parties who conduct its operation sustain entirely *different* relations toward it. In its construction, the *contractor* makes his money by economy and good management. When the work is let for *cash*, the margin for profit is always sufficiently small. The company, therefore, have the best guarantee in the *interest* of the contractor that the work will be economically executed; but the profit, or pay of the person who in operating the road, takes place of the contractor, in construction, does not depend upon his qualities, or fitness for the place he fills, as he receives a stipulated salary which may be entirely irrespective of the value of the services he renders his employers. Now it cannot fail to be the fact in numerous instances, that persons filling such places think more of getting rid of their tasks, and of getting their money, than of serving the company. So universal is this found to be the case, that in nearly all our manufacturing establishments, the employees work by the *piece*. Every man, therefore, becomes his *own* master, and his *own* interest is his stimulus to exertion. An establishment that should attempt to carry on their business by "days works," could not stand a week's competition with one conducted in the manner described. Upon railroads every kind of service is paid by the *day*, which necessarily largely increases the cost of their operations.

To remedy these evils the experiment of working railroads by *contract* has been tried, and very successfully, in the old countries. If it be practicable to work railroads in this manner, there is no doubt that such a saving might be effected, as would be the turning point in the success of many roads. At all events every company should always reward good conduct by additions to a *regular* salary. Allowing the employee to be benefitted to a certain extent by what he *saves* to the company, is not only just, but is the most certain mode of promoting faithful service. We understand that the Erie Railroad are acting upon this plan, and thus far with good results.

Another very fruitful source of loss and wastefulness is the incapacity or inattention of *directors*. There are only a few instances in which the directors of a road feel, or manifest the same interest in the management of their railroads, that they do in their own personal affairs, no matter how large the pecuniary interest they may have in it. One reason is that they do not understand their duties, consequently cannot appreciate their responsibilities. Knowing little, or nothing, about the management of a railroad themselves, they, of course, cannot direct others; nor tell when the road is well or poorly served. It is often the case that directors of a road are entirely indifferent to their duties, and merely occupy their places to oblige a

friend, or to secure the triumph of the party, or clique to which they belong. In this category may be placed the directors of the New Haven Road. Now the remedy for all these evils is the appointment of suitable men for directors; and the education of those filling such places up to a point which shall fit them for a discharge of their duties.

But the grand cause of mismanagement is to be found in the indifference of the *stockholders*. A proper sentiment on their part would be felt in every department of service on the road. They are the umpires to determine what the management of a road has been, or shall be. In them resides the power to correct the abuses which may exist. It is their intelligence and action that stamps the management of a road. If the stockholders of the New Haven Road had required a strict accountability every cent expended in the construction and management of that road, a very large sum might have been saved in construction, while the last grand catastrophe which has overwhelmed it, could have hardly been possible. Notwithstanding, it is one of the most difficult things in the world to arouse stockholders to a sense of the duties devolving upon them. Their ignorance and indifference is mainly owing to the fact that very few of our companies ever publish detailed statements of the operations of their road, and the condition of their affairs. The stockholders neither know how their money is expended in construction, nor how the road is managed. They need in the first place that some standard of good management should be placed before them. With such standard, and with detailed statements of the operations of the road in which he is interested, every person holding a share of stock becomes a *critic* upon the management of the directors, and officious in showing where a penny could have been saved, an abuse lopped off, or something be added to the earnings of the road. With suitable reports placed in the hand of every stockholder, the public would not be long in becoming competent judges of railway management, and the directors could not move without a hundred eyes scrutinizing every step they took; to censure the wrong, and approve the right. For the want of such reports the public remain in that stolid ignorance and apathy, which we witness on almost all occasions; and which can only be removed, by creating in the manner indicated, an interest, and with it, capacity to judge correctly of their management.

The most effectual way to correct the evils complained of, is to secure full and ample reports from our railroad companies, or in other words, to diffuse information upon the subject of railroad management. Without information there can be no intelligent action. The elaborate report published by the Erie Railroad Company for 1853, was worth an incalculable sum to that road, and was, probably, the *only* thing that saved their affairs from a financial crisis. That report was the basis of the reasoning, that convinced the *public*, that the road was capable of being a profitable work, and without such basis, which was a grouping together, in an intelligible form, all the results of the operation of the road, we do not see how any effective appeal could have been made to the public. Had the company been in the habit of making similar reports for previous years, a vast

good would have been effected. Errors in management would have sooner been corrected, while others would have been avoided. Reports from the Hudson River Road similar to that made by the Erie Company the past year, and at the same time elucidating the true position of the road, and its capacities for ultimate success, would this instant have been worth to the company a million of dollars, in keeping up the value of its securities, and as a means of helping their company to the money necessary to complete their road. Yet such are the sacrifices made for the want of a proper appreciation of their duties on the part of the directors, and a few hundred dollars spent in printing and paper. The several reports made by this company scarcely cover paper enough to light a cigar. Had full reports been exacted from the New Haven directors, and had Mr. Schuyler been properly looked after, that fine property would not have wrecked. Had the companies that compose the New York Central line been in the habit of making any reports at all, they could not have put a number of dilapidated concerns in that scheme at 25 per cent. above their value. Had the Michigan Central Railroad Company been in the habit of making suitable reports, the directors of that company could never have run the rig they have, declaring dividends from capital, and lavishing money, we know not upon what projects. The catalogue might be indefinitely extended, but we think we have cited a sufficient number of appropriate cases to prove our point.

The first step to reformation is a knowledge of what needs correction. Companies must lay bare before the public their internal condition and organization. These must be made entirely transparent. The disease being discovered, the remedy, sooner or later is certain to be applied. Such reports hereafter must be the order of the day. To omit them must be taken as evidence of something wrong, and we do not believe that any important company can hereafter neglect them with impunity. As far as we are concerned, we mean to insist upon them in all cases, and with the public to back us, we feel pretty certain that an important step toward reform can be effected.

Railroad Convention.

At the meeting of the numerous Roads in our City, which adjourned last evening, numerous important measures were adopted. Chief of these, as far as the public is concerned, was the adoption of a Memorial to the Legislature praying for the abolition of all laws to license runners for Emigrant Passengers to the West, and asking for a statute making it a penal offence to sell tickets for passage by the Railroad lines of rates higher than those charged by the roads. This will measurably end the scandalous cheating and robbery of the poor Germans, and Swedes, and Norwegians, who come so eagerly to our shores.

The charge for emigrant passengers from New York to Chicago, is to be \$11; New York to Cincinnati, \$10. Luggage, to the extent of 50 pounds, free; over 50 pounds, \$2 25 to Cincinnati, \$2 50 to Chicago. The New York Central and New York and Erie, are to have ten per cent. on the whole amount collected at New York from emigrants, as compensation for the trouble and cost of taking care of them and starting them.

There will be an increase of freight from New York to Chicago, amounting to 7 per cent. advance on the present rates.

After the 1st of December there will be a slight advance of fare from New York to Buffalo, amounting on the Central, we believe, to 50 cents. —Buffalo Democracy.

Journal of Railroad Law.

JOHN G. MYERS VS. THE YORK AND CUMBERLAND RAILROAD COMPANY.

The opinion of the Court was given by CURTIS J.

This action was referred under a Rule of the Court, entered at the April Term, 1853, to John Davis, Marcus Morton and Nathan Hale, Esquires, and after these referees had fully heard the parties, one of their number, Mr. Davis, died, and then Mr. Morton became so ill as to be unable to act. The parties thereupon agreed, that the remaining Referee, Mr. Hale, should make an award, and he having done so, it was presented to the Court at the last term, and its acceptance moved by the plaintiff, and opposed by the defendant,—only one Judge being then present, (by consent of parties) the case was continued to the present term, when the defendants filed their objections to the acceptance of the award, as follows:—

Circuit Court of the United States for Maine District.

In the action John G. Myers, plaintiff; vs. the York and Cumberland Railroad Company, defendants.

And now at the September term of said Court, the defendants in the above entitled cause come into Court and object to the acceptance of the award of Hon. Nathan Hale as Referee in the above action, and allege the following objections to the acceptance of the paper offered as an award of the said referee:

First. That the said Hale has acted and awarded upon, and included in said award damages for a subject matter not referred to him.

Second. That the said Hale has included in his said award damages for a claim not embraced in the plaintiff's writ or declaration and not sued for in the above action and not referred to his arbitration or decision.

Third. That in and by his said award he has awarded to the plaintiff in said action damages for the non delivery of the reserved stock specified in said writ and declaration and in the contracts therein set out and copied, although the said Reserved stock is not sued for nor is any allegation made in the said writ and declaration that the same had been demanded, nor was any proof of demand of the same offered at the hearing before said Referee, nor was any claim for the same referred to his arbitration or decision.

Fourth. That the said Hale has awarded damages to the said plaintiff, in lieu of profits for work not performed by the plaintiff, under his said contracts, contrary to law.

Fifth. There having been no proof or claim that the defendants in fraud of the plaintiff's rights under his said contract, had taken the contract from the plaintiff and given to any other person at a lower rate, or taken it for the purpose of giving it to any other party, at a lower rate, the referee has awarded a sum as damages to the plaintiff, for prospective profits not earned by him, contrary to law.

Sixth. That it does not appear in and by said award whether the said Referee has credited or charged the plaintiff with an amount of bonds deposited in the hands of Levi Morrell under the terms of the supplementary contract dated February 6, 1851, and set out in said writ and declaration.

Seventh. That it does not appear in and by said award what disposition was made by the Referee of an amount of bonds in the hands of D. C. Emery, the Treasurer of said Corporation.

Eighth. That it does not appear in and by said award whether the said Referee charged the said plaintiff with an amount of bonds in his hands purporting to have been issued by one Nathaniel J. Herrick describing himself as Treasurer pro tempore of said corporation.

Shepley and Dana, Nathan Clifford, counsel for defendants.

Upon these objections, by permission of the Court, the testimony of Mr. Hale, the Referee was taken, and the counsel of the respective parties having been heard, and the objections to the

award considered, we will now state our opinion thereon.

The first three objections are statements in different forms, of the same thing. Their substance is this, that the Referee exceeded his authority, by awarding to the plaintiff, damages on account of certain stock of the defendant corporation, called reserved stock.

This involves two enquiries: 1st, whether the Referee did, in point of fact allow such damages; and 2d, whether that subject matter was referred to him. The first has been answered by the Referee himself. He has testified "the value of the reserved stock, as estimated by me, was included in the damages I awarded." And it is insisted by the defendants, that the Referee had not authority to include in his award a compensation to the plaintiff, for not receiving this stock. The argument is, that this was not a reference of all demands, but only of this action; that nothing was referred which was not sued for; that under the declaration in the case neither the reserved stock, nor its value, nor a compensation for not receiving it, is demanded; that the Referee therefore exceeded his power in awarding damages on this account, and as the amount of those damages does not appear upon the award, so that they can be separated from the residue of the damages by the Court, the whole award is void.

To the correctness of many of these positions the Court at once assents. This being a reference of the action, it was not competent for the Referee to take into consideration any subject matter, not substantially shown by the declaration. We say substantially, because formal defects in a declaration may be, and should be overlooked by a Referee of an action under a rule of court. He has not the power possessed by the Court, to allow them to be amended, but he may disregard them. *Coffin vs. Cottle 4 Pick, 454. Forsyth vs. Shaw 10 Mass. R. 253.* Still the declaration must in substance, embrace a subject matter, to enable a Referee of that action, under a rule of Court to include that subject matter in his award. We are of opinion also, that under our practice, the award itself must be such, as to enable the Court to distinguish what is, from what is not legally awarded. The practice here, derived from ancient usage in the State of Massachusetts, is to render a judgment on the award. The record must contain the basis of such a judgment. The award goes upon the record. But if the Court were to hear parol testimony as to the amount of damages correctly awarded, and act thereon, and under judgment therefor, the judgment would accord with that parol evidence which would not be on the record, and would not pursue the award, which would be on the record. We think the correct practice, in such a case, would require us not to accept the award.—Whether it should be recommitted, or not, must depend on circumstances, not necessary in this connection, to be described.

The important question here is, whether this subject matter of the reserved stock was substantially embraced in the declaration; and to decide this question we must consider the contracts set out in the declaration, and the averments there made, and the breaches there assigned. The declaration, which is in a plea of covenant broken, sets out in *hæc verba*, two principal contracts under seal. The first bears date the 12th day of August, 1848, the second on the 5th day of August, 1850. The subject matter now under consideration, viz: "the reserved stock" depends upon the second of these contracts, by force of which the original contract to build the railroad was modified and changed in many important particulars. By this second contract the road was to be divided into four parts; from the depot in Portland to the Station House in Gorham, being the "First Division;" from Gorham to the Saco River, "No. 2," from Saco River to Alfred "No. 3;" from Alfred to the terminus, "No. 4." And the second contract providing that for the work on the First Division, "as the same shall progress from the first day of August current, payment shall be made at the rate of fifty per cent. bonds

of the company hereafter described, and 25 per cent. in stock, *reserving one half of the stock as indemnity for the fulfillment of this contract until said division of said road shall be completed.* The declaration avers that, after the making of the last mentioned contract, the plaintiff proceeded in the performance thereof, and continued down to the 19th day of August, 1851, to do all that was incumbent on him towards the fulfillment thereof on his part; that on that day, while proceeding with the work, and when he had nearly completed the "first division," and while he was willing to continue to execute his contract, the defendants removed him from his situation as contractor; and prevented him from completing the work and performing the residue of his contract.

Upon this declaration, the question is whether the Referee could take into consideration that claim in the contract which entitled the plaintiff to receive from the company $12\frac{1}{2}$ per cent. of the contract price of the work upon the "first division" in the stock of the corporation upon the completion of that work.

It is entirely clear that the time for this payment had not arrived when this action was brought. The language of the contract is, that payment shall be made to the extent of twenty-five per cent. in stock, "reserving one half of the stock as indemnity for the fulfillment of this contract, until said division of said road shall be completed." The substance of this stipulation, and its legal as well as its practical effect, were, that until the "First Division" should be completed, this part of the payment was not to be made. And the declaration avers that when the plaintiff was prevented by the defendants from going on with the work, the First Division had not been completed. The precise ground of action, therefore, so far as concerns this stock, was not that the defendants would not deliver it to him, for he had not become entitled to receive it; but it was that, by preventing him from completing the First Division of the Road, they have prevented him from acquiring a right to this stock. This was one of the benefits which would have accrued to him by the completion of his contract. Of this benefit they deprived him by stopping his work. And consequently, the value of this right is, among other things, to be made good to him, he having lost it by the wrongful act of the defendants. Having set out in the declaration the contract which gave him the right and made its enjoyment dependant on the completion of the work, and having averred that he was prevented from completing it by the defendants, the declaration contains sufficient to lay the foundation for this claim of damages.

Suppose the contract had stipulated that the price of the work should be paid on its completion, in some species of merchandize, and the defendants had prevented the contractor from completing the work. It would then have been necessary to ascertain at what time the contractor could, and would, if not prevented, have finished the work; then to find the market value of such merchandize on that day, and then to allow the contractor, by way of damages, that market value, deducting the cost of completing the work; and all this would be done by the jury, under a declaration describing the contract and avowing that the defendants had prevented its completion. In our opinion the assignment of the breach, that the defendants discharged the plaintiff from the work, and refused to permit him to complete it, was sufficient to enable the plaintiff to claim before the Referee all the damages which naturally arose from that breach; and that the value of the stock which the plaintiff was prevented by this breach from obtaining, constituted a part of those damages.

It was strongly argued by the defendants counsel that so far as the plaintiff had earned these stocks by work actually done, they were in truth his property; that he was their legal owner; that though they continued in the hands of the company, it was only that the latter might retain a lien thereon for their security; and that the company had been at all times ready to acknowledge his title.

But whatever force this argument is entitled to, we think it was an argument to be addressed to the Referee, and considered by him, in the exercise of the jurisdiction conferred to him by the parties. He was to determine what damages Myers was entitled to recover, by reason of any breaches of covenant by the defendants, alleged in the declaration. Among those breaches was the refusal to permit him to finish the work. But the amount of damages which he should recover for this breach necessarily depended on the general state of the account between the parties. He was entitled to recover the contract price of the work, deducting the cost of finishing the work, and deducting also so much of that contract price as had been paid to him by the company.

Suppose the ground had been taken before the Referee, which is taken here, that for twelve per centum of the work done on the First Division the plaintiff had already received payment in stock pursuant to the contract, and therefore to that extent could have no claim for damages by reason of the interruption of the work by the defendants; and suppose the plaintiff had then answered, as he now does, that the provisions of the contract, taken in connection with what was done respecting this stock did not amount to a payment *pro tanto*, and so did not reduce his claim; must not the Referee have decided that question? and if he decided it in favor of the plaintiff, must he not have gone on and put a money value on this stock, which the plaintiff was entitled to receive as part of the contract price of the work? Whether such questions were in fact raised before the Referee, we do not know, nor is it material. It is enough that they might have been raised, for if they could, and he had power to decide them, he did not exceed his authority when he allowed the value of this stock, as estimated by him, as part of the damages he awarded. He has testified that he did not perceive how he could assess the damages in money without passing on this question, and we think he was justified in taking this view of his powers and duties.

For reasons which will be presently more fully stated, we consider the decision of the Referee final, upon this question, which he had authority to decide. But if we were now to revise that decision we do not perceive how we could declare it to be erroneous. The plaintiff, as already stated, was not to receive the reserved stock on account of the first division for that division, until the contract should be completed. The time for receiving this payment had not arrived; his title to it was yet incomplete when the action was brought. This stock was to be evidenced by certificates thereof issued by the company in pursuance of their charter and by-laws, describing and identifying the particular shares. So far as appears to us no tender of any certificates of this stock was ever made by the company to Myers, and no admission made that there was any balance due him on general account. And the only act done by the company concerning this stock which has been shown to us is, that in the account exhibited by the company to the Referee is the following entry:—

The amount of stock estimated to Mr. Myers by the Engineer.

Amount of certificates issued.....	\$65,000 00
Do reserved stock.....	31,435 33
Do stock due Myers, Nov. 1,	
1851.....	1,294 69
Bal. stock due Myers and not issued..	1,294 69

Upon this state of facts we are unable to see how the company could successfully maintain that this reserved stock had actually passed to the plaintiff and become his property. In this account they do not even treat it as due to him.—The object which the parties had in view in the stipulation for its being reserved, viz: the security of the company could only be obtained by having the title continued in the company. No certificates having ever been issued, and no particular shares identified, the property was not the subject of a pledge or mortgage or lien by contract, and the only mode in which it could stand as security,

was to consider the whole contract as executory; that is, that the company agreed to issue certificates to him and thus constitute him a stockholder to the extent of this $12\frac{1}{2}$ per cent., when the First Division should be completed; and, that until that time should arrive, no such shares were in existence and the company was under no obligation to create them for his benefit. We are aware, that under some circumstances, a party may be the owner of stock in a corporation though no certificate has been issued to him. But we consider such cases distinguishable from this case, by strongly marked features. Where the title of a party to receive a certificate is perfect, he may insist, as against the company, that he shall be treated as a stockholder. Where the obligation of a party to take a certificate is perfect, the company may insist that he shall bear the burthens of a stockholder. But where an executory contract is made by a corporation to issue shares of its stock to a party when he shall have done certain work, and the company prevent him from completing the work, make no tender of certificates, and do nothing to set apart any particular shares for his use, we do not think they can defeat the action of the contractor for damages, upon the ground that the contract on their part executed itself and made him the owner of the stock which they agreed he should have, and so he has no cause of complaint. Our opinion is, that this stipulation for a payment in stock, was executory merely; and the plaintiff no more became the owner of such amount of stock, by doing a part of the work, than he would have become the owner of the defendant's money, while in the hands of their Treasurer, if the whole payment had been to be made in money instead of partly in stock.

The first, second and third objections are, in our opinion, insufficient to prevent the acceptance of the award. The fourth and fifth objections to the award are, in substance, that the Referee has awarded damages for prospective profits on work not actually done by the plaintiff.

At the hearing, the Court intimated, it considered the law to be, that profits which the contractor would have made, if allowed to complete the work, were recoverable, as damages, in this action: and that however this might be, the judgment of the Referee upon the rule of damages was final. Upon this intimation, though the Court expressed its willingness to hear the counsel, and to allow the Referee to be examined to ascertain what rule, he in fact adopted, the counsel declined to press their objections, and the Referee was not examined on this subject matter. Still, if on further reflection and examination the Court had found that its intimations were not well founded, it would have given opportunity further to examine the Referee. But we have not so found.—Under a contract for building part of a railroad, in its nature precisely like the one now before us, the Supreme Court, in the case of the Philadelphia, Wilmington and Baltimore Railroad, vs. Howard, 13 How'd R. 344, decided this question: "It is there said: 'it is insisted that only actual damages, and not profits, were in that event to be allowed by the jury. It must be admitted that actual damages were all that could lawfully be given, in an action of covenant, even if the company had been guilty of fraud. But it by no means follows that profits are not to be allowed, understanding as we must, the term profits, in this instruction, as meaning the gain which the plaintiff would have made, if he had been permitted to complete his contract. Actual damages clearly include the direct and actual loss which the plaintiff sustains *propter rem ipsam non habita-* tam, and in case of a contract like this, that loss is, among other things, the difference between the cost of doing the work and the price to be paid for it. This difference is the inducement and real consideration which causes the contractor to enter into the contract. For this he expends his time, exerts his skill, uses his capital, and assumes the risks which attend the enterprise; and to deprive him of it, when the other party has broken the contract, and unlawfully put an end to the work,

would be unjust. There is no rule of law which requires us to inflict this injustice.

Upon the other ground, the conclusiveness of the judgment of that tribunal to whose decision the parties have voluntarily submitted their case, we are equally clear. Unless we overrule the decision of Mr. Justice Story in *Klein vs. Cataw*, 2 Gal. R. 61., we must hold, that the judgment of the Referee, upon all questions of law and fact, necessary to a determination of the matter submitted to him, is final, and binding on the parties, in the absence of fraud and under regular proceedings in which no improper conduct is alleged. We are satisfied of the correctness of this rule, which has received the sanction of Courts of great respectability, and among others, of the Supreme Court of Maine, in *Brown vs. Clary* 31 Maine R. 518, and of the Supreme Court of Massachusetts in *Boston Water Power Co. vs. Gray* 6 Mass. R. 131.

Our opinion is that the fourth and fifth objections are not tenable.

The remaining objections were, properly, not pressed at the hearing, and it is not necessary to notice them in detail. A Referee may certainly make a general award, provided it appears on its face to embrace, and finally dispose of, what was submitted to him. He is not bound in a case like this, to show what disposition he made of each item in a long and complex account. If this case had been tried by the Court and Jury the verdict and judgment would have shown no more particulars than are upon the face of this award, and the Court does not exact of a Referee of an action under a rule, any more fullness and particularity of finding than the law has deemed sufficiently certain in its own regular proceedings.

The result is, that the objections to the award are found insufficient, and it must be accepted.

The English Railway System.

One can scarcely conceive the rapid progress which the railway system has made in England, in the few years in which it has existed. It was in the year 1829, scarcely more than 25 years ago, that the Liverpool and Manchester Railway, the father of the English passenger railways, was opened for traffic. The estimated cost of this line was £510,000, but it subsequently swelled up to more than a million. On this it paid 10 per cent. for many years. It was the extraordinary traffic it had, and the consequent profit, which gave birth to other railways.

When the Liverpool and Manchester line had been made, and the fact of its extraordinary traffic and profit become known, railway schemes sprang up like mushrooms. Many, however, thought and maintained that the Liverpool and Manchester was an exceptional case. It was of moderate length, and connected a large importing and exporting town with one of the largest of manufacturing towns, which, it was urged, gave it advantages that no other line could expect.

As its capital was continually augmented to satisfy the requirements of its traffic, many contended that it was a great swindle, the dividends being constantly paid out of capital. Pamphlets by some of our cleverest engineers were written to prove it, and really they appeared to make out a very good case, for, as the profits of the line were continually expended on the increased works, the Directors were obliged to call up their additional capital to pay the dividends. And as the increasing capital exceeded the amount of the profits, some of the writers, taking no notice of the new works, insisted, and with some show of reason, that the railway, though dividing 10 per cent., was indeed a deeply losing concern.

The Stockton and Darlington, though declaring a dividend of 14 per cent., was looked upon to be nothing to the point, as it was a coal line traveling about 10 or 12 miles an hour, whereas the Liverpool and Manchester, did the distance, 30 miles, between Liverpool and Manchester in a hour or little better.

At length the Grand Junction railway between Birmingham and Newton, a village midway on the Liverpool and Manchester, was made and opened

at a cost of about a million for 82 miles. This line, which was made cheap, developed a traffic far surpassing that of its precursor, the Liverpool and Manchester, and soon divided 10, 12 and even 14 per cent.

The question of profit on railways was therefore now considered to be set at rest, and railways by scores were projected in various parts of the country.

Up to January 1st, 1839, acts were granted for the construction of 107 railways, the capital of which was £41,610,814; and loans £16,177,630: together \$57,788,444.—*Railway Magazine*, Vol. 6.

This was in 18 years, that is, from January 1st, 1826, to January 1st, 1839, and did not, therefore, include the Stockton and Darlington, and a few other coal lines. It was at the average of £4,422,188 per annum. But it was not uniformly at that rate.

In the year 1835 and 1836 railways were projected in enormous numbers.

From the beginning of 1839 to the beginning of the present year, the united capital and loans of the companies authorised have risen up to £366,769,733, that is, £308,981,389 more than they were 15 years before. During the 15 years ending with last year, railway companies have therefore obtained powers to expend on railways at the rate of £20,598,759 every year—an enormous sum regarded *per se*, but not a half, and scarcely more than a third, of the national yearly increase of wealth.

Let it not, however, be supposed that all this money has been expended on new lines. No, an immense amount of it has gone on old lines, and not so much on works of utility as in extravagant and reckless expenditure, partly on the lines and partly on profitless branches and extensions. Much of the extravagance is due to the Shareholders themselves, who, when their shares were at premiums, never cast a thought on the purposes for which the money was professed to be wanted. Whether it was for the benefit or the injury of the concern was alike indifferent to them provided premiums were to be got out of it. Some, we believe, were more displeased with their Directors who went on steadily, and tried to make the best of the undertakings than with those who heels-over-head ran into every wild whim that was presented to them. We hesitate not to assert that if there had been less cupidity in the Shareholders and an honest regard for the good of the property, there would scarcely be a trunk line in the kingdom which would pay less than 10 per cent., and many of them would reach 15 or 20 per cent. The fact is, the whole system of railways has been vicious from first to last. Parliament has acted badly, the Government has done the same, and has given up railways to the plunder of big wigs, engineers, contractors and land-owners; the Directors have been reckless, and the Shareholders seized with insatiable cupidity for premiums and jobbing in shares. Had railways been managed with anything like commercial prudence, they would have been the finest and safest of properties for investment.

The country, too, would have been in a far better situation with respect to them than it is. We should have had the system more developed, and the fares and tariffs much lower than they are.

Had our Government begun wisely, they would have divided railways into classes, say three, the first class to consist of main trunk lines, connecting all the great manufacturing towns and principal seaports with the metropolis; the second class to unite important places with the principal towns on the main trunks; the third class, towns and places of less note with others of greater. The first and second class lines should have two or more tracks, with the best gradients the country would afford. On the third, generally, a single track would be sufficient, and the gradients might not be so scrupulously attended to.

To ensure honesty of purpose and even something of moral integrity, the engineers ought to have been compelled to enter into heavy securities for the sufficiency of their estimates.

Could a tight envelop have been drawn round the consciences of members of Parliament, just to keep their integrity from evaporating, it would have been better. Better still would have been the institution of a tribunal to consider and decide on what railways should be made; for Committees of Parliament are by common consent about the worst tribunal that could be devised.

One may form some idea of the extravagance of railway construction from the excess of cost over the original estimates of some of them. The Bristol and Exeter was estimated at 1½ million, the amount expended is near 3½, and its powers, exceed 4¼ millions. The Great Western's estimate was 2½ millions, which was reduced to 2¼. Its cost, we believe, has been about 7 millions. The same is the case in the old London and Birmingham both in the estimate and cost. The North Midland's estimate was 1½ million. Long before it was completed it had cost 3 millions. The Croydon estimate was £140,000; we believe considerably above a million never paid for it. The Eastern Counties was estimated at £1,600,000 right up to Yarmouth, 126 miles. The Directors spent above 2 millions before they reached Colchester, 51 miles. Other railways exceeded in cost the estimates in similar extraordinary ratios.

It is difficult now to get at the precise facts in these cases, and one can only speak of them from recollection; but we believe we may say that English railways on an average have cost three times their estimates. Fortunately the traffics have very far outstripped calculation, and have continued ever since to increase, or it would have been much worse than it is. If the estimates had been kept to, or been exceeded only by the amount of the loans, that is, by one third of the capital, every line in the country would have paid handsomely, and we should now have had double the number of miles open that we have, that is, 16,000 for under 8,000.—*Herapath*.

Alabama and Tennessee Railroad.

We have before us a circular from the President of the Alabama and Tennessee River Railroad Company, proposing a novel, but it strikes us, a safe and practical plan for securing the construction of that road to the east bank of the Coosa river, a distance of a hundred miles from Selma. We copy from the circular of the plan:

"The plan suggested is this: That every stockholder who shall loan the Company on its 8 per cent. bonds, having ten years to run, secured by a second mortgage on 100 miles of the road, proposed to be issued, shall have the right to convert an equal amount of his stock now owned, or which may hereafter be subscribed for, into 8 per cent. preferred stock, that is: Any stockholder who shall loan the Company on its bonds say one thousand dollars, (or any other sum) shall have the right to convert an equal amount of the stock of the Company owned by him or her into 8 per cent. preferred stock, the dividend to commence on the completion of the road to the east bank of the Coosa river, and then to be paid out of the earnings of the road, (that is the earnings after the payment of the expenses of transportation, and all interest due from the Company and other necessary charges,) until the same shall amount to 8 per cent. per annum. It is confidently believed that on the completion of the road to the east bank of the Coosa river, its net earnings will be much more than sufficient to pay the full dividend proposed on the preferred stock to the amount of \$200,000, after paying interest and all expenses and other necessary charges, which amount will of course be increased as the road is extended."

The best friends of the road are sanguine that on this plan the road can be built without difficulty; it is recommended by the Board of Directors, and will be submitted to the Convention of Stockholders, to be held, as advertised in our columns, on the 18th of October. From a private letter from a well-informed source, which we have been permitted to peruse, we learn that the business on the road is continually increasing—that it has, for some time past, reached \$60,000. per annum.

The writer is confident that when it reaches the Coosa the business of the road will be increased four-fold, while the ratio of expenditure will be diminished. The expenses are now about 40 per cent. of the receipts.

The bond debt of the Company is now \$500,000, to run 20 years. Seven per cent. interest on this debt is \$35,000 per annum. It is proposed to issue and sell \$200,000 8 per cent. ten year bonds, the annual interest of which would be \$16,000 more, making the annual payment on account of bonds \$51,000. There seems little room to doubt that the business of the road, if completed to the east bank of the Coosa, will readily enable the Company to meet these payments, and, if so, it were difficult to conceive a more satisfactory arrangement for individual stockholders. The grading, bridging and mason work on the road, with the exception of a few light sections, is nearly completed 150 miles above Selma, and it seems a pity the work should stop, or be materially retarded for lack of means. We cordially commend the plan to the favorable consideration of the Mobile Stockholders.—*Mobile Advertiser.*

American Railroad Journal.

Saturday, November 4, 1854.

Caution.

As we understand a man named Crawford has been presenting bills to several of the advertisers in the *Journal*, purporting to emanate from this office, and to be for sums due the *Journal*, we deem it our duty to put our patrons on their guard.

Monies due this office should be paid to no one outside the office except the editor, proprietors, or Mr. N. Davidson, their business agent; or some person showing their written authority to receive them.

New Map—Pocket Edition.

We have now ready a few copies of Mr. Poor's new map of all the Railroads in the United States and Canadas put up in covers for carrying in the pocket. It will be found very convenient for travellers.

Price by mail \$1. Usual discounts to the trade. Address AMERICAN RAILROAD JOURNAL, OFFICE 9 Spruce st., New York.

Iron Works for Sale.

The attention of iron men and capitalists is invited to the advertisement of a "Rolling Mill for Sale" in this week's *Journal*. The works alluded to are desirably situated and well adapted to the iron manufacture in all its branches. The high prices which iron has maintained during the last two years has stimulated its manufacture in this country, and it is now carried forward at immense profits. It is generally believed, also, that our iron works are now established on a footing which will place them beyond the reach of unusual danger in cases of revulsions.

It will be seen that a charter may also be obtained if it is desired to work the mill on a Joint Stock basis. Rails can now be manufactured here at a much less price than an inferior quality can be imported for, and still leave a handsome profit to the maker.

In view of these facts, it would seem that the property now offered should command the attention of capitalists who wish to invest their funds in something sure to return good interest, and over which they can exercise some personal control.

Topographical Drawing.

Mr. JOHN WILEY, 167 Broadway, has favored us with a copy of a new work entitled "A Manual of Topographical Drawing," by Lieut. R. S. SMITH, U. S. A., Assistant Professor of Drawing in the U. S. Military Academy, West Point. This work is just from the press and is destined to fill a vacuum in the libraries of our Civil Engineers, which has long been deprecated as a serious misfortune. Our Civil Engineers in this country have been, preeminently, self made and self educated. If they had not the influence to get an appointment in the Military Academy at West Point; or the means necessary to enter some similar private institution, they were obliged to take the field in whatever capacity might offer a livelihood for the present, with a chance of learning something of the profession and of gradual promotion in the future. Formerly, the profession was not considered a lucrative one; an engineer was fortunate if he could find employment sufficient for his support. But, as we increased in wealth and improved in our tastes, science was called in, with her aids in the capacity of architects, engineers and surveyors. Magnificent and costly structures must be erected, canals must be excavated, railways must be constructed, and in this "age of gold" a fence cannot be "run," a floor laid, a path marked out, or a lot sold, without calling into requisition the level and transit; the pencil and brush; the axe, the rod, and the chain. The impetus which our internal improvements thus received taxed the engineer force of the country to its utmost, and doubtless called many into the profession who were fitted neither by nature or education for the situations they occupied. To palliate and eventually cure the latter defect, many books and tables have been prepared and published by eminent engineers, which have greatly aided their younger brethren in their labors and studies. Among these, however, there was no regular and thorough course of instructions to the draughtsman—the topographical draughtsman.

Although correct drawings of a work are one of the most essential features in its proper preparation, we think we shall not be disputed if we say that there is no other point in which our native engineers have proved themselves so deficient.—The maps of our works show it; the large number of foreign draughtsmen employed, attest it. Nor is it singular, for the migratory life which an engineer and his staff were obliged to lead gave little opportunity for the practice or instruction of drawing.

To become an efficient draughtsman requires time, taste, and intense application. Native genius may prompt a fancy sketch, and it is executed at once and without effort, for fancy is not arbitrary in her requirements; but a good mechanical or topographical drawing is quite another and far more difficult thing to accomplish. The material must be represented correctly and with the utmost precision; the picture must conform to the object, and not the object to the picture. In this case a man, though he be possessed of the genius of an Angelo must have instruction, application and practice before that genius can avail him.

LIEUT. SMITH tells us how to acquire the position of a ready and correct draughtsman. His "manual" embraces sixty two pages of instruc-

tions, explanations, tabular illustrations and problems besides seven large illustrative plates.—Every department of field and office drawing is fully elucidated and the manner of its execution explained; also instructions with regard to the use of colors, the preparation of tools, materials, etc., etc. The instructions and illustrations with reference to the projection, drawing, and copying of maps, selecting, and reducing scales &c., are particularly full and interesting. Some of the tabular statements are exceedingly valuable as economists of time. Altogether, we regard the work as a choice addition to the library of science and art and one which has long been wished for by the Profession. Able and experienced engineers should have it as a matter of economy, while each beginner and student will find it indispensable, and all will thus testify their gratitude to LIEUT. SMITH, and their appreciation of his labors.

Michigan Central Railroad Company.

We called attention last week to the extraordinary fact that the Michigan Central Railroad Company, for years, appear to have been declaring dividends from capital. We also called attention to the meagre and unsatisfactory reports put forth by the company from time to time. These reports at best are mere statements that so much money has been received and expended, without specifying for what objects. No estimates or vouchers of engineers are given. For ought appears, the money may have been expended in building a railroad to the North Pole. It is difficult to perceive how all the money could have been properly expended upon the company's road. The capital account has increased nearly two millions since the opening of the road to Chicago; a rate of increase which is unprecedented, and in our judgment demanding attention.

A part of this increase has undoubtedly gone to help the construction of other roads, as instruments of combating the Michigan Southern and other lines. While the managers of the Central have been pursuing their own schemes, the public have been kept quiet and unsuspecting by enormous dividends, for making which we can see no other motive, unless it be the object of original holders, to reimburse themselves their original outlay, and then sell out their stock at a high figure.

Whatever may be the explanation for the excessive dividends paid, there can be no satisfactory one for the style of reports put forth. They contain nothing necessary to be known, to a proper understanding of the company's affairs, or of the acts of the directors. They may cover any kind of jobbing and dishonesty. They seem to be any intended to throw a sort of screen around the directors, for the purpose of concealing their operations from the public gaze. If it could be seen what they have been about, we have no doubt much that is wrong would be disclosed.—We should think the stockholders would like to know whether any, and how much, of the money has gone to build other roads; and whether the money so expended is lavishly or wisely invested. It strikes us, that they have an interest in knowing how much of the money has been expended outside the legitimate objects of the company; and upon whose motion. The company's reports throw no light upon these subjects. We presume that there are not five persons; other than the direc-

tors, who have the least notion as to the manner in which the affairs of this company have been managed.

If stockholders maintain such indifference as to the management of their property, they must not complain if they wake us some morning and find it *vamosed*. Take the case of Schuyler and the New Haven Company. He preyed upon this road for years, while the victimized stockholders looked with the most stolid apathy. It required a thunderbolt to awaken them; but even such a warning may fail to convey any useful lesson. The stockholders in the Michigan Central must not complain if they should one of these days find that the *bottom* has fallen out of their buckets; and that they have eaten up the road in dividends, which they supposed to be declared from earnings.

Why the New Erie Loan will be Taken.

It is pretended by many that the new loan will not be taken. We are of the contrary opinion.—We believe that the new loan will be taken *on its own merits*, because the road is abundantly able to pay the interest and the principal, and because this is the only instance we know of where *eleven per cent.* of the loan is to be purchased and cancelled annually. In corroboration of our impression we subjoin the following figures:

	1852. Sept. 30.	1854. Sept. 30.	Increase, per cent.
Total cost of Erie R. R. \$28,307,375	\$34,850,000		23 1-8
Gross earnings.....	3,047,748	5,122,666	68 1-12
Transportation expenses..	1,728,344	2,740,960	58 1-2
Net earnings.	1,319,404	2,381,706	80 15-100
Per centage of net earnings on total cost of the Road, (\$28,307,375,) Sept. 30, 1852.....			4 661-1000
Per centage of net earnings on total cost of the Road, (\$34,850,000,) Sept. 30, 1854.....			6 834-1000

It must be borne in mind that the cost of the road is taken as it stood on the 30th of Sept., 1854, but a large proportion of the increase during the year was only effected in the latter part of it—the percentage given, therefore, is below the true one. Taking the *average cost* during the year, the percentage would exceed seven per cent. These figures are sufficient to show that the statements so frequently put forth that the *construction account* was increasing in a more rapid proportion than the net earnings are erroneous.

But even if the loan should not be taken on its *own merits*, we are sure that the stockholders, income and Convertible Bondholders, will, in that event, agree to take it because it is the only wise policy to be pursued, as the following figures show. We give round figures:

<i>Value of Securities under the anticipation of embarrassment.</i>		
\$10,000,000 Erie Stock at 29.....	\$2,900,000	
2,660,000 Erie Income bonds at 70..	1,820,000	
7,900,000 Erie Convertible bonds at 50.....	3,950,000	

Total.....\$8,670,000

Value of Securities under the anticipation of relief from embarrassment.

\$10,000,000 Stock at 45.....	\$4,500,000	
2,660,000 Income Bonds at 90.....	2,340,000	
7,900,000 Convertible bonds at 75...	5,925,000	

Total.....\$12,765,000

By these figures it is evident that the very securities which would be most seriously affected by any embarrassment on the part of the company have appreciated over \$4,000,000, that is, more than the total amount of the new loan proposed. Should the loan not be taken, the lowest quota-

tions here given would again rule, and the difference to the parties interested would exceed \$4,000,000. Will they prefer to lose \$4,000,000 by depreciation, or to lay out \$4,000,000 and receive in exchange an undoubted security, the very negotiation of which will probably cause an advance of 10 per cent. on the quotations of to-day, of both stock and bonds? This further rise would make an equivalent of \$2,000,000.—*N. Y. Times.*

Railroads vs. the Erie Canal.

The relative receipts of the canal from tolls and the freight receipts of Railroads, which connect with the Lakes and compete with the canals in their carriage, viz: the Erie, the Central, and the Ogdensburg road, have been as follows for five years, viz:—

	R. R. freight receipts.	Canal tolls.
1850.....	\$1,122,432	\$3,486,172
1851.....	3,102,453	3,722,163
1852.....	3,366,280	3,179,145
1853.....	4,824,519	3,168,546
1854 (estimated)...	6,000,000	3,000,000

thus showing an increase, in four years, of about five millions of dollars in the freight receipts of the three competing railroads, and a decrease in Canal tolls of more than *half* a million of dollars.

It will be borne in mind that the receipts of the railroads include the *entire* amount of transportation, while of the canals, only the tolls paid the State. The entire movement on the canal for 1853 was 4,247,853 tons, carried for an average distance of 165 miles. The entire movement of the above Railroads was 1,200,000 tons, carried an average distance of 100 miles. The relative service performed by each is as follows:

Tons carried one mile by the canal... 701,293,745
" " " " " " Railroad. 120,000,000
or six times greater service by the canal than by the *three* railroads.

While the canal makes but very little noise, it is doing a business equal to that of *eighteen first-class roads*. Such is the point from which to get a correct idea of this great work.

Fictitious Stock in Railroads.

One of the great evils connected with the construction of railroads, is the immense amount of *fictitious* capital which they are the means of imposing upon the public. No other contrivance affords such means for accomplishing such objects as railroads. The cost of our roads differ all the way from \$15, to \$90,000; so that \$45,000 is only *one-half* the cost of some roads, and *three* times the cost of others per mile. A scheme is set on foot. The difficulties in the way of its construction, and its immense prospective income are both magnified; one as screen under which stock and securities to the amount of \$40,000 are issued to build a road which in fact only costs \$20,000; and the other as a means of persuading the public to *purchase* such valuable securities, by which operation the lucky parties who have the scheme in hand pocket one hundred per cent. profit, while the duped public lose in the same ratio.

The evil complained of is glaring. Yet it is almost impossible to remedy it. The public have no means of forming an accurate idea of the real cost of a proposed road, or of correcting the estimates that are placed upon its income, and as results may be affirmed of a *poor* scheme, as extravagant as of a good one, and more is always said in favor of a poor, than a good one, for the reason that consciousness of having a sound project precludes all idea of the necessity of trumpeting its

merits, while the lack of such merits creates the necessity of inventing, and insisting upon them. It is too often the case that the general character of the parties controlling such works, is no evidence in favor of them, as it is not considered *dishonorable* among the great mass to make use of any of the above modes for making money.

There is no doubt that the public have been severe sufferers from the great quantity of fictitious, or *bogus* securities imposed upon it, which accounts for the disgust felt by so many toward one roads. Where is there a road whose stock has not been inflated in the manner indicated? Take an illustration within the observation of all, that of the great High Priest in this kind of iniquity, the *New York Central*, and see what wrong resulted from the dividend of the *supposed* value of its stock above *par* at the time of the consolidation. The companies issued and divided among the stockholders, nearly \$10,000,000, in bonds, which became a part of the capital account, while it does not represent a penny paid into the road. Now although this was a public act, only a very small part of the community ever heard of it, and fewer understand anything about it, but bought into the stock after the consolidation, under the idea that it was worth just as much after as before. Such a case came under our observation only a few days since. A distinguished clergyman, a trustee for orphan children, had occasion to invest their money soon after the consolidation, and never having heard any thing about it, or at any rate, which it signified, bought the stock at the highest figure it was then going at. Of course he now finds the market value of his investment some 25 per ct. below cost; and his wards without dividends, or means of support. A vast amount of the stock of the Central has been purchased for similar objects, with similar results; and the holders understanding *why* they are without dividends, of course have no very high opinion of the tone of railroad management, or the value of railroad property. We take the case of the Central as a palpable one of the kind; as one of the most successful, and at the same time most unjustifiable swindles upon public credulity.

The Central was a case where dividends were paid, being the excess of the estimated value of the property of the company above *par*; time has proved the incorrectness of the estimate.

The more common case is to affirm similar results of *unfinished* roads, and to realize the excess of value long before the road is opened. This is the favorite mode of imposing upon the public, as the fraud in the outset is more difficult of detection, and can be excused as a *mistake* of judgment, when detected.

It always happens that schemes that are most worthless in themselves are loaded with the greatest amount of fictitious, or *bogus* stock, or bonds. The reason is, that the object of such schemes is a swindle. Where men put their money into a project, *bona fide*, they are pretty certain to look after it, and not allow its capital to exceed the *cost* of the road. If the purchasers of securities desire a test by which to distinguish a sound from an unsound, or fictitious project, let them ask for the list of stockholders, and the sums paid by them in *cash*. Where there is a large and responsible list of subscribers, and who are not in the *direction*, or *management* of the road, it shows that

there is money in the project, and that consequently it will be well managed. A man's care generally follows his money. On the other hand when the stock in a road is taken by a few parties, the almost unavoidable inference is, that such parties intend the public shall build the road, while they pocket the profits. To correct these abuses, purchasers have only to look into the matter themselves, to refuse to take any security that is not based upon a large, paid up, cash subscription. Acting upon such rule, they can hardly make a mistake. By violating it they only lend themselves to the frauds against which they complain.

(For the American Railroad Journal.)

Locomotive Engines.

The "Old Engineer" who accuses Mr. Colburn of "stating facts which are notoriously otherwise" and of "looking one way and rowing the other," and who would induce your readers to believe that Mr. C., is entirely ignorant of the subject of which he writes, has only proved himself so: his direct contradictions unsupported by any evidence do not come with any good grace from a man whose object in writing is to "assist to impart information in which assumption should not be the predominant feature.

No one acquainted with the production and application of steam, to locomotion, can overlook the advantage arising from the use of cylinders of great length and small diameter. The longer the stroke, the greater may be the diameter of the wheel; the greater the diameter of wheel, the fewer the number of revolutions per minute for any speed; the fewer the number of revolutions, the less the velocity of piston, and the more moderate the reciprocations of machinery, and consequently, the wear and tear. The slower the motion of the piston the better chance has the steam to make its entrance and exit from the cylinder—and the more completely do we obtain the value of its pressure. The slower the motion of the piston the slower the consumption of steam—as also the production. The slower the production, the greater the economy of production; and economy in working a locomotive, is an object of primary importance in railway management.

Mr. C. is quite right in saying that with a smaller diameter of cylinder and consequently a less pressure on the head, that there is less tendency to sinuous motion. The centre of sinuous motion is the centre of gravity of the engine (a little forward of the driving axle). The leverage is the distance from the crank-pin to the cylinder head, and the steam pressure on the cylinder head, the power; consequently the less the pressure the less the sinuous motion.

Of course the lateral vibration is greatest at the after end, as that point is at the greatest distance from the centre of motion. The "Old Engineer" is wrong in making the sinuous motion due to the reciprocating machinery. The weight of crank-pin and connecting rod is balanced by the counterweights at the rim of the wheel. The sinuous motion in a locomotive is caused by the difference in the time of action of the two pistons. If both pistons moved in the same direction at the same line, there would be no sinuous motion, even were the wheel unbalanced. In the first quarter revolution, the pistons move together; in the second, in opposite directions; in the 3d, together, and in the 4th opposite; and the sinuous motion is produced while the motion is different.

Of course the efficiency of the Winaus' engines depends in a great degree on the small wheels and the great adhesion, but the very element which, combined with the small wheel, produces the maximum useful effect for freight locomotives, is the long stroke.

Mr. C. is not wrong in recommending a large driving wheel. Such an adoption does not necessarily increase the weight of the engine (except the wheels. As to raising the centre of gravity, this objection is overcome by adopting Crampton's arrangement; or by placing the boiler below the driving axle; or by the application of a combustion chamber; all of which have been proved practicable. As to shortening the smoke-stack, we might as well object to high-heeled boots on the ground of their lowering the crown of a man's hat. As to affecting the exhaust pipe, the fact that engines on both broad and narrow gauge in England, have worked 8 feet wheels at 70 miles per hour, is enough to set aside this objection, even coming, as it is from an "Old Engineer."

If our old friend has not outlived the possibility of further acquirements, I would suggest that he reads "Clark on Railway machinery."

I have not said this much to find fault with an "Old Engineer" but to disabuse any one who may be reading Mr. C's article on locomotion.

Very respectfully,

GEORGE L. VOSE.

Portland, Oct. 27. 1854.

Pennsylvania Railroad.

HISTORICAL SKETCH.

Previous to the construction of the most improved highways now in use, the city of Philadelphia, from her favorable position, was in possession of the trade of the interior of the country, particularly of the Western and South-Western States. She had the easiest access to the Ohio River, and as this, with the rivers with which it is connected, served as the channels of commerce for the vast territory watered by them, Philadelphia was the most convenient centre, or depot, for the internal trade of the country; and, consequently, remained the largest and most important city, so long as the ordinary highway was the best means of conveyance known. Of all the Atlantic cities, Baltimore alone maintained a feeble competition for the trade of the great valley. New York and Boston was entirely cut off from this trade, except through the above cities, by the enormous cost of transportation between N. York and Lake Erie, which so late as 1820, was \$100 per ton, and a still larger sum between Boston and the same point.

The opening of the Erie Canal instantly reduced the cost of transportation of its route from one hundred to ten dollars per ton. No sooner was this grand work completed than it became the outlet of all the upper portion of the Mississippi Valley. To reach it all the North-Western States immediately commenced the construction of similar works, terminating upon the Lakes, which secured to New York a monopoly of the trade formerly engaged by Philadelphia. To recover this trade the State of Pennsylvania commenced the construction of a work similar in character and objects, the Pennsylvania Canal. It was found impossible to cross the crest of the Alleghenies by a water line, and the intermediate break had to be supplied by a railway, consisting of numerous plans, worked

by stationary power. This new line to the Ohio, though of vast importance to Philadelphia, restoring a portion of the trade she had lost, failed to secure all the results predicated of it, from delay and expense incurred by the break in the canal, and the use of the portage railroad; and as soon as the time had demonstrated the capacity of railroads to compete with water routes, the Pennsylvania Railroad was commenced for the purpose of restoring Philadelphia to what her citizens believed to be her proper place in the ranks of American cities.

The Pennsylvania Railroad was chartered on the 13th of April, 1846, with authority to construct and maintain a railroad between Harrisburgh and Pittsburgh. The charter required a subscription of \$2,500,000 to the capital stock of the company as a condition precedent to its organization. It conferred the ordinary franchises and powers, with the right to take land and material necessary for the construction of the road; but authorized only the holding of such real estate as might be required by the business of the road. It provided that the debts of the corporation should never exceed one-half of the paid up capital stock, and that no part of the capital, or funds, should ever be loaned to any officer of the company. The directors, were all to be citizens of the State. The charter also provided that no holder of shares transferred within 60 days preceding the election of the directors, or general meeting of the stockholders, should vote at such meeting, or election; and that no persons, (excepting females,) living within ten miles of the place of such meeting should vote by proxy; that no person shall represent by proxy more than three stockholders, and that no proxy should be valid unless executed within three months from its use, and acknowledged before some person authorized to take such acknowledgments. The charter also provided, that the Legislature shall charter no other company with a right to construct a railroad upon a parallel route. No compensation is to be allowed to the directors, except to the President. Dividends are not to exceed the net earnings, and in case of such excess the directors are to be liable therefore: but the company were authorized to pay interest on the stock subscriptions at the rate of 6 per cent. till the road was completed; earnings of the road in the mean time being credited to the cost of construction. The company were authorized to construct branches to the city of Erie, to Blairsville, to Uniontown and to any part of the counties through which the road might run. The charter also required a full report of the doings of the company to be made annually, and published in the newspapers, and in pamphlet form. The amount of capital stock authorized was \$10,000,000, which amount was, by amendments increased to \$17,500,000. The company were authorized to charge a rate of toll not exceeding three cents per mile for through, and 3½ cents for way passengers. The company are to pay to the use of the State at the rate of three mills per ton, per mile, for every ton of freight transported over the road, as a protection to the State works.

The State also reserved the right to purchase the road at the expiration of 20 years at cost, with 8 per cent. interest thereon, deducting the profits of the company; but if this right should not be exercised, then the right of the

company to continue for a further period of 20 years; and so on, from 20 years to 20 years. The charter also authorized subscription to the stock of the company by the counties of Philadelphia and Alleghany, and by the cities of Philadelphia and Pittsburgh, but provided that the private stockholders shall always elect a majority of the directors.

The work of construction was commenced in July, 1847, and 60 miles of the road, from Harrisburg to Lewiston, was opened in September, 1849; and in September, 1850, to Hollidaysburg, a distance of 71 miles; there connecting with the State Road, crossing the Alleghany Bridge. On the western division, the road was completed from Johnstown, the western terminus of the State road to Lockport, a distance of 18 miles, in August, 1851; from Lockport to Beatty's, 22 miles; from Pittsburgh to Turtle Creek, 12 miles, in December, 1851; and from Turtle Creek to Beatty's 27 miles in December, 1852. The mountain division of 36 miles was not completed till February, 1854, up to which time the road was worked in connection with the State road,

ROUTE AND CONNECTIONS.

The route of the road is favorable, with the exception of crossing the mountains. From Harrisburg to Altoona, a distance of 131 miles, the steepest gradient going east, is only $10\frac{1}{2}$ feet to the mile, and going west, 21 feet to the mile.—From Altoona to the summit, a distance of 12 mile the ascent overcome is 993 feet, equal to an average gradient of 82 75-100 feet to the mile. The maximum grade on this part of the road is 95 feet to the mile, which upon curves is reduced in proportion to their radii. From the summit west to Pittsburgh, a distance of 105 miles, the steepest descent is $52\frac{1}{2}$ feet to the mile. The difference in elevation of these two points, 1,461 feet. The elevation of Pittsburgh above tide water is 700 feet; of the road-bed in the tunnel, by which the Alleghany range is crossed 2,161 feet. The elevation of the passenger station at Harrisburg is 310 feet.

The summit tunnel is 3,760 feet long. With the exception of the mountain division, the route is a very favorable one, and probably is the only practicable one for a direct line between Harrisburg and Pittsburgh. The key to the passage of the mountains is the Juniata valley, so that in addition to Legislative protection, the company have a still stronger one against rival lines, in occupying the only feasible route.

The eastern terminus of the road is practically based upon Philadelphia, with which it is connected by the Columbia Railroad, a State work, and by the Harrisburg and Lancaster road, now run by the Pennsylvania road. All these roads form complements of one line, and will probably be eventually consolidated under one management, or the Pennsylvania company will construct an independent line between Harrisburg and Philadelphia, for which a favorable route may be found through the Lebanon valley. There seems to be little doubt that the State will, before many years, dispose of her public works to private companies; in which event, the Columbia will undoubtedly be secured to the Pennsylvania road; though it may be doubted whether such consolidation would increase the value or profits of the latter, as experience seems to show, that a termination in a large

city frequently adds more to the cost of maintaining it, than is gained by such connection.

From Harrisburg, till the road descends the western slope of the mountains, no connection of importance is practicable from the topography of the country. On crossing the mountains, the first important connection made is the North-western railroad, designed to connect the Pennsylvania road and the city of Philadelphia, with Lake Erie at Cleveland. This road is in progress. The next important tributary line is the Hempfield, branching from the Pennsylvania at Greensburg, and extending westwardly to Wheeling, a distance of 80 miles. This road is well advanced, having been largely aided by the city of Philadelphia. At Wheeling the Hempfield road will connect with the Cleveland and Wheeling, the Ohio and Central, and the Marietta and Cincinnati, and through these with nearly every important road in Ohio, Indiana and Illinois. At Pittsburgh, the Pennsylvania road will connect with the Ohio and Pennsylvania, and the Pittsburgh and Steubenville roads, both extending into Central Ohio, and both prolonged by other lines into Indiana and Illinois, and soon to be carried to the Mississippi River. No road in the country has more extensive western ramifications, and none is in better position to command a large portion of the trade of the interior.

At its eastern terminus, the Pennsylvania Railroad connects, as before stated, with the State line leading to Philadelphia: also with the Tide-water Canal, a State work, and which, in fact, is the continuation to tide-water of the Pennsylvania Canal; also with the line of Railroad extending to Baltimore. Should the proposed Railroad from Easton to Harrisburg be constructed, the Pennsylvania Railroad will have ample and convenient outlets for its immense traffic to the three great Atlantic Cities of Philadelphia, Baltimore and New York, for all of which it will form the shortest avenue to the Ohio River.

SOURCES AND CHARACTER OF BUSINESS.

The Pennsylvania Railroad is what may eminently be termed a *through* route, not for the want of a very large *local*, but from a still larger *through* business. The important relations sustained by Pittsburgh to Philadelphia must secure to the road an enormous *through* traffic, not to estimate the business brought to it by means of its numerous connection, among the most important of which is the Ohio River, which must always continue as the great route for the movement of heavy freight. The City of Pittsburgh already numbers 100,000 people, and has a growth as rapid as the most flourishing of American cities. The numerous lines of Railroad intersecting the road west of the mountains, among which are a number of first class roads, look to the Pennsylvania Railroad as their great trunk to tide-water.

The immediate route of the road supplies a very large business, which is capable of indefinite increase from the immense resources of the country traversed, both in soil in minerals, which is exceeded, probably by no portion of the State. A very large portion of the line of the road is overlaid by beds of iron ore and coal, both of which are now extensively worked, and active measures are in progress for their further development.

As the road was only opened the present

year, the earnings of the successive divisions are no criterion of the future earnings of the whole line. The entire earnings for 1853, were \$2,774,889, of which \$1,507,520 were from freight; \$1,145,908 were from passengers, and \$182,663 from mails and miscellaneous. The receipts for the year ending Jan'y 1, 1853, were from freights \$780,892; from passengers \$1,080,840; miscellaneous \$82,095; total \$1,942,827. The receipts for the year ending January 1, 1852, were from freight, \$326,827; from passengers \$404,771; miscellaneous \$23,075; total \$754,674. The total receipts from the date of the opening of the first division to Uniontown, on the first day of September, 1849, to Jan'y 1, 1851, were, from passengers, \$229,142; from freight \$101,621; miscellaneous \$8,689; total \$339,452.

The total amount expended up to January, 1854, was \$14,360,637 64. The total estimated cost of the road, with a double track, and ample equipment, is \$16,655,000. The probable receipts for the present year will be \$3,600,000, which, deducting 60 per cent. for expenses, will leave a net revenue of 84 per cent. on the whole estimated cost.

[A full notice of the above road is deferred till the publication of the next report of the company, which will cover their operations for the present year.]

Philadelphia and the Lakes.

The completion of the Catawissa and Williamsport Railroad from "the Junction," 8 1-4 miles west of Tamaqua, in Schuylkill county, to Milton, in Northumberland county, 63 1-4 miles, gives the citizens of Philadelphia a railroad connection with the lakes, with but 21 miles of staging, or boating, from Uniontown, 7 miles above Milton, to Williamsport. In a month or six weeks, that connecting link, which is a portion of the Sunbury and Erie Railroad will be finished, and then we can breakfast in this city, dine at Milton, and sup in Elmira, New York, a prominent point on the New York and Erie Railroad, a distance of 231 miles from Philadelphia. The advent of the new road was celebrated yesterday by a large number of gentlemen, who started from Broad and Vine streets on an excursion over the new improvement. The road passes through a beautiful section of country, and gave those participating in the pleasures of the trip an opportunity not only of examining the Catawissa and Williamsport road, but also seven miles of the Sunbury and Erie Railroad, the Little Schuylkill road, and the favorite Reading road leading to the coal regions of Schuylkill county.—*Com. List.*

Opening of the Central Ohio Railroad.

This great event took place on last Saturday.—So, then, the great work is accomplished, and now Baltimore has a railroad communication with Cincinnati, Louisville, Columbus, Cleveland, Indianapolis, Chicago and Alton.

The running of trains over the Central Ohio road will commence to-day, and on Wednesday fortnight (November 15,) it will be formally opened by a grand excursion, in which will be represented all the great cities of the East and the West. The invited guests from the cities East of Baltimore, will reach here on Monday, the 13th, and will take a special train over the Baltimore and Ohio Railroad with the guests from Baltimore, to Wheeling, where they will arrive early on the 15th. They will then go on to Zanesville, to Columbus, to Cincinnati, and if they desire, to Indianapolis, and other cities. There will be an entertainment at Zanesville and Columbus, for which the most bounteous arrangements have been made.

The completion of the Central Ohio Railroad consummates one of the great designs for which

the Baltimore and Ohio Railroad was made. It opens a direct railroad line from Baltimore to the interior of Ohio, where it unites with thousands of miles of railroads already completed, thus connecting it with all the important cities and towns of Ohio, Indiana, Illinois and Michigan, and opens the most direct, and of consequence the most favorable route, between all the Eastern Atlantic cities and the great West!

The result of the completion of the Central Ohio Railroad will soon show itself in the increased travel over the Baltimore and Ohio Railroad, and thus open to our markets new trade, and secure to Baltimore the great advantages which her position gives her as the commercial city for the great West—advantages with which the West sympathizes, and in which it will fully share.—*Patriot*.

Sinking Funds--Mason Company Railroad Bonds.

The county of Mason, in the state of Kentucky, having issued to the Maysville and Lexington railroad company \$200,000 of their six per cent. bonds, redeemable in thirty years, has recently, by virtue of a special law of the state, made a levy of five cents on the hundred dollars, to be applied exclusively as a sinking fund for the liquidation of these bonds, a levy having been originally authorized and made, and collected for the interest thereof. This tax for the sinking fund will yield from six to eight thousand dollars per annum, and be ample to cancel the entire debt. In the West much attention has of late been given to the creation of similar sinking funds, to meet at maturity the debts of cities, counties and railroads.

Erie Railroad.

There have been some remarks made upon the discrepancy between the statements of the receipts of the Erie Road as stated in the Committee's Report, and as given in the proposals for the loan. This discrepancy was occasioned by the omission in the committee's report to include the several items of miscellaneous receipts. The correct statement is as follows:

EARNINGS OF THE NEW YORK AND ERIE RAILROAD.

From	1851'52.	1852'53.	1853'54.
Passengers.....	\$1,286,732	\$1,601,209	\$1,751,791
Freight.....	1,761,017	2,537,214	3,370,875
Total.....	\$3,047,749	\$4,138,423	\$5,122,666
Storage.....	1,478	3,458	3,854
Telegraph.....	.....	243	226
Rents.....	14,809	17,191	15,695
Mails.....	84,796	110,708	116,628
Miscellaneous.....	47,472	48,935	82,291
Ferry.....	122,419	.....	.....

Totals.....\$3,318,725 \$4,318,962 \$5,341,363

The earnings of the Hudson River Ferry, New York to Piermont, for the years ending Sept. 30, 1853 and 1854, are included in the freight and passenger earnings.

The month of September, 1854, is partially estimated, but the figures will not vary materially from the amount estimated.

Baltimore and Ohio Railroad.

The Stockholders of the Baltimore and Ohio Railroad Company met in Baltimore, on Monday the 23d ult. The following Directors were appointed, five of them being old members: John Hopkins, Columbus O'Donnell, Chauncy Brooks, Benjamin Deford, Edward Patterson, Andrew Gregg, Wm. A. Hack, Wm. Lamping, Marcus Denison, Francis Burns, Wesley Starr, and Nathan Tyson. For the year ending Sept. 30, 1854 the receipts of the Road have been \$3,648,108, 67 from the main stem; and \$370,332 37 from Washington branch, which compared with last year shows an increase of \$1,634,282 17 on the main stem, but a falling off of \$29,608 17 on the Washington branch, which was caused entirely from the circumstance, that in March of 1853, the President was inaugurated, which drew large crowds to Washington, the receipts in that month amounting

to \$54,153 02—being nearly \$22,000 over the March of 1854.

The aggregate receipts of the company for the past year, exceed four millions of dollars.

Western and Atlantic Railroad.

The earnings of this Road, for the year which expired on the 30th ult., are

From freights.....	\$395,956 31
" Passengers.....	169,335 10
" Mail.....	13,983 20
" Sales and Materials.....	11,880 17

Amounting to..... 591,154 78

The expenses of working and maintaining the Road for same period, are.....	\$259,455 54
Less various credits.....	6,423 76

Net earnings.....\$338,123 00

The amount paid for machinery, cars and construction is.....	\$324,542 34
Less credit.....	37 10

..... 324,505 24

An exhibit in details, showing the objects of these expenditures, classed under appropriate heads will be found in Table A.

The gross earnings, year ending Sept.

30, 1853.....	\$478,876 06
Same time for 1854.....	591,154 78

Increase earnings..... 112,278 72

The expenditures for the year ending

Sept. 30th, 1853.....	\$701,177 05
Same time for 1854.....	577,537 02

Decreased expenditures.....\$123,640 03

Independence Railroad, Va.

This is a line of road intended to connect Cincinnati directly with Baltimore, via Marietta, the North-western Virginia, and the Baltimore and Ohio Railroads. The western terminus is fixed by the charter at Williamstown, Virginia, on the Ohio river, directly opposite Marietta; the eastern terminus was not defined, except that it should be some point upon the North-Western Road. The point selected as the Eastern terminus, is known as Williamson's, 28 miles from Marietta, and 39 from Parkersburg; making the total distance from Cincinnati to Baltimore, over this line 556 miles, being 7 miles less than via Belpre and the Parkersburg road; and 84 less than by way of the Central Ohio road and Wheeling.

Cincinnati and Chicago Railroad Company

An election of directors for the Ohio division of this company was held in this city on Monday the 9th inst., when the following board was elected: C. B. Smith, Samuel L'Hommiedieu. R. M. Corwine, Thomson Neave, S. B. W. McLean, Cincinnati; M. G. Bright, Madison, Indiana; James Sample, Butler County, Ohio; Sam'l Martin, Isaac Bates, Hamilton county, Ohio. The Board was organized on the same day by the election of C. B. Smith, President; Stanhope S. Rowe, Secretary.

Philadelphia, Wilmington and Baltimore Railroad Company.

The Philadelphia, Wilmington and Baltimore Railroad have postponed their dividend to January in consequence of having expended their earnings in improvements. They do this in preference to selling their assets, such as bonds, real estate, steamboats, stock, etc., at depressed prices. The net earnings for the six months ending August 31, 1854, have been, after deducting the usual appropriation to renewal fund of \$30,000, a little over 3

per cent. The company have on hand and unsold \$190,000 of bonds, authorized to be issued in January, 1853, for improvements, other than the bridge and double track, also \$350,000 of other assets.

Kennebec and Portland Railroad.

At the late annual meeting of this company, the following gentlemen were chosen directors for the current year:

Ruel Williams, Geo. F. Patten, J. D. Lang, Jos. McKeen, M. S. Hagar, W. D. Sewall, F. T. Lally, B. A. G. Fuller.

Indianapolis and Cincinnati Railroad.

At the late election of directors of the company, the following gentlemen were elected: Thomas A. Morris, Harvey Bates, James M. Ray, Indianapolis; C. Worthington, P. Outcalt, Cincinnati; L. B. Lewis, H. K. Hobbs, Lawrenceburgh; Joseph G. Monfort, A. R. Forsyth, Greensburgh.

Notice to Contractors.

PROPOSALS are requested until the fifteenth of November next, for the graduation and masonry of twenty miles of the Third Division of the Pacific Railroad of Missouri, extending from Gray's creek, near Jefferson City, to the summit of the country westward. The work is divided into sections. Payments will be ninety per cent. in cash and 10 per cent. in bonds.

A profile of the work and the quantities can be seen at the Resident Engineer's office, Jefferson City, or at the office of Kirkwood, Porter & Co., at the same place, where further information can be obtained of Mr. Porter. The line is ready for examination and the work can be commenced forthwith.

Proposals will also be taken, any time during the next six weeks, for fifty miles or more of the work beyond the above mentioned twenty miles, subject, however, to the directions of the Railroad Company as to the time of commencement of this last mentioned work.

Information as to the general character of the work can be obtained at the Engineer's office of the Pacific Railroad Company, St. Louis.

KIRKWOOD, PORTER & CO.

Jefferson City, 24th Oct., 1854 44. 2t.

Iron Rolling Mill Property for Sale.

The particular attention of capitalists desiring to enter AT ONCE (WITHOUT THE DELAY of putting up new works,) into the manufacturing of Iron, is called to the following:

The mill is situated UPON TIDE WATER (and ACCESSIBLE at ALL SEASONS of the year for shipments) between New York and Philadelphia—Coal can be had at the very lowest rates—and in point of convenience and situation is perhaps SECOND to NONE IN THE COUNTRY. In ADDITION to its PRESENT adaptation to the manufacture of MERCHANT AND BOILER IRON, it has machinery in operation for making WROUGHT IRON RAILROAD CHAINS AND SPIKES, and could readily be prepared for MAKING RAILS together WITH ALL THE advantages of a first-class establishment. It is well known that in the present prosperous condition of the business THE PROPERTY WILL PAY ITSELF IN ONE YEAR and the reason of the property being disposed of, is that the owner is engaged in a heavy business in the State of New York. A VERY LIBERAL SPECIAL charter may BE BOUGHT, under which the Mill can be worked, if wanted. It is needless to say more, as parties interested can obtain all information by applying to

J. WOOD & SON,

76 South 4th street, Philadelphia.

P. S.—A portion of the purchase money may remain on the property, or otherwise. 44. 4t.

New Work on Engineering Drawing.

JOHN WILEY, 167 Broadway, New York,
has now ready:

A MANUAL of TOPOGRAPHICAL DRAWING,
by Lieut. R. S. SMITH, U. S. Army, Assistant
Professor of Drawing in the U. S. Military Academy,
West Point.

Illustrated with numerous colored plans and
drawings, 1 vol. 8vo. Price \$1.60.

*** Mailed to any part of the United States,
free, on receipt of the price of the book.

"The great activity which prevails in regard to
internal improvements, is constantly calling into
the field numbers of young engineers, and already
many instructive works have been addressed to
them on almost every detail connected with their
profession, except map-making.

The design of this manual is, to be a practical
assistant and office companion, to be consulted on
all matters, connected with Topographical Drawing,
from the first sketch of a preliminary survey,
to the complete map."—*Extract from preface.*

*** A large assortment of Engineering and
Mechanical works kept constantly on hand, cata-
logues of which will be furnished gratuitously on
application as above. 44 2t.

WANTED.—To take charge of the sale or in-
troduction of certain valuable **PATENTED**
MECHANICAL INVENTIONS, a person who can
furnish satisfactory evidence of character and
ability, for such business.—Address, stating views
as to remuneration, &c., L. P. C., Post Office, New
York. 44 3t.

The Lowell Machine Shop

CONTINUES to manufacture to order, **FREIGHT** and
PASSENGER LOCOMOTIVES of different classes,
with the most modern improvements,—

also **MACHINISTS' TOOLS**,
especially adapted to Railroad Repair Shops, and to the con-
struction of machinery generally. These Tools are of the most
approved construction and consist in part of Engine Lathes,
Hand Lathes, Vertical Drilling Lathes, and Planers of various
sizes and lengths, Compound Planers, Shaping Machines, Slot-
ting Machines, Bolt and Nut Machines, Gear Cutting Engines,
Chucks, Compound Slide Rests, Machines for boring Crank
Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c.

COTTON MACHINERY of all descriptions, **BOILERS**,
SHAFTING and **MILL WORK**, **CASTINGS**, and all work
usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Supt, Lowell, Mass.
J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

NEW YORK AND ERIE RAILROAD LOAN.

N—The Committee appointed to report in re-
gard to the financial affairs of the New York and
Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed propos-
als, to be opened on the 10th of January next, for
the purchase of \$4,000,000 7 per cent. Bonds, re-
deemable in twenty years, with interest, coupons
payable 1st February and 1st August.

And that for the purpose of gradually reducing
the debt of the Company, the New York and Erie
Railroad Company pledge themselves in said Bonds
to pay monthly, commencing on the 1st of March
next, the sum of thirty-five thousand dollars into
the hands of Trustees, to be by them invested, as
well as the accruing interest on the investments, in
the Bonds of the New York and Erie Railroad
Company of the new issue, as long as they can be
purchased at or under par. And that whenever
the said Bonds of the new issue cannot be pur-
chased at or under par, then the said Trustees to
invest the said monthly payments and the accru-
ing interest in any Bonds of the New York and
Erie Railroad Company which can be purchased
at or under par.

And whenever it shall be impossible to purchase
any of the Bonds of the New York and Erie Rail-
road Company at or under par, then the said Trust-
tees shall invest the said monthly payments and
all accruing interest in such Bonds of the New
York and Erie Railroad Company as can be pur-
chased at the lowest rate.

And all Bonds on being purchased by said Trust-
tees shall be canceled by writing or printing on
the face "Held by the Sinking Fund of the New

York and Erie Railroad Company," but that the
interest warrants on said cancelled Bonds shall be
collected by said Trustees, as they become due,
until the monthly payments of the New York and
Erie Railroad Company and the accruing interest
or the conversion of convertible Bonds into Stock
of this Company, shall have reduced the entire
debt of the Company to \$20,000,000. After which
the said monthly payments shall cease, and the
trust vested in said Trustees shall be closed, and
all cancelled bonds and the unpaid interest war-
rants delivered to the Company.

And the Committee would further recommend
that the Board of Directors adopt the following re-
solutions:

Whereas, The period has arrived when it is ex-
pedient and necessary to close the construction
account of this Company, to be reopened only
when the imperative necessity of the increasing
traffic on the road, and the state of the finances
of the Company will render it perfectly evident
that it is proper and justifiable to reopen it, so
as to increase the present capacity of the Road.—
Therefore

Resolved, That any and all future expenditures
beyond the amount to be derived from the pro-
ceeds of the new loan, after reimbursing the In-
come Bonds due 1st February next, be charged to
transportation expenses.

Resolved, That as often as the Bonds purchased
by the Sinking Fund amount to 10 per cent. on
the Capital Stock, this Company will, upon re-
ceiving due authority from the Legislature of this
State, declare at the next semi-annual dividend
day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in
the daily papers, so that the public have cogni-
zance of the future policy of the Company.

(Signed.)

CHARLES MORAN.
SHEPHERD KNAPP.
WILLIAM E. DODGE.
NELSON ROBINSON,
GEORGE F. TALMAN.

Special
Finance
Committee.

New York, Oct. 21, 1854.

Sealed proposals will be received at the office
of the **NEW YORK AND ERIE RAILROAD COM-
PANY** in the City of New York, until the 10th of
January, 1855, for the purchase of \$4,000,000 of
the bonds of the Company, bearing 7 per cent. in-
terest payable semi-annually on the 1st day of
February and August, redeemable in twenty
years.

The **NEW YORK AND ERIE RAILROAD**
COMPANY pledge themselves in said bonds to
pay monthly, commencing on the 1st of March
next, the sum of thirty-five thousand dollars into
the hands of the United States Trust Company of
the city of New York to be by them invested,
as well as all accruing interest, in the bonds of the
NEW YORK AND ERIE RAILROAD COMPANY
of the present issue, as long as they can be pur-
chased at or under par; and whenever the bonds
of the new issue cannot be purchased at or under
par, then the said trustees shall invest the said
monthly payments and the accruing interest in any
bonds of the **NEW YORK AND ERIE RAILROAD**
COMPANY which can be purchased at or under
par. And whenever it shall be impossible to pur-
chase any of the bonds of the **NEW YORK AND**
ERIE RAILROAD COMPANY at or under par,
par, then the said trustees shall invest the said
monthly payments and the accruing interest, in
such bonds of the **NEW YORK AND ERIE RAIL-**
ROAD COMPANY as can be purchased at the low-
est rates. And all bonds when purchased by the
said trustees shall be cancelled by writing or
printing on their face: "Held by the Sinking Fund
of the **NEW YORK AND ERIE RAILROAD COM-
PANY**;" but the coupons on such cancelled bonds
shall be collected by said trustees as they become
due, until the monthly payments of the **NEW**
YORK AND ERIE RAILROAD COMPANY, and
the accruing interests, or the conversion of conver-
tible bonds into stock of the Company, shall have
reduced the entire debt of the Company to \$20,-
000,000. After which the said monthly payments

shall cease, and the trust vested in such Trustees
be closed, and all cancelled bonds and the unpaid
interest warrants delivered to the **NEW YORK**
AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay
10 per cent. in cash on the notice of the accept-
ance of their bids; 20 per cent. on the 20th of
January; 30 per cent. 1st February; 20 per cent.
15th February, and the balance on the 1st of
March.

The Income Bonds of the **NEW YORK** and
ERIE RAILROAD COMPANY will be received
in part payment at par, and the accrued interest
till day of surrender to the Company.

The Directors of the **NEW YORK** and **ERIE**
RAILROAD COMPANY, in offering the present
loan to the public beg leave to state that it will
be amply sufficient to pay the Income Bonds re-
deemable on the 1st February next, and the en-
tire present floating debt of the Company, as well
as to complete all the unfinished work now under
way.

By a resolution of the Board of Directors, all
future outlays of every kind beyond the proceeds
of the present loan, will be charged to expense
account, and paid from the income of the Com-
pany, after payment of the interest on the funded
debt, and the monthly payment to the Sinking
Fund.

After the negotiation of the present loan and
the redemption of the Income Bonds, the position
of the Company will be—

Stock	\$10,024,000
Bonds of 1867, First Mortgage	3,000,000
Bonds of 1859, Second Mortgage	4,000,000
Bonds of 1883, Third Mortgage	6,000,000
Bonds of 1862, Convertible	3,500,000
Bonds of 1871, Convertible	4,251,000
Bonds of 1875, present loan	4,000,000

Total

In the opinion of the Directors it is perfectly
safe to estimate the gross earnings of the Road,
for the coming year, at \$6,000,000, from which
must be deducted:

Expenses 55 per cent	\$3,300,000
Seven per cent. on debt \$24,-	
851,000	1,739,570
Sinking Fund	420,000
	\$5,459,570

Net revenue equal to over 5 per cent.
on stock applicable to cash dividends
and contingencies

The Directors of the Company are confident these
estimates will be fully realized. The gross re-
ceipts since the Road has been in operation to
Dunkirk, have been for pas'sers and freight alone—
1851 to 1852 \$3,047,748 INCREASE.
1852 to 1853 4,138,424 \$1,090,676, say 35 1/2 per ct.
1853 to 1854 5,122,666 984,242, say 23 1/2 per ct.

The business of the road depending mainly on
the local traffic, must inevitably increase in the
same ratio as the population of the Counties
through which it passes. In the opinion of the
Superintendent, Mr. McCollum, the road in its
present position and with its present equipment,
can earn \$8,000,000. If the future increase in the
receipts be estimated at only 15 per cent. per an-
num, which is not much over one-half of the av-
erage increase of the past the above utmost capa-
city of the road will be tested in 1858.

As to the running expenses, as they were only
53 1/2 per cent. in 1853 and 1854, there is every pre-
probability that with rigid economy and an increase
in the traffic, they can be reduced to 50 per cent.,
but they have been estimated at 55 per cent., so
as to leave ample margin for contingencies.

The effect of the monthly purchases by the
Trustees, of the Bonds of the present issue on
their market value, cannot fail to be immediate,
and will insure to the original purchasers a cer-
tain profit within a moderate time; for whilst the
amount outstanding will decrease each month, the
absorption by the Sinking Fund will constantly in-
crease by the accruing interest on the Bonds in
the hands of the Trustees. In 8 1/2 years the Sink-

ing Fund will absorb \$4,768,053, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among our most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie-place.

HOMER RAMSDELL, President.

NATHANIEL MARSH, Secretary.

New York, Oct. 23, 1854.

New York and Erie R. R.

On and after Wednesday, Sept. 20th, and until further notice
PASSENGER TRAINS
will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a.m. for Buffalo.
DUNKIRK EXPRESS, at 6 a.m. for Dunkirk.
MAIL, at 8 1/2 a.m. for Dunkirk and Buffalo, and intermediate stations.

ROCKLAND PASSENGER, at 3 1/2 p.m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAY PASSENGER, at 4 p.m. for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5 1/2 p.m. for Dunkirk and Buffalo.
EMIGRANT, at 6 p.m., for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 5 1/2 p.m.
These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

For Sale.

A STATIONARY Engine having cylinders 13 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,

Paterson, New Jersey,
or 74 Broadway, New York.

Jul. 14 29 tf.]

Rensselaer Polytechnic Institute.

DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS,—including railway, Hydraulic, Topographical, and Mining Engineers.

For copies of the Annual Register, giving full information respecting the Institute, apply to

R. FRANKLIN GREENE, Director, R. P. I.
32 3m Troy, New York.

Lowell Machine Works.

ALDRICH & CALVERT (late ALDRICH, TYNG & Co.) manufacture and furnish to order, at short notice,

Machinists' Tools

of various description and with the latest improvements; as engine lathes, with swing 18, 20, 24, 30, 36, 43 inches, up to 7 1/2 feet, and bed made to turn any desirable length; planing machines, to plane 3 1/2, 6, 8, 10, 12, 18, 20, 22 feet long, and 18, 24, 32, 36, 40, 43, 60 inches square; also hand lathes, compound planers, slotting and shaping machines, vertical drills, bolt cutters, and many other tools used in railroad, repair and machine shops.

Lowell, Mass., Jan'y 1, 1853.

41 17

THOS. M. CASH,

PHILADELPHIA RAILWAY AGENCY,

FOR THE PURCHASE OF ALL ARTICLES

required by

RAILROAD COMPANIES

ON COMMISSION.

Office No. 80 South Fourth Street, near Walnut,

PHILADELPHIA.

REFERENCES.

RICHARD NORRIS & SON, Locomotive Builders, Philadelphia.
WM. D. LEWIS, Esq., Pres't Catwissa R.R. Co., "
CHARLES H. FISHER, Esq., "
JOHN CALDWELL, Esq., Pres't S. Carol'a R.R. Co., Charleston.
J. PINCKNEY HUGGER, Esq., Pres't N. East'n R.R. Co., "

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

Buffalo Machinery Depot.

BUFFALO, N. Y.

H. C. BROWN, Sup't. J. W. HOOKER, Proprietor.
I AM prepared to furnish and will keep constantly on hand from the best manufacturers a full stock of Machinists' Tools for railroad and other shops; such as Engine and Hand Lathes, Large Driver Lathes, Car Wheel Boring Mills, Power and Hand Planers, Drill Presses, Punch and Shears, Axle Lathes, Power Wheel Presses, Bolt Cutters, &c.

J. W. HOOKER, Buffalo, N. Y.

Fire! Fire! Fire!
Preserve your books in one of Duryee & Forsyth's celebrated Fire King safes. They are perfectly secure and excel in finish.

J. W. HOOKER, Agent, Buffalo.

Railroad Track, Suspension and Depot Scales, Dormant, and Portable Warehouse Scales, Trucks, Baggage Barrows, and Manifest Presses.

Buffalo Machinery Depot,

General Agency for Rochester Scale Works.

H. C. BROWN, Sup't.

J. W. HOOKER.

Port Morris Manufactory.

WESTCHESTER COUNTY, N. Y.

ARE prepared to execute orders for all kinds railroad work and have on hand the approved Railroad Box with the raised Journal; also Car Couplings (Lewis' Patent) and Ratchet Wrenches from \$5 to \$10 each.

All orders punctually attended to by addressing the above,

M. C. BAKER.

N.B. Long Iron Planing done on reasonable terms.

37 6m. 108 Front street, up stairs.

NOTICE.

THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,

RICHARD W. TYSON,

No. 25 South Charles st.

Baltimore, July 1st, 1854.

Notice of Copartnership.

THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,

RICHARD W. TYSON.

Baltimore, July 1st, 1854.

33 3m

Notice of Copartnership.

MR. PETER MARIE, heretofore of the firm of DECOPPET & CO., has this day formed a copartnership with Mr. RUDOLPH KANZ, (for many years with the banking house of Messrs. L. Von Hoffman & Co.), under the firm of MARIE & KANZ, at No. 27 William street.

Their attention will be devoted to the purchase and sale on Commission of Stocks, Bonds and Foreign Exchange, and to the negotiation of Business Paper.

New York, 1st September 1854.

36 8t

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.

A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to EDW. BACH & KUNHARDT, 62 Beaver st., or, A. TOWAR, Agent Poughkeepsie Iron Works, Poughkeepsie, N. Y.

23 tf

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

or, BRIDGES & BRO.,

64 Courtland st., New York.

19 tf

Machinists' Tools.

SHRIVER & BROTHERS,
Cumberland, Maryland,

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other Machinists' Tools. These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others repairing first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address SHRIVER & BROTHERS, Fulton Works, Cumberland, Maryland.

August 19th, 1854.

32 6m

Low Moor iron.

A FULL ASSORTMENT of this superior brand, which for strength, soundness, and uniform quality, is confidently recommended for all work requiring good iron, consisting of Round, Square, and Flat sizes of all dimensions, constantly in store and on sale in lots to suit purchasers, by W. BAILEY LANG & CO., 64 Cliff street

Notice to Contractors.



CHIEF ENGINEER'S OFFICE,
Columbus, Ga., Sept. 5th, 1854.

SEALED PROPOSALS, will be received by the undersigned at this office until the 1st day of December, for the clearing, graduation, Track-Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 130 miles.—The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work 5 1/2 miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two rivers will be crossed with the common pile bridging, with Truss Pivot draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The country is healthy, with no swamps after leaving the Tensas River; from Mobile to the river (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third (1/3) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common stock of the Road, and relying upon the earnings of the same for dividends; the balance (1/3) to be paid in the (.08) per cent. Convertible Bonds of the Company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus, Ga., Mobile, Ala., or in N. Y., at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding (1/2) the amount of the contract, for the timely and faithful completion of the same.

22 1/2 miles of the Road from Girard west will be open for business the first of November, and 52 miles nine months thereafter. It is the intention to have the entire line of 245 miles open for business early in 1858.

St. 37.

GEO. S. RONEY.

New York Locomotive Works, JERSEY CITY.

THIS COMPANY are prepared to execute with despatch, orders for Locomotive Engines, Tenders, and Railroad Machinery generally, embracing the latest improvements.

The works being located near the water, and in the immediate vicinity of the New Jersey and Erie Railroads offers great conveniences for shipping.

BREESE, KNEELAND & CO.,

Proprietors,

33 Exchange Place.

E. P. GOULD, Superintendent,

late Master Machinist on Hudson River R. R. [40 tf]

500 TONS No. 1 Gleggarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

99 and 101 John st.

N. B.—The above Iron constantly imported

32 tf

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS. In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

ENLARGEMENT OF ERIE CANAL—EASTERN DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Utica, until Monday, the 9th day of October next, at 10 o'clock, A. M., for the following described work:—

Description of Work.	Amount of Penalty in Bond.	Time of Completion.
Section No. 16.....	\$7,500.....	1st April, 1856.
" 36.....	3,300.....	"
" 37.....	5,200.....	"
" 57.....	7,000.....	" 1857.
" 58.....	9,500.....	"
" 59.....	6,000.....	"
" 60.....	6,000.....	"
" 61.....	6,000.....	"
" 62.....	12,400.....	"
" 75.....	5,100.....	" 1856.
" 78.....	5,800.....	"
" 131.....	5,800.....	" 1857.
" 132.....	5,800.....	"
" 133.....	6,000.....	"
Lock No. 34.....	5,600.....	1st July, 1856.
" 38.....	6,000.....	"
" 40.....	6,200.....	"
" 42.....	6,200.....	"
Waste Weir on Sec. 120.	1,200.....	1st April, 1855.
Bridge Abutments on Sections 15, 16 and 17.....	2,500.....	1st July, 1855.
Bridge Abutments on Sections 36 and 37....	1,300.....	"
Bridge Abutments on Sections 57, 58 and 59 and Main street Bridge at Fultonville.	3,000.....	" 1855.
Bridge Abutments on Sections 60, 61 and 62.....	2,000.....	"
Bridge Abutments on Sections 75 and 78....	1,500.....	" 1855.
Bridge Abutments on Sections 111, 116, 121 and 122.....	2,000.....	"
Bridge Abutments on Sections 132 and 133.	900.....	" 1856.
Culverts on Sections 69 and 60.....	1,200.....	"
Culverts on Section 75.	600.....	1st April, 1856.
Culvert at Van Vranken's on Section 18..	300.....	1st July, 1855.
Culverts on Sections 112 and 121.....	1,100.....	1st April, 1856.
Culverts on Sections 131, 132 and 133....	1,200.....	1st July, 1856.
Completion of Phillips' Aqueduct.....	1,300.....	1st April, 1855.

BLACK RIVER CANAL.

Sealed proposals will be received at the Engineer's Office at Lyons Falls until Thursday, the 12th day of October next, at 10 o'clock A. M., for the following described work:—

Reservoir at Wood Hull Lake.....	\$3,700.....	1st Oct., 1855.
Reserv'r at N'rth Br'nch Lake.....	5,500.....	"
11 Lock Houses from Boonville to Lyons Falls.....	1,000.....	"
Sluices around Locks No's. 34 to 69 inclus.	2,900.....	1st Aug. 1855.

MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse until Saturday, the 14th day of October next at 10 o'clock in the forenoon for the following described work:—

Section No. 195.....	\$6,400.....	1st April, 1857.
" 196.....	4,800.....	"
" 197.....	7,200.....	"
Centre Port Aqueduct..	3,400.....	"
Port Byron do.....	7,000.....	"

OSWEGO CANAL.

Sealed proposals will be received at the En-

gineer's Office in the village of Fulton until Monday, the 16th day of October next, at 10 o'clock A. M., for the following described work:—

Section No. 3 below Salina.....	\$4,000.....	Ap'l 15th, 1857.
Section No. 4 below Salina.....	7,400.....	"
Part of Sections 14 and 15, Gascon Rapids....	12,700.....	"
Part of Sections 16 and 17, above Phoenix....	6,400.....	"
Part of Sections 17 and 18, above Phoenix...	7,700.....	"
Part of Sections 22 and 23, Morseman level..	6,500.....	"
Section 27 at Fulton...	6,000.....	"

CAYUGA AND SENECA CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Seneca Falls until Tuesday, the 17th day of October next, at 10 o'clock A. M., for the following described work:—

Section No. 9.....	\$7,200.....	1st April, 1856.
" 10.....	8,500.....	"
Dam and Guard Gate on Section 10.....	5,600.....	"
Culverts on Sections 1 to 5 inclusive.....	2,200.....	"
Road and Farm Bridge Abutments on Sections 1, 4 and 10.....	2,300.....	"

ENLARGEMENT OF ERIE CANAL—WESTERN DIVISION.

Sealed proposals will be received at the Engineer's Office, in the village of Albion until Wednesday, the 18th day of October next, at 10 o'clock A. M. for the following described work, between Lockport and Rochester:—

Section 276, with penalty in bond of....	\$9,000.
" 277, " " " " " " " " " " " "	6,700.
" 278, " " " " " " " " " " " "	7,000.
" 279, " " " " " " " " " " " "	7,600.
" 280, " " " " " " " " " " " "	8,400.
" 281, " " " " " " " " " " " "	9,200.
" 282, " " " " " " " " " " " "	5,700.
" 283, " " " " " " " " " " " "	4,100.
" 316, " " " " " " " " " " " "	6,600.
" 317, " " " " " " " " " " " "	6,500.
" 318, " " " " " " " " " " " "	9,400.
" 319, " " " " " " " " " " " "	9,300.
" 320, " " " " " " " " " " " "	9,200.
" 322, " " " " " " " " " " " "	10,100.
" 323, " " " " " " " " " " " "	8,000.
" 324, " " " " " " " " " " " "	7,700.
" 325, " " " " " " " " " " " "	7,100.
" 326, " " " " " " " " " " " "	9,400.
" 327, " " " " " " " " " " " "	7,600.
" 328, " " " " " " " " " " " "	8,800.
" 329, " " " " " " " " " " " "	9,700.
" 330, " " " " " " " " " " " "	13,000.
" 331, " " " " " " " " " " " "	8,500.
" 332, " " " " " " " " " " " "	8,500.
" 333, " " " " " " " " " " " "	12,200.
" 334, " " " " " " " " " " " "	13,000.
" 335, " " " " " " " " " " " "	8,000.
" 336, " " " " " " " " " " " "	6,000.

Bridge Abutments on Sections 276 to 283, inclusive.....	3,600.
Bridge Abutments on Sections 316 to 329, inclusive.....	7,300.
Bridge Abutments on Sections 330 to 336, inclusive.....	5,400.
Culverts on Sections 276 to 283 inclusive..	6,200.
" 316 to 320 " " " " " "	5,500.
" 322 to 329 " " " " " "	8,000.
" 330 to 336 " " " " " "	4,000.
" 306 " " " " " "	1,000.
Waste Weir on Section 330.....	500.

Iron superstructure of Genesee st. Bridge, Buff..... 1,500.

The superstructure of Genesee street Bridge and the Culvert on Section 306 to be completed by the 1st day of April, 1855, and the remainder of the above work by April 1st, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and

every kind of work; and no proposition not thus defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborer's wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the canal commissioner, until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to him, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the times specified for the several lettings.

Dated at ALBANY, Sept. 13th, 1854.

HENRY FITZHUGH,
FREDERICK FOLLETT,
CORNELIUS GARDINER, } Canal Comm'rs
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

STATE OF NEW YORK, SECRETARY'S OFFICE, ALBANY, AUGUST 10, 1854. To the Sheriff of the County of New York.—Sir: Notice is hereby given, that at the General Election to be held in this State on Tuesday succeeding the first Monday of November next, the following officers are to be elected, to wit:

A Governor, in the place of Horatio Seymour;
A Lieutenant Governor, in the place of Sanford E. Church;

A Canal Commissioner, in the place of Henry Fitzhugh; and

An Inspector of State Prisons, in the place of Henry Storms;

All whose terms of office will expire on the last day of December next.

A Representative in the Thirty-Fourth Congress of the United States, for the Third Congressional District, composed of the First, Second, Third, Fifth and Eighth Wards in the City of New York; for the Fourth District, composed of the Fourth, Sixth, Tenth and Fourteenth Wards of the City of New York; for the Fifth District, composed of the Seventh and Thirteenth Wards in New York, and the City of Williamsburg, in Kings County; for the Sixth District, composed of the Eleventh, Fifteenth and Seventeenth Wards in New York; for the Seventh District, composed of the Ninth, Sixteenth and Twentieth Wards in New York; and for the Eighth District, composed of the Twelfth, Eighteenth and Nineteenth Wards in New York.

County officers also to be elected for said County:—

Sixteen Members of Assembly;

A Surrogate, in the place of Alexander W. Bradford;

A Recorder in the place of Francis R. Tillou;

A City Judge, in the place of Welcome R. Beebe;

A Mayor, in the place of Jacob A. Westervelt;

A Register, in the place of Garret Dyckman;

A Commissioner of the Streets and Lamps, in the place of George G. Glasier, who was appointed to fill a vacancy caused by the resignation of Henry Arcularius;

A Police Justice, for the Second District, in the place of Daniel W. Clarke, who was appointed to fill a vacancy caused by the death of John M'Grath;

Two Governors of the Alms House, in the place of Gustavus A. Conover and William Pinkney, appointed to fill vacancies;

A District Attorney, in the place of Lorenzo B. Shepard, who was appointed to fill a vacancy occasioned by the death of Nathaniel B. Blunt;

A Civil Justice and a Police Justice, for the Seventh Judicial District, composed of the Twelfth, Nineteenth and Twenty second Wards;

A Police Justice for the Eighth Judicial District, composed of the Sixteenth and Twentieth Wards.

Yours, respectfully,

E. W. LEAVENWORTH,
Secretary of State.

SHERIFF'S OFFICE,
New York, August 14, 1854.

The above is published pursuant to the notice of the Secretary of State, and the requirements of the statute in such case made and provided.

JOHN ORSER,

Sheriff of the City and County of New York.

All the public newspapers in the County will publish the above once in each week until the election, and then hand in their bills for advertising the same, so that they may be laid before the Board of Supervisors, and passed for payment. See Revised Statutes, volume 1, chapter 6, title 3, article 3d, part 1st, page 140.

JOHN ORSER, Sheriff.

Sept. 1, 1854.

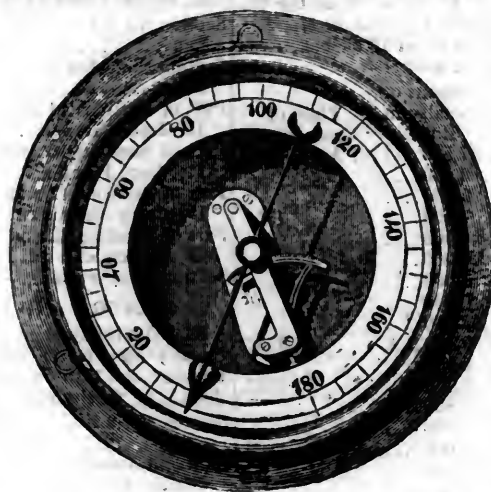
Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per lineal yard. For sale by

THEODORE DEHON,
26½ Broadway,
New York.

Contracts made as above for Rails delivered American ports at lowest rates.

ASHCROFT STEAM GAUGE.



AMERICAN
STEAM GAUGE
COMPANY.
SOLE PROPRIETORS
AND
MANUFACTURERS
FOR THE
UNITED STATES.

THE COMPANY
ARE PREPARED TO
EXECUTE
ORDERS FOR THEIR
GAUGE
AT THEIR MANUFACTORY
No. 4 Charleston Street,
BOSTON, MASS.

THIS Company purchased of Mr. E. H. Ashcroft the Patent for the above Gauge in February last, and they presume there is no necessity of stating the benefit of this celebrated Gauge, which has obtained so much repute throughout the Country during the last three years, as a matter of economy and safety for Railroads, Stationary Boilers and Steamers its equal has never been discovered. The Company also purchased of Mr. Ashcroft the Patent for the Fountain Moreau or India Rubber Gauge of which the Eastman, Lowe and German Gauge are considered by them to be infringements. They will furnish the India Rubber Gauge if desired, although they think it cannot be depended upon.

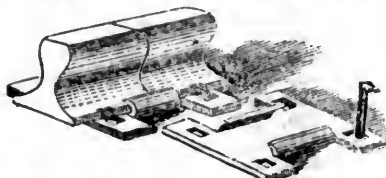
41 17



LOCOMOTIVE TYERS made from one bar, and Low Moor Bar Iron of every description, Boiler Plates, Rivets, and Car Axles; also, Wrought Iron Wheels, Spring, Tool, and Machinery Steel, Iron and Brass Tubes, Locomotive Balances, Horse Nails, English Iron Wire, Telegraph Wire, &c., for sale at the manufacturer's prices, by W. BAILEY LANG & CO., 54 CHURCH ST., New York, and 9 LIBERTY SQUARE, Boston, sole agents in America to the Low Moor Iron Company.

42 17

RAILROAD SPIKES.



WROUGHT IRON Chairs and Fastenings.

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.

The best quality of Refined Iron is used, and all orders filled with despatch.

J. HOPKINSON SMITH,
No. 25 South Charles str.

Please direct the name in full,
Baltimore, July 1st, 1854.

33 17

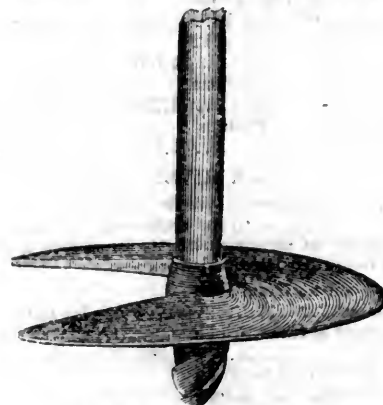
SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER
OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his New Patent Boiler for burning Anthracite Coal; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 23 Summer st., Philadelphia.

Screw Pile Foundations.



ALEXANDER MITCHELL'S

Patent Iron Screw Pile,

FOR obtaining permanent foundations on Rivers, Morasses, and Quicksands; for Railway Bridges, Viaducts, Depots, Wharves, &c.

I. W. P. LEWIS, C. E.,

Agent in the United States,
No. 39 South 5th street, PHILADELPHIA.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.
E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 45.]

SATURDAY, NOVEMBER 11, 1854.

[WHOLE No. 969, VOL. XXVII.]

Mr. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

Lexington and Ohio R. R.	705
Kings Mountain R. R.	706
Rutland and Burlington R. R.	707
Little Miami R. R.	708
General Railroad Law of Ohio.	709
Earning of Railroads for October.	712
Kennebec and Portland R. R.	713
Columbus and Xenia R. R.	713
Cincinnati, Hamilton and Dayton R. R.	713
Ohio and Indiana.	714
Cleveland, Columbus and Cincinnati R. R.	714
Journal of R. R. Law.	715
Trial of Locomotives on the Cleveland and Pittsburgh R. R.	716

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, November 11, 1854.

Lexington and Ohio Railroad.

HISTORICAL SKETCH.

The "Lexington and Ohio Railroad Company" was incorporated by the Legislature of Kentucky during the session of 1829-30. Its object, as implied in the name of the company, was the construction of a Railroad from Lexington to the Ohio river; the selection of the terminus on the river being left to the discretion of the stockholders. The power to condemn lands was conferred upon them in the usual terms. The capital stock was limited to \$1,000,000, with authority to commence operations as soon as \$300,000 were subscribed.

The rates of transportation were fixed at 2½ mills per hundred pounds per mile on all articles transported 60 miles and upwards—3 mills per mile on articles transported over 20 miles and under 60; and 3½ mills per mile on articles transported less than 20 miles. Silver, gold, bullion, money and mails were excepted from these rates, and the company authorized to carry them at any rate that might be agreed upon. The passenger rates were fixed at 4 cents per mile.

The property of the company was exempted from taxation for 20 years, with a provision that it should not be then taxed higher than other property in the State. By the terms of the charter,

the Commonwealth was further bound during the space of twenty years to authorize the construction of no parallel road approaching nearer than twenty miles—with the reservation of a right to construct diverging roads approaching at an angle of not less than 15 degrees.

The company were authorized to commence the business of transportation so soon as 15 miles of the road were completed.

On the 6th of March, 1830, the company was organized by the election of the following gentlemen as Directors viz: Henry C. Payne, Benjamin Gratz, Joseph Bruen, Elisha J. Winter, Richard Higgins, Elisha Warfield, John W. Hunt, John Brand, George Boswell, HENRY CLAY, Walter Dunn and Benjamin W. Dudley. The total stock subscription was \$542,900.

On the 9th of the same month Elisha J. Winter was chosen President of the company.

In April, 1830, Professor Mathews with Mr. John Van De Graff his assistant, were employed to make a reconnaissance of the route from Lexington, via Frankfort, Louisville via Portland.

On the 1st of July of the same year Messrs. Kneass and McIlvaine were employed to make a survey of the route as near the town of Shelbyville as possible.

Mr. McIlvaine remained but a short time in the employment of the company, and his associate, Mr. Kneass, became the Chief Engineer. On the 30th March, 1831, he presented to the Board report of his surveys and his estimate of the cost of the road.

At a meeting of the stockholders of the company on the 16th April, 1831, it was resolved and declared as part of the by-laws of the company "that the remedy to enforce the payment of balances due on stock shall not extend farther than the forfeiture of the stock, and the sums paid thereon by the holder;" and that it should at "all times be the privilege of any stockholder to cease to be a member of the company by transferring to the company his stock, together with all sums paid thereon; and that such stock so transferred should be the property of the company and liable to be resold or otherwise disposed of, as to the President and Directors might seem advisable." These resolutions were the fruitful source of future difficulties.

At the same meeting the Directors were authorized to take measures to put under contract not exceeding eight miles at the Louisville, and seven miles at the Lexington terminus of the road—six miles of road beginning at Lexington were therefore placed under contract in October following. Difficulties with the City Council of Louisville as to the right of way through that city prevented the commencement of work at that end of the road.

Mr. Kneass left the employment of the company in March, 1832, and was succeeded by Mr. H. J. Ranney.

In July, 1832, twenty-five additional miles of road, extending to the head of the plane at Frankfort were advertised to be let.

On the 2d of August, the cars, drawn by horse-power, commenced running over the first division of the road.

At the session of the Legislature of 1832-3, an act was passed authorizing the Auditor of State, in the name of the Commonwealth, to endorse and guarantee the bonds of the company to an amount not exceeding \$150,000. To secure the State against liability on her endorsement, the company was required to execute a mortgage of all its rights franchises and property, and the President and Directors to give their individual bonds for the proper application of the money. Their securities having been fully executed, the bonds were guaranteed by the Auditor in the name of the Commonwealth, and then sold by the company.

In December, 1835, the road was opened to the head of the inclined plane at Frankfort.

Dividends of from 4 per cent. were declared in July, 1835, and January and December, 1836. A very considerable proportion of stock had been forfeited by the subscribers under the resolutions of 16th April, 1831, and the instalments paid on the forfeited stock becoming thus the property of the company, were regarded by the Directors as profits and as properly forming the subjects for dividends.

At a meeting of the stockholders in November, 1837, the accounts of the company were referred to Judges Owsley and Robertson, and Sylvester Welch, Esq., for the purpose of examining into the propriety and legality of the three dividends made by the directors. On the 16th of December the referees reported—

1st. That in their opinion there was not, on proper principles, any surplus of profits at any time, that either of these dividends were declared; and—

2d. That the dividends so far as paid in cash should be refunded, and that the credits entered on stock notes so far as entered on accounts of dividends should be erased.

From this time forward, the difficulties of the Company continued to accumulate. Dissensions sprang up between the stockholders at either end of the line; the funds of the Company were nearly exhausted, and for a few years more it continued to drag on a lingering existence with but little hope of relief. Partial, but wholly insufficient assistance was given by the City of Louisville; partly by a subscription of stock, and partly by an endorsement of the bonds of the Company. The work continued to be prosecuted between Louisville and Frankfort during the years 1837-8 and 9, and then ceased altogether.

Up to that time the expenditures in construction had been as follows:

Cost of road and equipments between Lexington and Frankfort.	\$511,284 87
Expended between Frankfort and Louisville.	411,652 77
Total.	\$922,937 64

In the years 1838-9-40 and 41, the Company failed to pay the interest on the \$150,000 of bonds guaranteed by the State. The act of February 11th 1841, authorised and directed the Auditor to advertise the whole property and franchises of the Company for sale, agreeably to the terms of the act of 1833, authorising the endorsement of the bonds. The sale took place accordingly, on the 15th January, 1842, and the Commonwealth became the purchaser for the sum of \$178,544 64, being the amount of the principal and arrears of interest on the guaranteed bonds. The road between Lexington and Frankfort was repaired during that year and furnished with new equipment, at an expense to the State of \$87,000. In the spring of 1843, Messrs. Swigert and William R. McKee leased that portion of the road for several years, at an annual rental of \$17,000.

At the session of 1846-7, the *Louisville and Frankfort Railroad Company* was incorporated.—By the terms of the charter, two persons were to be selected by the Company, and two by the Governor of the State, to value "the improvements made by the *Lexington and Ohio Railroad Company* between Frankfort and Louisville." On the return of the valuation, it was made the duty of the President and Directors to execute and deliver to the Governor a bond "binding said Company, before each and every payment of dividends to the stockholders, to pay into the treasury, interest at the rate of six per cent., per annum, on said valuation, from the time of the completion of the road from Frankfort to Louisville; and on the execution of the bond, all the rights, property, immunities and privileges which the Commonwealth then held in that portion of the road were to be released to the Company. The valuation was made shortly after the organization of the Company, and amounted to \$70,000.

At the session of 1847-8, the *Lexington and Frankfort Railroad Company* was incorporated with a capital of \$450,000. The 2nd Section of the charter provided, that as soon as the Governor

should be satisfied that two thousand shares of stock had been bona fide subscribed by solvent individuals, he should subscribe in the name of the Commonwealth for fifteen hundred shares of stock in the Company, payment of which should be made by a transfer to the Company "of all the property immunities and privileges which the Commonwealth claims, holds, or is entitled to in the Railroad made by the Lexington and Ohio Railroad Company between Lexington and Frankfort." In March, 1848, this Company was organized by the subscription of \$200,000, by corporations and individuals, and \$150,000 by the State. Steps were immediately taken for the construction of five miles of new road at the Frankfort end of the line, and to relay the whole with heavy iron. All this was completed by the spring of 1850. The *Louisville and Frankfort Railroad* was opened throughout the whole line in July 1851.

Up to July, 1853, there had been expended by the *Louisville and Frankfort Railroad Company* for construction and equipment (inclusive of \$70,000 due the State for old road,) the sum of \$1,358,764
The *Lexington and Frankfort* had expended, under the same head, up to May 1st, 1854, (including \$150,000 paid the State for old road) 630,976
Making the whole cost of the line to the present Companies \$1,999,740

If we deduct from this amount the sum of \$220,000 paid by the present companies to the State for the old road, and then add \$922,937 64 expended on the work by the Lexington and Ohio Railroad Company, and \$87,000 expended by the State after the road came into her possession, we find the total expenditures for construction and equipment on the whole line, since the first organization of the Lexington and Ohio Railroad Company, have been \$2,789,677. The length of the line from Lexington to Louisville is 96 miles.

Boston, Nov. 2d, 1854.

EDITOR RAILROAD JOURNAL:

DEAR SIR—We have recently fallen in with a curiosity in Railroad literature, and hasten to send it to you.

It is the first Report of the President of the King's Mountain Railroad Company (South Carolina) to the Stockholders, and embraces statements of a very unusual character.

We have prepared an abstract of the Report which accompanies this. It will show you that this Road, of twenty-two and a half miles in length, was well built, ironed with "T" rail of fifty pounds to the yard, and equipped, for a sum less than the amount of original cash subscription by \$378.19, and at a total cost per mile of a mere fraction over \$9000.00.

You will also perceive that the company is out of debt, the amount of its indebtedness on the first day of July, 1854, (\$3,669 54) having been since paid, with the exception of a small amount due for labor, which the company had not, at that date, been called upon to pay.

The characteristics which distinguish the position of this company, viz: its total freedom from all species of indebtedness, the construction of the road within the original estimate, and its low cost per mile, are much more than sufficient to make it the exception to all Railroad Companies we have ever before heard of. But aside from these con-

siderations, there is another point of view presented by the Report, in which we have never seen it excelled, and that is, its simple, clear, and intelligible style.

The President states that he received so much money to be appropriated to construction—that he expended so much, and has so much left. He further states, that from the time of opening the road to July 1st, 1854, he received so much money from freight account, so much from passenger account, and so much from other sources. On the other hand, he quotes the expenses of operating the road, and so strikes his balance of income. Then he adds the surplus of stock subscription, and exhibits a total surplus of \$28,306 85, and finally he shows us by describing the assets of the company, of what this surplus consists. Surely nothing can be more simple, or more satisfactory.

Then, as regards the business of the road, and its prospects, the President says:

"The business of the road so far, notwithstanding the great failure of the last cotton crop, and its being withheld from market, has fully met our most sanguine expectations, and, from our present prospects, we hope for an increase of business in future."

Not a word too much or too little—a total absence of all flourish—not a trace of enthusiasm even. He might be pardoned for a little show of warmth, but you look in vain for it, and find instead a matter of fact; an appropriate and hopeful statement.

We have thus said more in favor of the King's Mountain Company than can, we sincerely believe, be said in favor of any other Railroad Company in this country. We know this is a strong statement, but if we are in error we shall be glad to be corrected. Still we have recommendations to offer even this model company, and they are as follows:

We would first suggest the establishment of a Sinking Fund, to meet future depreciation of both rail and machinery, and we deem the importance of this matter too obvious to require further illustration.

Secondly—We regret to perceive that the books of the Company do not apparently balance by \$25. 21, the total surplus being \$28,306 85, and the excess of assets over indebtedness being \$28,332 06. A discrepancy of one cent only is, of course, inconsistent with the correct practice of accounts as a science, and the error above spoken of should be at once corrected.

Thirdly—The report speaks of the declaration of a dividend of eight per cent., amounting to \$16,256 00, but it is silent as to the manner in which it was made payable. By reference to this statement of assets, you will observe there was not sufficient cash on hand to permit the disbursement of so much money, and we are therefore led to presume, either that a partition of the securities was made, or that they were sold to meet the case.—We think an explanation would have added to the completeness of the Report.

One word more. You know we are thoroughly opposed to the slave system, and may therefore easily imagine that the purchase of five negroes would be utterly repugnant to our principles, and disagreeable to our Northern tastes and inclinations. Yet were we to choose, we candidly tell you, we should prefer honesty and integrity with

the negroes, to rascality and Schuylerism without.
We hope you will print this Report and the abstract we send you. NEW ENGLAND.

Exhibit of cost of construction and equipment of the Kings Mountain Railroad, and also of its operations from the time of opening to July 1st, 1854
2,032 shares paid for, amounting to...\$202,888 05
Collected on seven shares forfeited by the insolvency of the subscribers... 60 00

Equal to \$99.53 on 2,039 shares....\$202,948 05

DISBURSEMENTS.

Engineering \$4,837 70
Masonry on culverts..... 819 47
Graduation..... 22,430 52

Superstructure—

Railroad Iron (T rail, 50 lbs. per yard).....\$81,260 23
Chairs and Spikes..... 8,078 52
Cross ties..... 18,906 75
Hewed and sawed lumber.. 1,290 94
Miscellaneous..... 10,270 60

Incidental to construction..... 119,807 04
Real estate and land damages..... 3,815 50
Depot, water stations and other buildings..... 1,211 98
Books, stationery, office and depot furniture..... 11,175 68
Tools and materials for workshop.... 588 98
Engines..... 2,377 56
Cars..... \$18,246 88
..... 16,273 70

\$34,520 58

Deduct for engine and cars sold to Union and Spartanburg R. R..... 4,000 00
..... 30,520 58

\$197,589 01

Stock subscribed for and paid in....\$202,948 05
Expended in building and equipping the road.....\$197,589 01
(equal to \$8,781 73 per mile)

Paid for 6 Negroes..... 4,876 82
Due for construction the following unpaid bills:
Incidental to construction.....\$24 90
Depots and other buildings and water stations.. 79 13

104 03

202,569 86

(equal to 9,003 11 per mile)

Surplus.....\$378 19

INCOME ACCOUNT.

Received for freight.....\$17,608 35
" " passengers.... 12,936 00
" " mail service... 2,854 54

\$34,398 89

Less as follows—
Running exp'n's paid.....\$13,154 08
do. do. unpaid... 3,565 51

16,719 59

\$17,679 30
(equal to \$8.67 per share.)

PROFIT AND LOSS.

Dividends collected, balance of interest, &c.....\$4,940 46
Engine and Cars sold to Union and Spartanburg Co..... 4,000 00
Due from sundry stockholders for balances of stock subscriptions..... 311 95
Div. S. C. R. R. stock uncollected.... 500 00
Interest uncollected..... 355 82
Mail pay do..... 141 13

(Equal to \$5.02 per share) \$10,249 36

RECAPITULATION.

Surplus capital.....\$378 19
Income.....17,679 30
Profit and Loss.....10,249 36

Total Surplus.....\$28,306 85

BALANCE.

Assets, composed of the following items:—
100 shares of stock in S. C. R. R. Co..\$12,500 00
8 bonds in G. and Columbia R. R. Co.. 4,000 00
Sundry notes..... 960 54
N. C. R. R. Co. apc. for cross-ties sold. 1,336 94
Blacksmith's shop accounts..... 250 14
Amount due by Chester Agency..... 286 28
Accounts on freight ledger..... 3,052 75
Cash in treasury..... 8,306 05

\$30,692 70

Balances of stock subscriptions due.. 311 95
Uncollected dividend..... 500 00
do. interest..... 355 82
do. mail pay..... 141 13

\$32,001 60

Less debts, viz—

On account of construction...\$104 03
Operations on road.....3,565 51

3,669 54

\$28,332 06

To be accounted for.....\$28,306 85
Actually on hand..... 28,332 06

Surplus of assets.....\$25 21

Rutland and Burlington Railroad.

Statement showing a financial condition.

The construction account is as follows:

Grading and Masonry...\$2,359,387 16
Superstructure..... 849,525 74
Land, Land Damages, and Fencing..... 234,182 72
Station, Buildings, and Fixtures..... 227,326 90
Bridges..... 116,669 93
Engineering..... 94,901 12
Cost of road..... 3,978,993 57
Cars..... 366,640 88
Locomotives..... 175,164 34
Tools..... 14,470 34
Cost of furniture... 556,275 56
Discount on six per cent. Bonds..... 185,484 37
Discount on Mortgage Bonds..... 130,451 94
Discount on 2nd Mortgage Bonds..... 131,664 37
Interest paid Stockholders prior to the opening of the road..... 103,060 21
Sundry incidental accounts..... 122,380 36
Expenses..... 65,651 29
Delinquent Subscribers 54,467 32
Salaries..... 50,000 00 843,159 96

Total Cost, exclusive of Coupons, interest, &c.....\$5,378,428 99

The following are the assets of the company, with the amounts to their debit on the books of the Treasurer:

Vt. Valley R. Stock (50 per ct. paid on 135 shares).....\$6,750 00
Northern Telegraph Co. Stock (40 shares)..... 2,000 00
Shares 8 per cent. Pref'd Stock (400 lodged as coll)..... 40,000 00
Plattsburgh and Montreal R. Stock (500 shares)..... 26,355 10
Real Estate..... 34,174 47
Steamers Boston and Barges..... 57,763 99
Notes Receivable..... 25,870 86

Amounting in all to.....\$192,904 42

The amounts paid for Interest, Coupons, Dividends, are as follows:

Interest.....\$488,949 63
Coupons on Six per cent. Bonds..... 314,670 67
Coupons on Mortgage Bonds..... 172,301 50
Coupons on Interest Bonds..... 4,386 00
Dividends on Pref'd 8 per ct. Stock..... 82,372 00
1st. Dividend 6 per ct. Pref'd Stock..... 18,880 00
2d Dividend 6 per ct. Pref'd Stock..... 16,116 00
3d Dividend 6 per ct. Pref'd Stock..... 17,520 00

\$1,115,195 80

The amounts derived from the different sources of Income, from the commencement of the running of the road, January 1, 1850, to its assignment, November 20, 1853, have been from—

Passenger Earnings....\$548,965 14
Freight Earnings..... 534,416 42
Mails..... 40,100 00
Expresses..... 11,646 74
Rents..... 5,091 67
Steamer Boston and Barges..... 27,565 65
Wharf and Boats..... 5,510 07
Labor, &c., charged construction..... 67,327 48

\$1,239,623 17

The Running Expenses for the same period..... 765,726 11

Leaving the net earnings.....\$473,897 06

RECAPITULATION OF COST.

Construction.....\$5,378,428 99
Assets..... 192,904 42
Interest, Coupons, and Dividends..... 1,115,195 80
Less Net Income..... 473,897 06 641,298 74

\$6,212,632 15

The means to provide for this expenditure were realized from, and represented by—

Capital stock.....\$1,242,500 00
Eight per cent. Preferred Stock..... 382,700 00
Six per ct. pref'd stock... 605,200 00
Six per ct. do. part paid.... 2,976 31 608,176 31
Stock.....\$2,233,376 31
Mortgage bonds....\$1,800,000 00
Second Mortgage Bonds (sold)..... 660,500 00
Funded debt.....\$2,460,500 00
Notes payable.....\$921,518 69
Six per cent. bonds... 468,500 00
Int't bd's..30,500 00
Int't scrip.19,073 59

49,573 59

1st Div. 6 per ct. stock.... 374 00
2d Div. 6 per ct. stock 72 00
3d Div. 6 per ct. stock. 282 00 728 00
Sundry personal accounts..... 78,435 56
Floating liabilities.....\$1,518,755 84

\$6,212,632 15

In addition to the assets previously mentioned, the value of many of which is extremely doubtful, there are, for the extinguishment of the floating debt, second mortgage bonds unsold, but pledged, to the amount of \$639,500, and the third mortgage bonds created by the stockholders at

their meeting, April 12th, amounting to \$1,200,000.*

The earnings from June 1st to November 30th, 1853, were from

Passengers.....	\$107,807 19
Freight.....	97,500 96
Mails.....	6,100 00
Expresses.....	2,141 52
Rents.....	2,004 22
	\$215,553 89

The amount charged on the Treasurer's books to the several accounts of running expenses during the same period, \$189,700 34.

Little Miami Railroad.

The Little Miami Company was one of the first chartered in Ohio, having been incorporated on the 11th day of March, 1836, with authority to construct and maintain a railroad from the city of Cincinnati to the town of Springfield. The charter contains the usual provisions. The amount of capital was limited to \$3,000,000, but the company were, in addition, authorized to borrow a further sum not exceeding \$500,000. The charter is perpetual and imposes no limits upon the profits of the company, though by a general law, the above, with all the companies throughout the State are restricted to a charge not exceeding 3 cents per mile per passenger carried over 30 miles, and 5 cents per ton per mile for freight carried the same distance. For distances under 30 miles, companies may establish the rates. The Little Miami Company were originally authorized to construct branch roads to any part of the several counties through which the road might run, but this provision was afterwards amended by authorizing the company to subscribe to the capital stock of other companies constructing railroads over the routes upon which the former might construct branches, to the amount of their probable cost. The powers of the company have been further enlarged by the *General Railroad Law* of the State, to the provisions of which all the railroad companies of the State are amenable, providing they do not conflict with the powers and right conferred by the special charters granted before the General Railroad Law went into effect.

The work of construction was commenced in December, 1838. The original estimated cost was \$877,674 for 85.2 miles, equal to \$10,801 21 per mile. The plan of superstructure adopted was that of the Utica and Schenectady Railroad, which consisted of a sill, or longitudinal sleeper, 4 by 12 inches, resting upon cross-ties 3 feet from centre to centre. The rail used was a flat bar. $2\frac{3}{4}$ by $\frac{3}{8}$ inches, weighing 31 lbs. to the yard. The work progressed slowly in consequence of the embarrassed state of the company's affairs, arising in part from the repeal of a law by which a subscription equal to one-third of the capital

*Of the latter there have been issued, since the date of this Report, AT PAR, in accordance with the direction of the stockholders, the amount of one hundred and one thousand seven hundred dollars, and debts to the following amounts with the accumulated interest have been cancelled; viz:

Notes payable.....	\$37,458 57
Bonds payable.....	60 500 00
Interest bonds.....	500 00

Amounting in all to.....\$98,458 57

Settlements, to a limited extent have been also been made with creditors holding second mortgage Bonds as collateral, by which they have received the bonds lodged with them in full discharge of their claims.

stock of the company was authorized to be made by the State, the expected proceeds of which entered into the calculation of means for the construction of the road; and from the want of that experience and training necessary to success in such undertakings. It was not till December 1841 that any portion of the road was brought into operation. In 1842, 28 miles next to Cincinnati were opened for traffic. The result of the early operation of the road bears but feeble comparison to its recent success. The total earnings for the year ending December 1, 1843, were only \$9,912. The cost of the road at that date was \$480,384. In July, 1844, the road was further extended to Deerfield, a distance of 35 miles from Cincinnati, at the total expenditure \$575,526; and the total earnings for that year were \$18,632. In 1845, the road was further extended to Xenia, a distance of 65 miles at a total cost of \$815,753. The income for the same time was \$16,298. On the 10th of August, 1846, the road was opened to Springfield, a distance of 84 miles.

The relaying of the track with the heavy rail commenced in 1849, which work progressed as follows:—

Miles relaid in 1849.....	11
" " " 1850.....	36
" " " 1851.....	16
" " " 1852.....	7
" " " 1853.....	13
	84

The construction of the double track was commenced in 1852, and 23 miles were graded on the first day of Dec. last, and the work is still in progress, and will be rapidly pushed forward to its completion, for which a loan negotiated by the company to the amount of \$1,500,000 will furnish ample means.

The road was built under great pecuniary embarrassments, and, from the limited means of the company, in a very faulty and imperfect manner, which required a large expenditure to keep it up, while at the same time it was impossible to work it in that efficient manner necessary to secure full success. As soon as the company's affairs allowed it, they commenced the reconstruction of the road. The most important improvement effected has been the substitution of the heavy T rail for the flat bar. This and other improvements have rendered the road a first class work in every particular.

The improvements called for by the imperfect manner in which the road was originally constructed accounts for the large and steady increase of the cost of the road.

ROUTE AND CONNECTIONS.

The route of the Little Miami Railroad enters Cincinnati by the only practicable one on the East. The lofty range of hills by which that city is surrounded, terminating upon the immediate bank of the Ohio River, leaves a space only sufficient for the railway, and the ordinary highway. The road follows the bank of the river for about five miles, till it reaches the Little Miami, the valley of which it follows for nearly its whole length, over a country well adapted to the easy construction of a railroad, and at the same time one of the most fertile and densely settled portions of the State.

The possession of the key to the entrance to Cincinnati on the East, adds very largely to the

value of the road. The early date at which the company located their road enabled them to procure the right of way into the city at a merely nominal cost, but which at the present time could not be had for the first five miles out of the city, with the improvements made by the company, short of two million of dollars, which sum, were the road to be constructed at the present time would be added to the present cost of the work. From its location it consequently forms the trunk into the city of the railroads in progress and operation on the East, among which are the Marietta and Cincinnati, the Hillsboro branch of the above road, and the Cincinnati, Wilmington and Zanesville roads; the former of which enters it 23, and the latter 36 miles from Cincinnati. At Xenia, 65 miles from Cincinnati, the Columbus and Xenia Railroad leaves it. These three roads command the trade of the entire South-Eastern portion of the State; while the Columbus and Xenia Railroad, in connection with the Little Miami, and the Cleveland and Columbus, forms one of the great lines between Cincinnati and Lake Erie, and is now the leading road of travel between these points. At Springfield, the road also connects with the Mad River and Lake Erie Railroad, which forms a part of another route to the Lake at Sandusky; and with the Springfield and Delaware Line, which connects with the Cleveland and Columbus Road at Delaware, cutting off the detour now made by way of Columbus. The connections formed by the Little Miami Railroad are of the most favorable character, and contribute very largely to its receipts.

The road from having been recently relaid is in a good state of repair. Its equipment is owned jointly with the Columbus and Xenia, the two roads being now run together. The two companies own 31 locomotive engines; 30 first class passenger cars; 10 second class do; 9 baggage cars; 219 box do; 34 cattle do; 70 platform do; and 40 four-wheel do.

CHARACTER OF BUSINESS.

The receipts of the above road have been drawn very equally from passenger and freight. The through passenger traffic is much larger than the local. The freight is made up of agricultural products, going chiefly to Cincinnati, although there is a large through movement. The principal articles of merchandise transported in 1853, were, 126,709 bbls. flour; 418,280 bushels of grain; 46,967 bbls. pork and beef; 51,828 do. whiskey; 51,000 tons of merchandize; 182,500 bushels of lime; 141,741 do. of coal and 84,692 hogs.

FUNDED DEBT.

The total amount of funded debt on the first of December last was as follows:—

6 per cent. loan of the city of Cincinnati redeemable in 1880, secured by mortgage.....	\$100,000
7 per cent. loan contracted in 1845, redeemable in 1855, and convertible....	24,000

Total mortgage bonds.....	\$184,000
6 per cent. loan redeemable in 1856, and not convertible.....	61,000
7 per cent. loan redeemable in 1858, and not convertible.....	135,000
7 per cent. convertible bonds, redeemable in 1861.....	14,000
6 per cent. mortgage, nonconvertible bonds, issued on the second day of May, 1853, and payable on the first day of May, 1858.....	1,500,000

Of the last issue only \$138,000 had been sold on the first day of December, 1883. It is proposed, with the proceeds of the above bonds to pay off all the other indebtedness of the company, making the cost of the road, the amount of the capital stock and the convertible bonds; and the last named loan. The interest on all loans of the company is payable in New York.

Below we give a copy of the balance sheet from the company's ledger, December 1st, 1883.

Dr.—To Individual Accounts.....	\$51,699 17
To Bills Receivable.....	13,217 31
To Col. and Xenia R. R. Stock.....	495,400 00
To Cincinnati and Hillsboro' R. R. Stock.....	11,716 66
To Springfield, Mt. Vernon and Pitt. R. R. Stock.....	150,000 00
To Cincinnati and Sandusky R. R. Stock.....	1,200 00
To Lake Steamboat Line.....	32,630 40
To Construction.....	2,231,380 18
To Passenger Cars.....	56,479 18
To Freight Cars.....	165,193 13
To Real Estate and Depots.....	507,727 93
To Machinery.....	203,934 47
To Machine and Car Shops.....	29,220 52
To Fuel Account.....	19,520 63
To Interest do.....	40,619 48
To Profit and Loss.....	64,304 69
To Treasurer.....	74,154 01
	\$3,706,264 98

Cr.—	
By Individual Accounts.....	\$96,436 52
By Loan do.....	235,043 39
By Loan of City of Cincinnati.....	100,000 00
By Loan of 1845 in Bonds.....	34,000 00
" " " 1846 " ".....	61,000 00
" " " 1848 " ".....	135,000 00
" " " 1851 " ".....	14,000 00
" " " 1853 " ".....	138,000 00
By Bills Payable.....	141,392 74
By Dividends Unpaid.....	2,989 96
By Depreciation and Renewal Fund.....	80,000 00
By Capital Stock.....	2,668,402 37
	\$3,706,264 98

The following statement will show the expenditures and receipts for the year ending Dec. 1st, 1883,—

To Interest Account, for interest paid on Loans, Notes, &c.....	\$40,619 48
To Taxes, for amount of Taxes, for 1853.....	13,229 54
To Profit and Loss, for losses and damages sustained previous to Dec. 1st, 1852.....	3,664 26
To Dividend No. 15 (cash), declared to stockholders for 6 months ending May 31st, 1853.....	129,084 66
To Dividend No. 16 (stock or cash), declared to stockholders, for 6 mos. ending Nov. 30th, 1853.....	133,081 43
To Balance.....	121,674 48
	\$441,353 85

By Balance, for Surplus, Dec. 1, 1852.....	\$43,256 36
By Transportation Receipts, net, for the year ending Nov. 30, 1853.....	352,132 78
By Columbus and Xenia R. R. Stock Dividend, for Dividend on Balance Stock due and issued Co. in 1853..	5,887 87
By Columbus and Xenia R. R. Stock Dividend, for 5 per cent. Dividend, declared June 1st, 1853.....	19,300 00
By Columbus and Xenia R. R. Stock Dividend, for 5 per cent. Dividend, declared Dec. 1st, 1853.....	20,270 00
By Rent Account, for Rents received on Property.....	506 84
	\$441,353 85

By Balance, for Surplus.....**\$121,674 48**

Statement showing the Cost; Mileage; Cost per mile; Gross Receipts; Current Expenses; Net Receipts; rate of Dividend; Receipts from Passengers; Receipts from Freight; Miscellaneous; Earnings per mile; per centage of gross Earnings; Do. of net Earnings, of the Little Miami Railroad since the opening of the first division to the present time.

Year.	Cost of Road and Equipment.	Length in Miles.	Cost &c., per Mile.	Gross Receipts.	Current Expenses.	Net Receipts.	Dividend.	Receipts from Passengers.	Receipts from Freight.	Miscellaneous.	Earnings per Mile.	Per cent. of Gross Earnings.	Per cent. of Net Earnings.
1845	\$816,753	65	\$12,560	\$46,328	\$30,842	\$15,486	31%	\$25,396	\$20,908	.....	\$712	63%	13%
1846	1,122,646	84	13,365	116,062	64,767	51,295	5	61,190	64,862	.....	1,810	10%	4%
1847	1,338,244	84	15,931	220,340	112,266	108,074	81%	90,844	180,296	.....	2,631	15%	8%
1848	1,508,402	84	17,957	280,065	134,018	146,072	10	144,132	128,441	.....	3,834	18%	9%
1849	1,704,603	84	20,293	321,399	160,742	160,657	10	164,818	152,081	.....	5,826	19%	10%
1850	2,106,393	84	25,190	406,697	174,928	230,769	10	204,590	192,607	8,500	4,829	13%	12%
1851	2,409,748	84	28,681	487,815	180,358	297,457	10	224,787	246,591	16,516	6,807	20%	12%
1852	2,654,167	84	31,360	626,746	212,076	314,670	15	270,187	257,117	19,492	7,271	20%	12%
1853	3,169,783	84	37,736	667,568	315,426	352,132	10	350,947	293,478	23,138	7,071	21	11%
Totals.....	\$16,869,678	.....	\$3,072,630	\$1,336,418	\$1,676,002	9	.....	.....	.....	.....	17.3	8.7	.....

New York and New Haven Railroad.

A notice of the several meetings of the stockholders of the New York and New Haven Railroad, recently held in this city and New Haven, is excluded from our present issue by press of other matter, but will appear next week. The meeting at New Haven voted not to assume the Schuyler stock, by a stock vote of 7,635 to 4,386.

General Railroad Law of Ohio.

We give below the XIII. article of the new constitution of Ohio adopted Jan'y 3d, 1851, providing for the organization of corporations, under which the subjoined list of railroads have been organized.

SEC. 1. The General Assembly shall pass no special act conferring corporate powers.

SEC. 2. Corporations may be formed under general laws; but all such laws may, from time to time, be altered, or repealed.

SEC. 3. Dues from corporations shall be selected, by such individual liability of the stockholders, and other means as may be prescribed by law; but, in all cases, each stockholder shall be liable, over and above the stock by him or her owned, and any amount unpaid thereon, to a further sum, at least equal in amount to such stock.

SEC. 4. The property of corporations, now existing or hereafter created, shall forever be subject to taxation, the same as the property of individuals.

SEC. 5. No right of way shall be appropriated to the use of any corporation, until full compensation therefor be first made in money, or first secured by a deposit of money, to the owner, irrespective of any benefit from any improvement proposed by such corporation: which compensation shall be ascertained by a jury of twelve men, in a court of record, as shall be prescribed by law.

SEC. 6. The General Assembly shall provide for the organization of cities, and incorporated villages, by general laws; and restrict their power of taxation, assessment, borrowing money, contracting debts and loaning their credit, so as to prevent the abuse of such power.

SEC. 7. No act of the General Assembly, authorizing associations with banking powers, shall take effect, until it shall be submitted to the people, at the general election next succeeding the passage thereof, and by approved by a majority of all the electors, voting at such election.

Below we give a copy of the general Railroad Law of Ohio, under the new constitution,

Sec. 1. *Be it enacted by the General Assembly of the State of Ohio,* That any number of natural persons, not less than five, may become a body corporate, with all the rights, privileges and powers conferred by, and subject to all the restrictions of this act.

Sec. 2 That any number of persons as aforesaid, associating, to form a company for the purpose of constructing a railroad, shall under their hands and seals, make a certificate, which shall specify as follows:—

1st. The name assumed by such company, and by which it shall be known. 2d. The name of the place of the termini of said road, and the county or counties through which such road shall pass. 3d. The amount of capital stock necessary to construct such road. Such certificates shall be acknowledged before a justice of the peace, and certified by the clerk of the Court of Common Pleas, and shall be forwarded to the Secretary of State, who shall record and carefully preserve the same in his office; and a copy thereof, duly certified by the Secretary of State, under the great seal of the State of Ohio, shall be evidence of the existence of such company.

Sec. 3. That when the foregoing provisions have been complied with, the persons named as incorporators in said certificate, are hereby authorized to carry into effect the objects named in said certificate, in accordance with the provisions of this act; and they and their associates, successors and assigns, by the name and style provided in said certificate, shall thereafter be deemed a body corporate, with succession, with power to sue and be sued, plead and be impleaded, defend and be defended, contract and be contracted with, acquire and convey, at pleasure, all such real and personal estate as may be necessary and convenient to car-

ry into effect the objects of the incorporation, to make and use a common seal, and the same to alter at pleasure: and do all needful acts to carry into effect the object for which it was created; and such company shall possess all the powers, and be subject to all the rules and restrictions provided by this act.

Sec. 4. Said corporations shall be authorized to construct and maintain a railroad, with a single or double track, with such side tracks, turn-outs, offices and depots, as they may deem necessary, between the points named in the certificate, commencing at or within and extending to or into any town, city or village, named as the place of the terminus of such road, and construct branches from the main line to other towns or places within the limits of any county through which said road may pass.

Sec. 5. The capital stock of such company shall be divided into shares of fifty dollars each, and consist of such sum as may be named in the certificate; such shares shall be regarded as personal property, and shall be subject to execution at law.

Sec. 6. An instalment of five dollars on each share of stock, shall be payable at the time of making the subscription, and the residue thereof shall be paid in such instalments, and at such times and places, and to such person, as may be required by the directors of such company.

Sec. 7. If any instalment of stock shall remain unpaid for sixty days after the time it may be required, whether such stock is held by an assignee, transferred, or the original subscriber, the same may be collected by action of debt, or the directors may sell the stock so unpaid at public auction for the instalment then due thereon; first giving thirty days public notice of the time and place of sale in some newspaper in general circulation in the country where such delinquent stockholder resided at the time of making such subscription, or becoming such assignee or transferee, or of his actual residence at the time of said sale; or, if such stockholder reside out of the State, such publication shall be made in the county where the principal office of the company is located: and if any residue of money shall remain, after paying the amount due on said stock, the same shall, on demand be paid over to the owner; if the whole of said instalment be not paid by such sale, the remainder shall be recoverable by an action of debt against the subscriber, assignee or transferee.

Sec. 8. That whenever any railroad company heretofore incorporated, or created and incorporated under the provisions of this act, shall, in the opinion of the directors thereof, require an increased amount of capital stock, they shall, if authorized by the holders of a majority of the stock, file with the auditor of State, a certificate, setting forth the amount of such desired increase, and thereafter such company shall be entitled to have such increased capital, as is fixed by said certificate.

Sec. 9. That the persons named in said certificate of incorporation, or any three of them, shall be authorized to order books to be opened for receiving subscriptions to the capital stock of said company at such time or times, and at such place or places, as they may deem expedient, after having given at least thirty days' notice, in a newspaper published or generally circulated in one or more counties where books of subscription are to be opened, of the time and place of opening books; and so soon as ten per centum on the capital stock shall be subscribed, they may give like notice for the stockholders to meet at such time and place as they may designate, for the purpose of choosing seven directors, who shall continue in office until the time fixed for the annual election, and until their successors are chosen and qualified; at the time and place appointed, directors shall be chosen, by ballot, by such of the stockholders as shall attend for that purpose, either in person or by lawful proxies; each share shall entitle the owner to one vote, and a plurality of votes shall be necessary for a choice; but after the first election of directors, no person shall vote on any share (on) which any instalment is due and unpaid.—The persons named in such certificate, or such of

them as may be present, shall be inspectors of such election, and shall certify what persons are elected directors, and appoint the time and place for holding their first meeting; a majority of said directors shall form a board, and be competent to fill vacancies in their board, make by-laws, and transact all business of the corporation; a new election shall be annually held for directors, at such time and place as the stockholders, at their first meeting, shall determine, or as the by-laws of the corporation may require; and the directors chosen at any election, shall, so soon thereafter as may be convenient, choose any one of their number to be president, and shall appoint a secretary and treasurer of the corporation. The directors before entering on their duties, shall each take an oath, or affirmation, faithfully to discharge his duties, and they shall, from time to time, make such dividends of the profits of said company as they may think proper.

Sec. 10. Such corporation is authorized to enter upon any land, for the purpose of examining and surveying its railroad line, and may appropriate so much thereof as may be deemed necessary for its railroad, including necessary side tracks, depots and workshops, and water stations, materials for construction, except timber, a right of way over adjacent lands, sufficient to enable said company to construct and repair its road, and a right to conduct water by aqueducts, and the right of making proper drains; but no appropriation of private property to the use of any corporation provided for in this act, shall be made, in money, or first secured by deposit of money, to the owner or owners, irrespective of any benefit from any improvement proposed by such corporation, a shall be prescribed by law.

Sec. 11. That whenever any railroad company heretofore incorporated, or which may hereafter be incorporated, shall find it necessary, for the purpose of avoiding annoyance to public travel, or dangerous or difficult curves or grades, or unsafe or unsubstantial grounds or foundations, or for other reasonable causes, to change the location of grade of any portion of their road, whether heretofore or hereafter to be made, such railroad companies shall be and are hereby authorized to make such changes of grade and location, not departing from the general route prescribed in the certificate of such company; and for the purpose of making any such change in the location and grades of any such road, as aforesaid, such company shall have all the rights, powers and privileges, to enter upon and take and appropriate such lands, and make surveys necessary to effect such changes and grades, upon the same terms, and be subject to the same obligations, rules and regulations, as are prescribed by law, and shall also be liable, in damages, when any have been caused by such change, to the owners of the lands upon which such road was heretofore constructed, to be ascertained and paid or deposited as aforesaid; but no damages shall be allowed, unless claimed within thirty days after actual notice of such intended change, shall be given to such owner or owners, if residing on the premises, or notice by publication in some newspaper in general circulation in the country, if non-resident.

Sec. 12. If it shall be necessary, in the location of any part of any railroad, to occupy any road, street, alley, or public way, or ground of any kind, or any part thereof, it shall be competent for the municipal or other corporation or public officer, or public authorities, owning or having charge thereof, and the railroad company, to agree upon the manner and upon the terms and conditions upon which the same may be used and occupied; and if said parties shall be unable to agree thereon, and it shall be necessary, in the judgment of the directors, of such railroad company, to use or occupy such road, street, alley or other public way or ground, such company may appropriate so much of the same as may be necessary for the purposes of such road, in the same manner, and upon the same terms, as is provided for the appropriation of the property of individuals, by the 10th section of this act.

Sec. 13. Such corporation may demand and receive for the transportation of passengers on said road, not exceeding three cents per mile, and for the transportation of property, not exceeding five cents per ton per mile, when the same is transported a distance of thirty miles or more; and in case the same is transported for a distance less than thirty miles, such reasonable rate as may be from time to time fixed by said company, or prescribed by law.

Sec. 14. Such company shall have power to borrow money on the credit of the corporation, not exceeding its authorized capital stock, at a rate of interest not exceeding seven per cent. per annum, and may execute bonds or promissory notes therefor, in sums of not less than one hundred dollars; and to secure the payment thereof, may pledge the property and income of such company.

Sec. 15. Such company may acquire by purchase or gift, any lands in the vicinity of said road or through which the same may pass, so far as may be deemed necessary or convenient by said company to secure the right of way, or such as may be granted to aid in the construction of such road, and the same to hold or convey in such manner as the directors may prescribe; and all deeds and conveyances made by such company, shall be signed by the president, under seal of the corporation; and any existing railroad corporation may accept the provisions of this act, and after such acceptance, all conflicting provisions of their respective charters shall be null and void.

Sec. 16. It shall be lawful for such corporation whenever it shall be deemed necessary, in the construction of such road, to cross any road or stream of water to divert the same from its present location or bed; but said corporation shall without unnecessary delay, place such road or stream in such condition as not to impair its former usefulness.

Sec. 17. Such corporation shall, as soon as convenient after its organization, establish a principal office at some point on the line of its road, and change the same at pleasure, giving public notice in some newspaper of such establishment or change.

Sec. 18. Every company organized under this act, shall be required to erect, at all points where their road shall cross any public road at a sufficient elevation from such road to admit of the free passage of vehicles of every kind, a sign with large and distinct letters placed thereon, to give notice of the proximity of the railroad, and warn persons of the necessity of looking out for the cars; and any company neglecting or refusing to erect such sign, shall be liable in damages for all injuries occurring to persons or property from each neglect or refusal; and each railroad company shall be required to fence its roads, with a good substantial wooden fence, under such rule as the county commissioners of the several counties through which the same may pass shall prescribe.

Sec. 19. That each and every railroad company, incorporated under this act shall annually in the month of January, make a full report of the condition of its affairs, to the Auditor of state, showing the amount of capital stock of such company, the gross amount of tolls or receipts during the previous year, the costs of repairs and incidental expenses, the net amount of profits, and the dividends made; with such other facts as may be necessary to a full statement of the affairs and conditions of such road; and the Auditor shall annually present an abstract copy of such report to the general assembly.

Sec. 20. That whenever the line of any railroad company now existing, or which may hereafter organize under this act, shall cross any canal, or any navigable water, the said company shall file with the "board of public works," or with the acting commissioners thereof, having charge of the public works where such crossing is proposed, the plan of the bridge, and other fixtures for crossing such canal or navigable water, designating the place of crossing; and if the said board or acting commissioner thereof, shall approve of such plan, he shall

notify such company, in writing of such approval; but if the said board or acting-commissioners, shall disapprove such plan, or fail to approve the same within twenty days from the filing thereof, then it shall be lawful for such company to apply to the court of common pleas, or any judge thereof in vacation, and upon reasonable notice being given to the board of public works, or said acting commissioner, said court or judge shall, upon a good cause shown, appoint a competent disinterested engineer not a resident of any country through which said road passes, to examine such crossing, and prescribe the plan and condition thereof, so as not to impede navigation; and such engineer shall, within twenty days from his appointment, make his return to the court of common pleas of the county where such crossing is to be made subject to exceptions by either party, and thereupon the court shall at the next term after the filing of said return proceed to examine the same, and unless good cause is shown, shall approve and confirm the same; and such order or confirmation shall be sufficient authority, for the erection use and occupancy of such bridge, in accordance with such plan; provided, that no railroad company shall be authorized to construct a permanent bridge over any canal of this state which shall be less than ten feet in the clear above the top water line of said canal; and the piers and abutments of such bridge shall be placed so as not in any manner to contract the width of the canal, or interfere with free passage on the towing path.

Sec. 21. That whenever the lines of railroad of any railroad companies, in this state or any portion of such lines, have been or may be constructed, so as to admit the passage of burden or passenger cars over two or more of such roads continuously without break or interruption, such companies are hereby authorized to consolidate themselves into a single corporation, in the manner following:

1. The directors of said two or more corporations may enter into an agreement, under the corporate seal of each, for the consolidation of the said two or more corporations, prescribing the terms and conditions thereof; the mode of carrying the same into effect; the name of the new corporation; the number of the directors thereof, which shall not exceed thirteen; the time and place of holding the first election for directors; and the number of shares of capital stock in the new corporation; the amount of each share; the manner of converting the shares of capital stock in each of said two or more corporations into shares in such new corporation; the manner of compensating stockholders in each of said two or more corporations who refuse to convert their stock into the stock of such new corporation; with such other details as they shall deem necessary to perfect such consolidation of said corporations; and such new corporation shall possess all the powers, rights and franchises, conferred upon such two or more corporations, and shall be subject [to] all the restrictions, and perform all the duties, imposed by the provisions of this act; provided, that all stockholders in either of such corporations who will refuse to convert their stock into the stock of such new corporation, shall be paid at least par value for each of the shares so held by them, if they shall so require, previous to said consolidation being consummated.

II. Such agreement of the directors shall not be deemed to be the agreement of the said two or more corporations, until after it has been submitted to the stockholders of each of said corporations, separately, at a meeting thereof; to be called upon a notice of at least thirty days; specifying the time and place of such meeting, and the object thereof, to be addressed to each of such stockholders, when their place of residence is known, and deposited in the postoffice, and published for at least three successive weeks in one newspaper in at least one of the cities or towns in which each of said corporation has its principal office of business, and has been sanctioned by such stockholders, by a vote of at least two-thirds in amount of the stockholders present at such meeting, voting by ballot, in regard to such agreement, either in person or by

proxy, each share being entitled to one vote; and when such agreement of the directors has been so sanctioned by each of the meetings of the stockholders separately, after being submitted to such meetings in the manner above mentioned, then such agreement of the directors shall be deemed to be the agreement of the said two or more corporations.

Sec. 22. Upon making the agreement mentioned in the preceding section, in the manner required therein, and filing a duplicate or counterpart thereof in the office of the Secretary of State, the said two or more corporations mentioned or referred to in the said first section, shall be merged in the new corporation provided for in such agreement, to be known by the corporate name therein mentioned, and the details of such agreement shall be carried into effect, as provided therein.

Sec. 23. Upon the election of the first board of directors of the corporation created by the agreement in the twenty-first section of this act mentioned, and by the provisions of this act, all and singular the rights and franchises of each and all of said two or more corporations, parties to such agreement, all and singular their rights and interests, in and to every species of property, real, personal and mixed, and things in action shall be deemed to be transferred to and vested in such new corporation, without any other deed or transfer; and such new corporation shall hold and enjoy the same, together with the right of way, and all other rights of property, in the same manner, and to the same extent, as if the said two or more corporations, parties to such agreement, should have continued to retain the title, and transact the business of such corporations; and the titles and the real estate acquired by either of said two or more corporations, shall not be deemed to revert or be impaired by means of anything in this act contained; Provided that all rights of creditors, and all liens upon the property of either of said corporations, parties to said agreement shall be and hereby are preserved unimpaired; and the respective corporations shall continue to exist so far as may be necessary to enforce the same; and provided further, that all debts, liabilities and duties of either company shall henceforth attach to such new corporation, and be enforced from the same, to the extent and in the same manner, as if such debts, liabilities and dues, had been originally incurred by it.

Sec. 24. Any railroad company heretofore or hereafter incorporated, may at any time, by means of subscription to the capital of any other company, or otherwise, aid such company in the construction of its railroad, for the purpose of forming a connection of said last mentioned road, with the road owned by the company furnishing said aid; or any railroad company organized in pursuance of law, may lease or purchase any part or all of any railroad constructed by any other company, if said companies' lines of road are contiguous or connected as aforesaid, upon such terms and conditions as may be agreed on between said companies respectively; or any two or more railroad companies whose lines are so connected, may enter into any arrangement for their common benefit, consistent with and calculated to promote the objects for which they were created; provided that no such aid shall be furnished, nor any such purchase, lease or arrangement perfected, until a meeting of the stockholders of each of said companies shall have been called by the directors thereof, at such time and place, and in such manner as they shall designate, and the holders of at least two thirds of the stock of such company represented at such meeting, in person or by proxy, and voting thereat, shall have assented thereto.

Sec. 25. The commissioners of any county, the city or town council of any city or town, and the trustees of any township, which county, city, town or township, has heretofore subscribed to the capital stock of any railroad company, or turnpike, or plank road company, and have issued, or may hereafter issue any bonds for the payment of such subscription, are hereby authorized to sell the said stock, or any part thereof and on such terms as

they shall deem to be the interest of said county, city, town, or township, respectively, and may apply the proceeds of such sale to the payment of the bonds by such county, city, town, or township, respectively subscribed.

Sec. 26. That every railroad company in this State, shall cause all its trains of cars for passengers, to entirely stop, upon each arrival at a station advertised by such company as a station for receiving passengers upon such trains, at least one half of one minute; and every company, and every person in the employment of such company, that shall violate, or cause or permit to be violated, the provisions of this section, shall be liable to a forfeiture of not more than one hundred dollars, nor less than twenty dollars; to be recovered in an action of debt, upon the complaint of any person, before any justice of the peace of the county in which such violation shall occur; and in all cases in which a forfeiture shall occur under the provisions of this section, the company whose agent shall cause or permit such violation, shall be liable to the amount of such forfeiture, and in all cases, the conductor upon such trains shall be held prima facie to have caused the violation of this section, which may occur upon the train in his charge; said forfeiture to be recovered in the name of the State of Ohio, for the use of common schools.

Additional Act in reference to the sale of Railroad Bonds, passed Dec. 15th, 1852.

Be it enacted by the General Assembly of the State of Ohio, That the Directors of any Railroad Company authorized to borrow money and to execute bonds or promissory notes therefor, shall be, and they are hereby authorized to sell, negotiate, mortgage or pledge such bonds or notes, as well as any notes, bonds, scrip, or certificates, for the payment of money or property which such company may have heretofore received, or shall hereafter receive, as donations, or in payment of subscriptions to the capital stock, or for other dues of such company, at such times and in such places, either within or without the State, and at such rates and for such prices as in the opinion of said directors will best advance the interests of such company; and if such notes or bonds are thus sold at a discount, such sale shall be as valid in every respect and such securities as binding for the respective amounts thereof, as if they were sold at their par value.

Additional Act relating to the issue and sale of mortgage bonds, passed February 9th, 1853.

Be it enacted by the General Assembly of the State of Ohio, That in all cases where any railroad company organized, or hereafter to be organized, under any law of this State, or owning any real and personal estate therein, which has by virtue of any special provisions in its charter, of the act "regulating railroads," passed February 11, 1848, or of the act "to provide for the creation and regulation of incorporated companies in the State of Ohio," passed May 1, 1852, authority to borrow money, and to secure the payment thereof, to pledge the property and income of such company, every such company may execute a deed of mortgage, or other instrument in writing, for the purpose of securing the payment of the loan of money so made, or the notes, bonds, or other evidences of indebtedness that may be so issued by said company therefor, which said mortgage may include the personal as well as the real property of said company.

That in all cases where a mortgage has been or may hereafter be executed upon any portion of the personal and real property of any railroad company within this State, by the proper officers of the same, to secure the payment of any loans of money, or advances of material or labor made to said company, it shall be held to be a sufficient record of the same, to have the same recorded in the office of the Recorder of Deeds, in each of the counties in which said real and personal property may be situated or employed, and said mortgage so recorded, shall be held to be a good and substantial lien from the date of the record of the same in each county where the same is recorded,

as well upon the personal, as the real property of said company.

Additional Act in reference to the sale of mortgage bonds, and the increase of capital stock, passed March 11th, 1853.

Be it enacted by the General Assembly of the State of Ohio, That any railroad company heretofore, or that may hereafter be incorporated, under the laws of this State, contemplating the laying of a double track, may issue its bonds, convertible or otherwise, bearing any rate of interest not exceeding seven per cent. per annum, to an amount not exceeding half of its capital stock, and sell the same at such time and at such place, within or without the State, and at such rates as the directors of such company may deem best for its interests; and if such bonds are sold at a discount, they shall be as valid in every respect as if sold at their par value; and such company may secure such bonds by a mortgage on the property, or otherwise, and may, at its option, increase its capital, stock in an amount equal to the bonds issued as aforesaid.

The above, we believe, embraces all the legislation of Ohio, in reference to railroads, important to be known by persons interested in the securities of them. We group the several acts together for convenience of reference.

Below is the list of the railroads organized under the new law

Ashtabula and New Lisbon.
Atlantic and Ohio.
Clinton Line.
Cincinnati and Indiana.
Cincinnati, Harrison and Indianapolis Straight Line.
Cleveland and St. Louis.
Cincinnati and Portsmouth.
Cincinnati, Mansfield and Lake Erie.
Cincinnati, Dayton and Toledo.
Cincinnati and Mansfield.
Columbus, Dublin and Marysville.
Columbus and Hocking.
Cincinnati and Mackinaw.
Conneaut and Pittsburgh.
Cincinnati and Cleveland Short Line.
Cleveland, Madison and Louisville.
Cleveland and New York.
Cleveland and Louisville.
Clinton Line Extension.
Cincinnati, Aberdeen and Ohio River.
Dalton.
Dayton and Pierpoint.
Delaware and Xenia.
Dayton, Blanchester and Maysville.
Eaton, Union and Northwestern.
Eaton, Castine and Greenville.
Fremont and Defiance.
Fremont and Indiana.
Fulton and Brigton.
Great Western.
Grand River and Hudson.
Hudson and Grafton.
Logansport and Pittsburgh.
Louisville and Sandusky.
Lima, Pendleton, Gilboa and Toledo Air Line.
Mansfield and Newark.
New Lisbon Union.
Ohio Excelsior.
Ohio.
Painesville and Hudson.
Port Clinton.
Sandusky, Toledo and Michigan.
Sandusky and Fremont.
Scioto Valley.
Toledo, La Fayette and St. Louis.
Toledo and Fort Wayne.
Toledo and Illinois.
Tiffin and Fort Wayne.
Toledo and Indianapolis.
Tarleton.
Toledo and Louisville.
Urbana, Findley and Detroit.
Western.

(Companies which have not returned certificates of organization.)

Batavia, Perontown and Milford.

Cleveland and Tiffin.
Lancaster and Newark Junction.
Mt. Vernon, Plympton and Cleveland.
Newark, Bellefontaine and Chicago.
Ohio, Indiana and Illinois.
Perrysburgh and Detroit.
Port Clinton and Fremont.
Portsmouth and Chillicothe.

American Railroad Journal.

Saturday, November 11, 1854.

Caution.

As we understand a man named *Crawford* has been presenting bills to several of the advertisers in the *Journal*, purporting to emanate from this office, and to be for sums due the *Journal*, we deem it our duty to put our patrons on their guard.

Monies due this office should be paid to no one outside the office except the editor, proprietors, or Mr. N. DAVIDSON, their business agent; or some person showing their written authority to receive them.

New Map—Pocket Edition.

We have now ready a few copies of Mr. Poor's new map of all the Railroads in the United States and Canadas; put up in covers for carrying in the pocket. It will be found very convenient for travellers.

Price by mail \$1. Usual discounts to the trade.
Address AMERICAN RAILROAD JOURNAL,
OFFICE 9 Spruce st., New York.

Railroad Laws of Ohio.

We give this week a copy of the 13th article of the Constitution of Ohio, providing for the formation of Railroad, and other Corporations; and the General Railroad Law of the State, with the various amendments thereto; also a list of the Companies which have been organized under it.

The Constitution prohibits the granting of *special* charters, but does not abrogate any of the rights in powers of such as were granted *previous* to the time that it went into effect. The companies organized under the *new* law have very nearly the same privilege as were conferred by special acts; the principal difference being in the liability of stockholders, which, under the new constitution, is equal to twice the amount of stock held. Under the general law, both old and new companies may increase their stock and liabilities at pleasure.

With this number of the *Journal* before him, the reader has all that is necessary to form a correct idea as to the *legal* relations sustained by the railroads of Ohio. The instance given will show the *foreigner* the manner of doing things in the "*Model Republic*." The aims and tendency of legislation in this country is to render all industrial enterprises entirely independent of *government*, and to leave the construction of all such works as railroads entirely to the instinct of self-interest.—It would not be difficult to show, we think, that perfect liberty to construct railroads is the most effectual method of checking their *over-construction*, as well as of securing economical and efficient management. It requires no argument to prove that the *individual* is much wiser than *government*, and we think experience shows the latter cannot, as a general rule, interfere in controlling or shaping the industrial pursuits of a people without doing more harm than good.

Earnings of Railroads for October.

The earnings of the Michigan Southern and Northern Indiana Railroad for October were:

Passengers and mail:.....\$224,185 39
Freight and miscellaneous.....62,191 78

Total.....\$286,377 17
Earnings October, 1853.....223,575 96

Increase.....\$62,801 21
The earnings of this road for the ten months ending October, 31, amounted to...\$1,778,386 21
For same period, 1853, they were...1,287,179 11

Increase in ten months, (over 37 per cent).....\$481,207 10
The Cleveland and Toledo Railroad receipts for October were.....\$85,079
Against October last year.....59,608

Increase 45 per cent.....\$25,471
The receipts of the Chicago and Rock Island Road for October shows an increase of about \$44,000 over September. They are:
Passengers.....\$110,435 92
Freight partly estimated.....55,809 98
Contractor's freight for the Bureau Road.....7,176 00
Mails and expresses.....2,800 00

Total.....\$176,221 85
The receipts of the Milwaukee and Mississippi Road for October were:
Passengers.....\$20,176 28
Freight.....56,498 11

Total.....\$76,674 39
Total for the nine months preceding...304,527 42

Total for ten months.....\$381,201 82
The earnings of the Michigan Central Railroad Company for October were:

	Passengers.	Freight.	Mails.	Total.
1854.	\$167,178 40	95,845 38	4,655 23	\$267,679 01
1853.	95,653 16	97,985 28	6,525 00	200,163 44

Inc...\$71,525 24 \$67,505 57

The earnings of the Cleveland and Pittsburgh Railroad for October, 1853, are as follows:

For passengers.....\$24,302 82
Freight, mails, &c.....29,846 55
October, 1853,.....54,149 37
44,323 38

Increase.....\$9,825 99
The receipts of the Pacific Railroad for October were.....\$9,447 28
October 1853.....5,324 38

Increase.....\$4,122 00
The receipts of the Hudson River Railroad for October, 1854, were.....\$160,642 18
Same month in 1853.....153,258 80

Increase.....\$7,383 88
The receipts of the Ohio and Pennsylvania railroad Company for October were:
Receipts in October, 1854.....\$142,353 88
Do. in October, 1853.....84,070 60

Increase.....\$58,283 28
Receipts in 1854, to October 31.....897,268 80
Do. in 1853, to October 31.....529,793 84

Increase (69 per cent).....\$367,474 96
This statement shows the earnings of the road, after deducting the sums received for other companies. The road has earned in ten months very nearly the amount of the estimate for the whole year.

Kennebec and Portland Railroad.

The expenditures on this road to September 30, 1854, amount to \$2,605,365 86, and the balance of assets is \$238,338 77.

The receipts for the past year ending September 30, exclusive of all amounts paid and due to other roads for their proportions, have been as follows:

From 270,332 pass'gers..\$153,162 57
From 30,155 and 60-100th
tons freight..... 43,102 65
From transportation of
mails, express, rents,
&c..... 12,303 20
\$208,568 42

Less running expenses as follows:

Maintenance of way....\$16,040 17
Locomotive power..... 19,828 99
Train Expenses..... 16,046 54
Office establishment and
salaries..... 9,029 72
Station expenses..... 12,649 72
Mail expenses..... 615 42
Fuel expenses..... 19,118 21
General expenses..... 1,170 81
\$94,499 58

Leaving net receipts for the year..\$114,098 84

Columbus and Xenia Railroad.

This road which now, in connection with the Little Miami, and forms the complement of the line to Columbus, was commenced in 1847, and formally opened for business on the 22d day of February, 1850, and like the Little Miami it traverses an excellent country over a favorable route.

FUNDED DEBT.

The copy of the Balance Sheet from Ledger will show them the amount of the funded debt of the Company. The interest on the Bonds issued to the Ohio and Central Railroad is paid by the company.

Copy of Balance Sheet from Company's Ledger Dec., 1, 1851.

Construction account.....\$1,162, 963 78
Real estate..... 18,349 29
Machinery account..... 60,493 54
Car account..... 59,966 40
Engine house and car shop..... 8,253 71
Second track..... 7,020 96
Telegraph stock..... 2,000 00
Capital stock, held in trust..... 6,300 00
Lake Erie steamboat stock..... 15,369 60
Central Ohio R. R. Co.'s stock..... 60,000 00
Dayton, Xenia & Belpre R. R. Co.
Columbus & Springfield R. R. Co.
L. M. & C. & X. joint account.... 86,078 65
Bills receivable..... 2,944 41
Winslow, Lanier & Co..... 6,938 27
Individual accounts..... 4,437 65
S. E. Wright Treasurer..... 578 31
\$1,548,425 99

Capital stock..... 1,291,700 00
Iron bonds, convertible..... 19,000 00
Five year bonds do..... 7,000 00
Bills payable..... 50,983 32
Unpaid subscriptions..... 105 00
Suspense account..... 320 20
Bonds to Central Ohio R. R. Co.,
not convertible..... 60,000 00
Interest on county and corporation
bonds..... 776 97
Rent account..... 428 86
Profit and loss..... 1,393 24
Surplus fund..... 48,259 93
Use of track..... 1,772 49
Unclaimed dividends..... 2,329 35
Individual accounts..... 18 40
Dividend No. 6, Dec. 1..... 64,338 33
\$1,548,425.99

Statement, showing the Cost; Mileage; etc., etc., of the Columbus and Xenia Railroad from the date of its opening to Dec. 1, 1853

Year.	Cost.	Mileage.	Cost per mile.	Gross rec'ts
1850.....	1,057,933	55	19,235	66,366
1851.....	1,194,074	55	21,710	211,631
1852.....	1,227,719	55	22,322	*237,306
1853.....	1,347,700	55	24,503	314,436
Totals...	4,907,426	..	23,563	829,739
	Current expenses.		Net receipts.	Rate of div'd.
1850.....	23,917		37,449	—
1852.....	69,952		141,679	11
1853.....	102,143		135,163	10
1854.....	145,822		168,614	10
Totals.....	346,834		482,905	..
	Rec'ts f'm pass'grs.		Receipts from freight.	Miscellaneous.
1850.....	47,017		19,348	..
1851.....	135,829		64,141	11,661
1852.....	..		..	..
1853.....	165,287		148,251	10,806
	Earnings per mile.		Per cent- age of gross earnings.	Do. of net earnings.
1850.....	1,207		6 3/4	3 3/4
1852.....	3,848		18 3/4	12
1853.....	4,318		19 1/2	11
1853.....	5,717		23 1/2	12 1/2
Totals.....	..		Av. 17	Av. 9.81

*For 11 months.

Cincinnati, Hamilton and Dayton Railroad.

The Cincinnati, Hamilton and Dayton Railroad Company was chartered on the 2nd day of March 1846, with the usual authority, to construct and maintain a railroad from Cincinnati to Dayton. The work of construction was commenced in December, 1849, and the road opened for travel on the 18th of September, 1851.

ROUTE AND CONNECTIONS.

The City of Cincinnati can be approached (without tunnels) only upon the immediate bank of the Ohio River, and through the Valley of Mill Creek, which enters the Ohio at right angles, through the western part of the city. With these exceptions the city is completely hemmed in by high ranges of hills, with the Ohio River in front. Such being the case, the possession of the right of way into the city is a very important item in estimating the value of the roads which possess the keys to such entrance—the Little Miami, the Cincinnati, Hamilton and Dayton, and the Ohio and Mississippi Railroads.

The Cincinnati, Hamilton and Dayton Railroad finding an easy avenue from the city through the Mill Creek Valley, enters the Valley of the Great Miami about 18 miles from Cincinnati. The valley of the latter is followed to northern terminus of the road at Dayton, one of the most important interior towns in the State.

The Cincinnati, Hamilton and Dayton Railroad sustains relations in reference to the western part of the State similar to those sustained by the Little Miami toward the eastern. For the roads entering the Great Miami Valley, the above forms the convenient trunk to Cincinnati. The first connection formed is with the Junction Railroad, in progress from Hamilton, 25 miles from Cincinnati, to Indianapolis, about 85 miles in length. At the

same place the road connects with the Hamilton and Eaton Railroad extending to Richmond, to a point of junction with the Indiana Central Railroad extending to Indianapolis. From Richmond, the Cincinnati, Logansport and Chicago R. R. is now nearly completed to Logansport; a portion of it being in operation. At Carlisle Station, 44 miles from Cincinnati, a road is now in progress for the purpose of forming, in connection with the Greenville and Miami Railroad, a direct route to Greenville, and Union, the latter the point of intersection of the Bellefontaine and Indiana, and Indianapolis and Bellefontaine, and to which two roads are in progress to Fort Wayne. The above road will form a very important branch to the Cincinnati, Hamilton and Dayton R. R., as it traverses a country of great fertility and must command the trade of an extensive area of country dependent upon Cincinnati. At Dayton, the Cincinnati, Hamilton and Dayton Road connects with the Mad River Railroad, which, with the former, forms a continuous line of railroad between Cincinnati and Lake Erie; the Dayton, Xenia and Belpre Railroad, now in progress; the Dayton and Michigan Railroad in progress to Toledo, and in operation to Piqua, a distance of 28 miles; and with the Dayton and Western Railroad, forming a part of line a to Indianapolis. These roads secure to the Cincinnati, Hamilton and Dayton R. R. the most favorable connections and the trade of extended portions of Ohio and Indiana, and constitutes it a part of important through routes to Lakes Erie, and Michigan.

CHARACTER OF BUSINESS.

The connections above described have been too recently formed to have their influence seen in the table of earnings hereto annexed. From the opening of the road to the first day of April, 1854, the proportion of way, to through, receipts was \$807,820 60 of the former, \$72,894 82 of the latter; or a ratio of 11 to 1. There is, probably, no road in the Western States possessing a larger local traffic. The Valley of the Great Miami is well known to be one of the best portions of Ohio, while the numerous falls on that river are the seats of thriving manufacturing towns. The local business of the Valley is undoubtedly equal to the support of a first class double track road.

COST, AND CONDITION OF THE ROAD.

The cost of the Cincinnati, Hamilton and Dayton Railroad has exceeded that of most western roads from the great expense necessarily incurred in entering the City of Cincinnati, both for lands for stations, and right of way and damages. The balance of the line is not unusually expensive. The road is admirably constructed, and has an ample equipment. From Cincinnati to Hamilton a double track is in progress and is well advanced toward completion. This will add greatly to the efficiency of the road, and the safety of transportation.

The equipment of the company consists of 21 locomotive engines; 25 first class passenger cars; 4 second class do; 6 mail do; 188 box do; 98 platform do., and 9 cattle cars.

FUNDED DEBT.

The amount of the funded debt will be seen in the copy of the balance sheet from the company's ledger. It bears 7 per cent interest, and both principal and interest are payable in New York.

Copy of Balance Sheet from Company's Ledger,
April, 20th, 1854.

Dr.—Construction Account.....	\$2,263,286 72
Equipment.....	444,127 19
Real Estate.....	254,564 41
Property.....	250,884 31
Bills Receivable.....	51,630 64
Due from other Roads.....	57,022 28
Individual Accounts.....	50,359 49
Suspense Account.....	29,358 44
Carlisle and Stedman, N.Y.....	32,296 42
Expense Account, Feb'y and March.....	32,629 64
Stock and Material on hand....	28,342 04
Cash.....	65,862 64
	\$3,564,364 22

Cr.—Capital Stock Account.....	\$2,100,000 00
Mortgage Bonds, due 1867, (unconvertible).....	500,000 00
Do. do. 1880, do.....	362,000 00
Amount of Reserve Fund.....	50,000 00
" " Renewal Account.....	29,170 91
Bills Payable.....	388,350 10
Income Rec'ts, Feb'y & March	77,243 78
Individual Accounts.....	57,599 43
	\$3,564,364 22

Table showing the Cost of the Road, April 20th, 1854.

Capital Stock.....	\$2,100,000 00
Mortgage Bonds, (un- convertible,) due	
1867.....	500,000 00
Do. do. 1880.....	362,000 00
	\$2,962,000 00
Construction Acc't.....	\$2,263,286 72
Equipment do.....	444,127 19
Real Estate do.....	254,564 41
	2,961,978 32
	\$21 68

Statement showing the Cost, Mileage, &c., &c., of
the Cincinnati, Hamilton and Dayton R. R.,
from its opening to the present time.

Year.	Cost.	Mileage.	Cost per Mile.
1852.....	\$2,145,595	60	\$35,759
1853.....	2,508,011	60	41,800
1854.....	2,961,978	60	49,363
Totals. \$7,615,584		..	....
	Gross Rec'pts.	Current Expenses.	Net Receipts.
1852.....	\$97,215	\$35,181	\$62,034
1853.....	321,093	120,137	200,956
1854.....	463,021	187,207	275,814
Totals. \$881,329		\$342,525	\$538,803
Rate of Divid'd.	Receipts from Pass'grs.	Receipts from Freight.	Miscella- neous.
1852....	\$74,427	\$21,514	\$1,247
1853.... 9	191,701	122,377	7,715
1854.... 10	265,310	171,809	11,913
Earnings per Mile.	Per cent'ge of Gross Earnings.	Do. of Net Earnings.	
1852.....	1,620	14½	3
1853.....	5,363	13	8
1854.....	7,717	15½	9
Average.....		11	6.66

Ohio and Indiana Railroad.

This important line of road has been opened for its entire length, and is having a traffic quite up to expectation. From Fort Wayne, its Western Terminus, the Fort Wayne and Chicago Railroad is making rapid progress, and, upon its completion, a new route will be opened from Central Ohio to Chicago, and from Cleveland to Chicago, nearly as short as any other proposed or in use.

Richmond and Danville Railroad.

We publish below a comparative table of the receipts of this road for the last two years. The increase of business there shown is about 39 per cent. The road has been extended *eight miles* during the last year and is now only 90 miles long. The slow progress of the road during the year is attributable to many causes, the most material of which was the want of railroad iron. Besides the delays in shipping iron that had been purchased, there was the loss of a cargo by the sinking of a vessel.

Business of the Richmond and Danville Railroad for the year ending on the 30th Sept., 1853, and the 30th Sept., 1854.

	1853.	1854.
Freight.....	\$108,310 87	\$153,994 71
Passengers.....	50,543 66	64,810 91
Mail.....	3,124 71	3,808 96
Express Freight	2,986 03	2,679 82
	\$164,965 27	\$225,294 40
		164,965 27
Increase in '53 over '51.....		\$60,329 13
Increase about 39 per cent.		

The cars were running to Keysville, 73 miles, from 8th Nov., 1852, to 20th July 1853; to Drake's Branch, 82 miles, from the 20th July, 1852, to 4th Oct., 1853; to Overby's station, 85 miles, from 4th Oct., 1853, to 1st March, 1854; to Staunton river, 90 miles, from March 1st, to Sept., 30, 1854.

Cleveland, Columbus and Cincinnati R. R.

The construction of this road was commenced in 1848. It was formally opened to the public Feb'y 18th, 1851.

ROUTE AND CONNECTIONS.

The name of the road does not correctly indicate its route, which is limited to the distance between Cleveland and Columbus.

For the first 80 miles out of Cleveland the road pursues very nearly a direct south-westerly course for the purpose of obtaining a more favorable line, and for the additional object of constituting it the *trunk* for the numerous roads approaching Cleveland from the *West*. The route selected is a very favorable one, the maximum grade being only 40 feet to the mile, while 131 miles have no inclination greater than 15 feet to the mile. There are 122 miles of straight line. Upon the opening of the road it traversed one of the most sparsely settled districts of Northern Ohio, which has since been very rapidly improved, and is able to supply a very large traffic.

The first tributary entering the Cleveland and Columbus road from the *West* is the southern branch of the Cleveland and Toledo Railroad, (formerly the Toledo, Norwalk and Cleveland,) which joins it at Grafton, 25 miles from Cleveland. Since the opening of this road it has had an enormous traffic, having been for a time the only railroad running to Chicago. A portion of the business received from this road will eventually take the *northern* division of the Cleveland and Toledo road, which has an independent line into Cleveland. At Shelby, 67 miles from Cleveland, the Cleveland and Columbus Road crosses the Sandusky, Mansfield and Newark Railroad, which is now opened to Newark, 71 miles south from Shelby, and is in progress to the Ohio River at Portsmouth. At *Crestline*, 76 miles from Cleveland, the road intersects with the Ohio and Pennsylvania Railroad entering it from the *East*, and the Ohio and Indiana R. R., entering it from the

West. From the latter, a large traffic will be received. This line is now completed to *Fort Wayne*, a distance of 131 miles, where it connects with the Fort Wayne and Chicago Railroad, which is in progress, and upon the completion of which a new convenient route will be opened to Chicago. At Galion, 79 miles from Cleveland, a connection is formed with the Bellefontaine and Indiana R.R., extending on a very direct course, in connection with the Indianapolis and Bellefontaine R. R., to Indianapolis, the centre of the railroad system of Indiana. In connection with the last named roads the Cleveland and Columbus forms a very direct line between Cleveland and Indianapolis, a distance of 281 miles. From this connection the Cleveland and Columbus Road will derive a very large traffic. At Delaware it connects with the Springfield, Mt. Vernon and Pittsburgh Railroad, which forms, in connection with the Little Miami, the shortest line between Cleveland and Cincinnati; and in connection with the Springfield and Dayton branch of the Mad River Road, and the Cincinnati, Hamilton and Dayton, a portion of another line to Cincinnati, following down the valley of the great Miami. At Columbus it unites with the numerous roads concentrating at that place, the most important of which is the great line to Cincinnati. The position of this road constitutes it the convenient trunk of several important lines to Cleveland, the traffic of which alone would supply to the former a remunerating business.

CHARACTER OF BUSINESS.

A very large proportion of the freight is *through* freight; that going from Cleveland to Columbus being merchandize, while that going to Cleveland is made up chiefly of agricultural products. About one-fourth of the passengers pass over the entire line of the road, from whom are received about one-half of the passenger receipts.

FUNDED DEBT.

The amount of funded debt and the general financial condition of the company is shown by the following.

Abstract of the Books of the Company, Dec. 1st, 1853.

Construction.....	\$3,196,545 15
do. Second Track.....	90,891 02
Cars and Engines.....	545,912 51
	\$3,833,348 68
Real Estate.....	34,119 96
Cleveland City and Delaware County Bonds.....	45,000 00
Stock of this Com- pany.....	149,710 00
Columbus and Xenia R. R. Stock.....	5,050 00
Cleveland and Cin- cinnati Telegraph Stock.....	3,000 00
Steam Boat Stock...	54,000 00
Loan to Stockholders Bellefontaine and Indiana R. R. Co....	47,500 00
Loan to Stockholders Indianapolis and Bellefontaine R. R. Company.....	54,000 00
Loan to Cleveland and Mahoning R.R. Company.....	12,000 00
Bills Receivable.....	116,542 88
Individual and other accounts.....	6,073 28
	\$26,996 13

\$4,860,344 80

Capital Stock.....	\$3,983,652 00
Mortgage Bonds.....	67,000 00
Other Convert. Bonds	8,000 00
Franklin County B'nds	50,000 00
Bills Payable and other liabilities....	8,599 81
Borrowed from Earn- ings.....	293,092 96
	\$4,360,344 80

Statement showing the Cost, Mileage, &c., &c., of the Cleveland and Columbus R. R., from 1851 to 1853 inclusive.

Year.	Cost.	Mileage.	Cost per Mile.
1851.....	\$3,025,888	135	\$22,460
1852.....	3,426,897	135	25,384
1853.....	3,924,518	135	29,070
Totals....	\$10,377,303	...	...
	Gross receipts.	Current expenses.	Net Receipts.
1851.....	\$466,317	\$167,342	\$298,975
1852.....	777,793	294,339	483,454
1853.....	1,191,873	580,776	611,097
Totals.	\$2,435,983	\$1,042,457	\$1,393,526

	Rate of Divid'd.	Receipts from pass'g'rs.	Receipts from freight.	Miscellaneous.
1851....	8	\$299,616	\$150,284	\$16,417
1852....	7	443,013	294,786	39,994
1853....	13	583,976	457,883	68,331

Av. 9.33

	Earnings per mile.	Percentage of gross earnings.	Do. of net earnings.
1851.....	\$3,454	15½	9¼
1852.....	5,761	22¾	14
1853.....	8,828	30¼	15½
Average.....	22.83		13½

Hartford, Providence and Fishkill R. R.

An experimental trip was made over this road, Thursday, Sept. 21. The President and Directors, with the Chief Engineer and his assistants, and the President and Directors of the Boston and Providence Railroad Company, left the depot of the Boston and Providence Railroad in this city, soon after noon, and stopping occasionally at interesting points, proceeded to Hartford. We have, from time to time, kept our readers so well informed of the progress of this work, that we have little to add, except that all we have said of the excellence of the construction is fully sustained by the examination which has been made of it. The road bed is equal to any in New England, and it is conceded that on no other is there such masonry. The stone is hewn to a joint and laid in cement, and we were assured that the portions under ground were as substantial and enduring as those above. The bridges over the Pocasset, the Quinebang, Little River and Flat River, would be considered triumphs of engineering, if the great works that have been constructed through the country, in all directions, had not made us familiar with far greater exhibitions of mechanical power and skill. But though other roads have been carried over more difficult points, none have been built in a more faithful and substantial manner. Nothing short of an earthquake can shake the piers and arches of these structures.

Two of the new locomotives are from the works of William Mason & Co., Taunton, and six more are contracted for with the same house. They are the first locomotive engines made by these eminent mechanics, and show that the reputation which they long enjoyed in other departments of machinery will be fully sustained in this.

There are no depots erected between Providence and Willimantic, but the opening of the road will not be delayed for lack of them. An arrangement was made, in the beginning, for the use of the depots and track of the Boston and Providence Railroad at this end of line, and tempora-

ry platforms will be erected at the stopping places. The annual meeting of the company will be held at Hartford on the 25th of October, when the stockholders will be invited to go over the road.—*Providence Journal.*

Journal of Railroad Law.

OVER ISSUES OF STOCK.

The following decision of Judge Morris, delivered at a late Special Term of the Supreme Court, as will be perceived, indicates his opinion but partially in regard to the rights of the holders of stock issued without the authority of law. He decides simply, that such stockholders have no right to transfer their interests upon the books of the Company from whose agent they received them.

The People ex rel. James E. Jenkins and John A. Condit, agt The Parker Vein Coal Co., Joseph Noble, and others.

MORRIS, J.—This is a motion by plaintiffs for Mandamus requiring the Parker Vein Coal Co., and the other defendants, President and Directors of said company to permit Condit and Jenkins to transfer stock on the transfer books of said company, and also to permit transfers to be made in said books by all stockholders of said company, who may require the same to be made "according to the regulations of the company and the equal course of business."

The facts in the case, as established by the papers used by the parties, are as follows:

The Parker Vein Coal Company is incorporated by the State of Maryland with a capital of not exceeding Three Millions of Dollars, to be divided into shares of one hundred dollars each, being 30,000 shares. Prior to June 1854, some of the officers of the Company, who are legally authorized to issue certificates of stock and to transfer stock, fraudulently issued false certificates of stock to a large amount, so that prior to June, 1854, there had been issued, and was then and is now outstanding, certificates of stock of over 150,000 shares, being over 120,000 certificates of shares of stock more than the act of the Legislature authorized. These fraudulent issues of false certificates of stock upon their face, are precisely similar to the genuine certificates; it is therefore impossible by inspection to designate which are genuine and which are false.

On the 12th of June last an injunction out of the Supreme Court was issued against the company, &c., forbidding the transfer of stock by the officers of the company, which injunction is still in force. The plaintiffs in this suit were not parties to that suit. It is argued by the parties to this application that this motion may also be deemed a motion to dissolve that injunction.

The Parker Vein company have become insolvent and an assignment of all their property and effects has been made, for the benefit of all their creditors.

The plaintiffs in this suit own and hold certificates of stock, which they have sold and desire to transfer, and are stock brokers, and they require the power of transferring the stock of this company to facilitate their business operations.

Certificates of stock are only evidence of the existence of stock, and of its ownership. These false certificates are false witnesses—false pretenses—there is no truth in what they assert.

This fraudulent issue of false certificates of stock cannot increase the capital of the company, lessen the par value of the shares, or increase the number of the shares. No act of the company, of its officers, or directors, or stockholders, either by agreement or fraud, can increase the capital of the company, or increase the number of shares. The Legislature alone possesses such power. Therefore there is not, and cannot be, (short of an act of the Legislature) any stock represented by these false certificates.

To open the books for the transfer of stock would lead to the circulation and transfer of these 120,000 false certificates, as genuine; would increase the difficulties of tracing the genuine certi-

ficates of stock; would change the evidence in relation to these certificates, and would additionally expose holders of stock, and the community to injury.

The evidence of the parties interested must be left where it stood when the frauds were discovered, until the courts by adjudication, or the Legislature by enactment, dispose of the matter.

For these reasons I deny plaintiff's motion.

In arriving at this conclusion I have not considered the question whether mandamus would be a proper remedy were the merits of the question with plaintiffs.

ROBERT H. MORRIS.

ISSUING STOCK FRAUDULENTLY.

The Legislature of Vermont, with the concurrence of the Governor, have just passed a law which enacts that the fraudulent issue of stock by the agent of corporations shall subject the offender to a fine of a thousand dollars, and to imprisonment of not less than one year nor more than ten years.

MISBEHAVIOUR OF RAILWAY TRAVELLERS.

A railway traveller is not obliged to fasten himself as a fixture to his selected seat, and does not forfeit it by a momentary withdrawal. It is otherwise indeed, if he actually abandons his seat, which then belongs to the next occupant. But even if a traveller is ejected from a seat of which he has taken rightful possession, he is not justified in using such offensive language on the occasion as to annoy his fellow travellers. The Courts have often justified the Superintendents of public conveyances in forcibly excluding therefrom violators of the rights of their companions. And it would seem, that if, as in the Marine Court case subjoined, a conductor should instead of ejecting wrong doers from a car, shut them up in a well cushioned saloon, and carry them on to their place of destination, the result would only be what the law terms "a damage without an injury," or in common parlance, "no harm done."

SHEEHAN AGAINST THE HUDSON RAILROAD—POWERS

AGAINST THE SAME.

The plaintiffs, on Sunday, 10th of June last, made an excursion from this city to Sing Sing, at which place they took refreshments. Upon entering the downward train in order to return, they took possession of two vacant seats. They were in a few minutes accosted by a gentleman, who informed them, that he had taken the seats in question for himself and child at Albany, and had only left them for a few minutes.

The plaintiffs refused to surrender. The conductor decided against them, and upon their making very obstreperous, and, as alleged, unbecoming resistance, he locked them up by force in the saloon, which they complained of, as being decidedly too close quarters. Judgment for defendants.

LOCATING AND CONSTRUCTING RAILROADS.

A plan exhibited to the Legislature by those applying for an act of incorporation as a Railroad Company, but not referred to in the act, is not admissible in evidence to control the construction of the provisions of the act of Incorporation, as to the limits within which the road is to be located, the act in question being conclusive evidence in the case. *Boston and Providence Railroad Corporation vs. Midland Railroad Company.*—*Gray's Massachusetts Reports*, in press.

A corporation who have been authorized to construct a Railroad, and are afterwards authorized

to make it in sections of 5 miles each, provided that they shall not commence the construction of any portion of their road within a certain distance of one of its terminations, until the stock is subscribed for, by responsible persons, and a certain portion thereof actually paid in, are free to avail themselves of this privilege or to waive it and are not obliged to have their stock subscribed for, and the specified amount paid in, as a condition precedent to constructing their whole road, *not* in sections.—*Id.*

The Railroads in Great Britain.

The growth of railroads in Great Britain has been spasmodic. From the year 1843, when there were 2,036 miles in operation, to 1848—a period of five years—the increase was exceedingly rapid. A railway fever was in existence during all this period. Workmen were engaged by hundred and thousands, in the three Kingdoms. Iron was in demand. Rails were laid down with marvelous celerity. Locomotives were never seen before; travellers exchanged the coach for the cars; speculators investing heavily, lost heavily; and in 1849 the mania decreased.

The following figures, drawn from the report before us, exhibit the progress of the inflation and collapse:

Opened in 1844.....	204 miles
" " 1845.....	296 "
" " 1846.....	606 "
" " 1847.....	803 "
" " 1848.....	1,182 "
" " 1849.....	869 "
" " 1850.....	625 "
" " 1851.....	269 "
" " 1852.....	446 "
" " 1853.....	350 "

Total, 10 years.....5,650 "

Opened previous to 1844.....2,036 "

Aggregate to December, 1853'....7,686

We see here a total length of upward of 7,600, miles now in active operation. The division of the lines among the three Kingdoms is found to be as follows: In England, 5,848 miles; Scotland 995; Ireland 843. Of the railways opened during 1853, twenty-five portions, representing a total length of 298 miles, consisted of a single line, and it would appear that the length of single line open at the end of 1853, viz: 1,708 miles—was between one-fourth and one-fifth of the whole amount of railways open.

The amount of capital invested in railways at the end of 1853, is estimated at £281,000,000, (1,400,000,000,)—against £264,165,680 in 1852. Of present investments, it is calculated that £42,000,000 is preferential capital, and £70,000,000 borrowed on the security of the roads.

The total number of passengers conveyed on British railways in 1853 was upwards of One Hundred and Two Millions (102,286,660). The aggregate receipts from all sources of traffic were £18,035,879. The passenger lists show an increase over the previous year of upward of Thirteen Millions. The freight increased by the respectable figures of Twenty-three Millions of pounds. The steady progress of the goods traffic is an important feature of these railways; one upon which Mr. Bull loudly prides himself, and that with justice. The receipts from goods have increased from the rate of a thousand pounds per mile in 1849, to fourteen hundred pounds (sterling) per mile in 1853. This, it is to be considered, is in England alone, while Scotland shows figures correspondingly attractive. In the latter country the third class traffic preponderates.

With regard to railroad casualties, it appears that of one hundred millions of passengers conveyed in England, Ireland and Scotland, 305, were killed and 449 injured—making a total of 754; and that of this number not less than 243 were killed and 369 injured in England alone.

New Method of Rolling Railroad Iron.

A triumphant experiment of the verticle double acting rail-mill recently took place at the Trenton Iron Works, in the presence of the stockholders, directors and officers, and a large number of spectators. The machinery was put in motion about 3½ o'clock, P. M., and run through rails from 18 to 21 feet in length, 7 inches in height, weighing 93 pounds to the yard, in an average time of 1 minute to each, to the admiration of all present. The peculiarities of this invention are, that rails are run through at a welding heat in about one-half less time and with one-third less labor than by the old horizontal rollers.

The chief advantage accomplished by this new machine is the ability to roll flanged bars of great width, and such as cannot be made by the ordinary means in use. It is proposed to make wrought iron beams in these rolls, and they are well adapted for this purpose.

The triumphant success of the experiment created a sensation of joy throughout the company present. The foreman of the gang of men in charge of the new mill, Mr. David James, mounted the rolls and proposed three cheers for the victory they had just accomplished. These were given with great enthusiasm by the whole crowd. Cheers were then given for Peter Cooper, Edward Cooper, Charles Hewitt, William Borrow, and the Trenton Iron Company.

This invention is an important one to the Company, and gives a degree of success in the manufacture of railroad iron not enjoyed in any other establishment in this or any other country. Its value, therefore, is incalculable, and every Trenton man, as well as every friend of manufactures in the country, will rejoice at the success of this experiment. The inventor, Mr. William Borrow, has spent much time in bringing this invention to perfection, and to his indefatigable energy and mechanical prescience, aided materially by the generous and liberal expenditure of Mr. Edward Cooper, is the world indebted for this important and invaluable process of manufacturing railroad iron.—*State Gazette.*

(To the Editor of the American Railroad Journal.)

SUPERINTENDENT'S OFFICE.

Cleveland and Pittsburg Railroad.

Cleveland Oct. 11, 1854.

MR. EDITOR: My attention has been recently called by E. T. Sterling Esq., agent of the Cuyahoga Steam Furnace Company of this City to an article in the Railroad Journal of 16th ultimo, referring to extraordinary accounts of the economical performance of Cleveland locomotives, which, as is alleged, have been copied by your exchanges without throwing any light upon the means by which such results have been attained. Mention is made of a particular trip, giving distance run and quantity of wood consumed, which is substantially correct. The experiment having been made on the Cleveland and Pittsburg Road, Mr. Sterling has referred the matter to me, as one conversant with the facts, and the performance of the engine built at his works in comparison with those built at other shops, requesting me to make a statement in detail. With your consent I will do so.

Having for several days had an accurate account kept of the number of cars hauled, number of miles run, and quantity of wood consumed daily by each of nine locomotives built at three different shops, not including the Cuyahoga Works, I am prepared to make a statement of the comparative performance of one Eastern built engine, with the Cleveland engine to which your article refers. I have selected this particular eastern engine for two good reasons—first, because it consumed

a less quantity of wood than either of the other eight, and second, because it was managed by the same engineer who ran the Cleveland Engine.

For the purpose of exhibiting the comparative size and form of the two engines, I furnish the dimensions and peculiarities of each as follows:

Dimensions of Engines.	Ohio.	Massachusetts.
Diameter of Cylinder.....	16 in.	15 in.
Length of Stroke.....	22 "	20 "
" " flues.....	11 feet.	11 feet.
Diameter of flues.....	2 in.	1¾ in.
Number ".....	134	144
Diameter of Boiler.....	46 in.	46 in.
Number " drivers.....	4	4
Diameter ".....	6 ft.	5½ ft.
Weight.....	50,000 lbs	50,750 lbs.
Connections.....	outside.	inside.
Cut off.....	variable.	half stroke.

The Ohio engine was built by the Cuyahoga Steam Furnace Co. of Cleveland. E. T. Sterling Agent, and the Massachusetts engine was built at one of the best locomotive establishments in that State.

In order to make a comparative showing of the performance of the two engines, that shall not appear partial or invidious, I select the same trip for each, as regards distance, direction, gradients and weight of train.

Distance run, Wellsville to Cleveland.....	101 miles.
Total length of 40 and 50 feet grades.....	21 miles.
Total ascent of all grades.....	1255 feet.
Number of Cars hauled—three 44 miles and four.....	57 miles.
Total number of stops made.....	20
Speed of train including stops.....	23 miles per hour.
Wood consumed by Massachusetts Engine.....	260 feet.
Wood consumed by Cleveland Engine.....	90

Excess consumed by Massachusetts Engine..... 170 feet.

The same Cleveland Engine also run three times over the entire length of the Cleveland and Pittsburg Railroad, and once from Cleveland to Alliance and back to Cleveland, also four times between the Pier and the machine shop at Cleveland, performing the entire distance of 430 miles with one tender of wood. The capacity of the tank is 1500 gallons. The wood was of good quality, all hard, carefully packed and in quantity about 3¼ cords of 128 feet.

Distance run with three Cars.....	249 miles.
" " " four ".....	171 "
" " " Engine alone.....	10 "
Total distance ascending 40 and 50 feet grades.....	102 miles.
Total ascent of all grades.....	5439 feet.
Total number of stops.....	75

Speed of train from 28 to 30 miles per hour including stops. The results of these experiments, however extraordinary they may seem, are nevertheless real.

In making the trial no personal or selfish interests have been consulted, the reputation of no particular engine builder has been regarded, but taking a comprehensive review of railroad interests generally, with the knowledge of the fact that fuel in many portions of the country constitute the largest single item of cost on railroad transportation, and that a pressing demand has arisen for the discovery of some reliable means of materially reducing the quantity of wood heretofore required to perform a given amount of service, the great desideratum of a fuel saving locomotive has been

sought, and I frankly confess my entire belief that one has been found which closely approximates perfection.

Much credit is due to the engineer and fireman for the skill and economy practiced in the use of the steam, and the fuel to generate it, but the means by which they were enabled to produce such satisfactory results are attributable to the construction, proportions and arrangement of the parts of the engine; especially to the perfection attained in the application and use of the variable cut off.

Respectfully yours,
J. DURAND, Supt.

(For the American Railroad Journal.)
Iron Bridges.

The public generally in this country and some civil engineers, entertain serious doubts of the safety of iron bridges, let their construction be whatever it may. They have been led to believe that the failure of a number of iron bridges in different parts of the country has been in consequence of some inherent defect in the nature of iron which renders it a peculiarly unsafe material to use in the construction of a bridge. But any intelligent practical man knows that good iron is, and (through a long succession of centuries), has proved itself to be a good, safe and reliable material to be used in all uses where strength and durability are required, provided always its dimensions are in good proportion to the service it is required to perform; and he knows also that the cause that breaks down an iron bridge is of the same nature as that which breaks any other piece of iron under any circumstances whatever, viz. that the strain is too great for the size of the part that is required to bear it, and he is led to believe that the exact proportions of various and complicated strains on the different parts of a bridge under each of the changeable positions in which it is required to support a load, forms a mathematical problem too tough for the cranium of many projectors who are ready to undertake the construction of bridges, and who must therefore use a wasteful amount of materials like the sportsman who scatters a handful of shot at his game, in expectation that one or two grains only will do execution, otherwise he stands but a small chance of successfully hitting his mark.

As the resources of the country and business habits generally, require economy in all branches of construction, and as there are already experienced and mathematical minds engaged in the business who can build a bridge superlatively strong and safe, and still comparatively cheap and light, our blind blundering botches (who are generally too conceited to copy the work of their more intelligent competitors) must build a cheap bridge or none at all; and this is the cause of the failure of so many iron bridges in this country. Not that our bridges are worse planned, or more poorly constructed than those of England or any of the old countries, or that we have a greater proportion of fools among our civil engineers; but that in the latter country they are more liberal of expenditure and use such a profusion of materials that in the most exceptionable cases there still exists a good mathematical bridge of sufficient strength, buried in the superfluous iron that surrounds it, like the statue that may be supposed to be buried in a block of marble, awaiting only to

have the superfluous stuff removed. As I doubt the possibility of getting the greater portion of the readers of the R. R. JOURNAL to swallow long prosy articles upon so dry a subject, I will follow it no further at present, but in a series of very short articles in future, present some of the leading principles that govern the stability of a bridge, and endeavor to show up some of the defects most frequent and glaring and how the strength and safety of an iron bridge may be as certainly and accurately calculated as any other mathematical question.

D. BLANCHARD, Architect,
Troy, N. Y.

Massachusetts Railway Dividends.

The following table exhibits the per centage of dividends paid by sixteen railroads of Massachusetts during the last five years, and the total cost of said roads at the beginning of each year.

January 1, 1849, the sixteen roads named cost \$40,002,000; January 1, 1854, \$43,029,400—increase, \$3,027,400. Their net earnings in 1848 were \$2,729,150; in 1853, \$3,318,800—increase, \$589,650.

Railroads.	When opened.	Div'd 1849.	Div'd 1850.	Div'd 1851.	Div'd 1852.	Div'd 1853.	Average last 5 years.
Boston and Providence	1835	6	5 1/2	6	5 1/2	6 1/2	6 1/2
Boston and Worcester	1835	6	6 1/2	7	7 1/2	7 1/2	6 1/2
Boston and Lowell	1835	8	8	8	8	8	8
Taunton Branch	1836	8	8	8	8	8	8
Nashua and Lowell	1838	10	8	9	8	8	8 1/2
Norwich and Worcester	1839	none.	4 1/2	4	4 1/2	4	4 1/2
New Bedford and Taunton	1840	6	7	8	8	7	7 1/2
Western	1841	8	8	8	8	8	8
Eastern	1841	8	8	8	8	8	8
Boston and Maine	1843	5 1/2	5	5	5	5	5 1/2
Fitchburg	1845	8	8	7	7	6	6 1/2
Old Colony	1845	none.	none.	2	2	none.	none.
Connecticut River	1847	3	6 1/2	8	7 1/2	4	5 1/2
Fall River	1847	3	none.	7 1/2	8	8	6 1/2
Providence and Worcester	1847	3	none.	none.	none.	6	6 1/2
Cape Cod Branch	1848	none.	none.	none.	2 1/2	3 1/2	3
Cost.		\$40,001,800	\$41,949,300	\$42,569,900	\$42,078,400	\$42,089,740	

Boston Courier.

Buffalo and New York City Railroad Bonds.
The interest on the Buffalo and New York City Railroad Bonds, due in May last, is being paid at the Bank of Commerce. The trustee, Mr. Stevens, has issued the annexed circular to the bondholders:

"New York, Nov. 2d, 1854.

"GENTLEMEN—In the suit for the foreclosure of the first mortgage bonds of the Buffalo and New York City Railroad Company, dated Nov. 1, 1852, the defendants tendered the interest due in May last and taxable costs, which I refused to accept. The Court thereupon, on their application and after argument, ordered that upon bringing the sum tendered into Court and paying such taxable costs, or paying the same to my attorney, the suit should be stopped as to that mortgage.

I have thereupon received.....\$17,500
This is subject to the counsel fees incurred, not chargeable to the defendants, of.....\$250
To my statutory commissions.....275 625

Balance.....\$16,875

"Divided among 500 coupons, gives to each coupon \$33 75, at which rate, on presenting the coupons, you will receive the amounts.

"Your obedient servant,

"JOHN A. STEVENS, Trustee."

We learn that the above road is doing a good business, and we presume we shall have no more failures of the payment of interest on the first mortgage.

Iron Rolling Mill Property for Sale.

The particular attention of capitalists desiring to enter AT ONCE (WITHOUT THE DELAY of putting up new works,) into the manufacturing of Iron, is called to the following:

The mill is situated UPON TIDE WATER (and ACCESSIBLE at ALL SEASONS of the year for shipments) between New York and Philadelphia—Coal can be had at the very lowest rates—and in point of convenience and situation is perhaps SECOND to NONE in the COUNTRY. In ADDITION to its PRESENT adaptation to the manufacture of MERCHANT AND BOILER IRON, it has machinery in operation for making WROUGHT IRON RAILROAD CHAINS AND SPIKES, and could readily be prepared for MAKING RAILS together WITH ALL THE advantages of a first-class establishment. It is well known that in the present prosperous condition of the business THE PROPERTY WILL PAY ITSELF IN ONE YEAR and the reason of the property being disposed of, is that the owner is engaged in a heavy business in the State of New York. A VERY LIBERAL SPECIAL charter may BE BOUGHT, under which the Mill can be worked, if wanted. It is needless to say more, as parties interested can obtain all information by applying to

J. WOOD & SON,

76 South 4th street, Philadelphia.

P. S.—A portion of the purchase money may remain on the property, or otherwise. 44. 4t.


THOS. M. CASH,
PHILADELPHIA RAILWAY AGENCY,
FOR THE PURCHASE OF ALL ARTICLES
required by
RAILROAD COMPANIES
ON COMMISSION.
Office No. 80 South Fourth Street, near Walnut,
PHILADELPHIA.

REFERENCES.

RICHARD NORRIS & SON, Locomotive Builders, Philadelphia.
WM. D. LEWIS, Esq., Pres't Catawissa R.R. Co.,
CHARLES H. FISHER, Esq.,
JOHN CALDWELL, Esq., Pres't S. Carolina R.R. Co., Charleston.
J. PINCKNEY HUGHES, Esq., Pres't N. East'n R.R. Co.,

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

New York and Erie R. R.On and after *Wednesday, Sept. 20th*, and until further notice

PASSENGER TRAINS
 will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 6 a.m. for Buffalo.
DUNKIRK EXPRESS, at 6 a.m. for Dunkirk.
MAIL, at 8½ a.m. for Dunkirk and Buffalo, and intermediate stations.

ROCKLAND PASSENGER, at 3½ p.m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p.m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5½ p.m. for Dunkirk and Buffalo.
EMIGRANT, at 6 p.m., for Dunkirk and Buffalo and intermediate stations.

 On Sundays only one Express Train—at 5½ p.m.
 These Express Trains connect at Buffalo with first class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

Lowell Machine Works.
ALDRICH & CALVERT (late **ALDRICH, TYNO & CO.**) manufacture and furnish to order, at short notice,
Machinists' Tools

of various description and with the latest improvements; as engine lathes, with swing 16, 20, 24, 28, 30, 34, 48 inches, up to 7½ feet, and bed made to turn any desirable length; planing machines, to plane 3½, 6, 8, 10, 12, 18, 20, 22 feet long, and 18, 24, 28, 30, 40, 48, 60 inches square; also hand lathes, compound planers, slotting and shaping machines, vertical drills, bolt cutters, and many other tools used in railroad, repair and machine shops.

Lowell, Mass., Jan'y 1, 1853.

41.1y

New Work on Engineering Drawing.
JOHN WILEY, 167 Broadway, New York,
has now ready:
A MANUAL OF TOPOGRAPHICAL DRAWING, by Lieut. R. S. SMITH, U. S. Army, Assistant Professor of Drawing in the U. S. Military Academy, West Point.

Illustrated with numerous colored plans and drawings, 1 vol. 8vo. Price \$1.50.

** Mailed to any part of the United States, free, on receipt of the price of the book.

"The great activity which prevails in regard to internal improvements, is constantly calling into the field numbers of young engineers, and already many instructive works have been addressed to them on almost every detail connected with their profession, except map-making.

 The design of this manual is, to be a practical assistant and office companion, to be consulted on all matters, connected with Topographical Drawing, from the first sketch of a preliminary survey, to the complete map."—*Extract from preface.*

** A large assortment of Engineering and Mechanical works kept constantly on hand, catalogues of which will be furnished gratuitously on application as above.

44 2t.

Notice to Contractors.
PROPOSALS are requested until the fifteenth of November next, for the graduation and masonry of twenty miles of the Third Division of the Pacific Railroad of Missouri, extending from Gray's creek, near Jefferson City, to the summit of the country westward. The work is divided into sections. Payments will be ninety per cent. in cash and 10 per cent. in bonds.

A profile of the work and the quantities can be seen at the Resident Engineer's office, Jefferson City, or at the office of Kirkwood, Porter & Co., at the same place, where further information can be obtained of Mr. Porter. The line is ready for examination and the work can be commenced forthwith.

Proposals will also be taken, any time during the next six weeks, for fifty miles or more of the work beyond the above mentioned twenty miles, subject, however, to the directions of the Railroad Company as to the time of commencement of this last mentioned work.

Information as to the general character of the work can be obtained at the Engineer's office of the Pacific Railroad Company, St. Louis.

KIRKWOOD, PORTER & CO.

Jefferson City, 24th Oct., 1854

44. 2t.

Buffalo Machinery Depot.

BUFFALO, N. Y.

H. C. BROWN, Sup't. **J. W. HOOKER, Proprietor.**
 I AM prepared to furnish and will keep constantly on hand from the best manufacturers a full stock of **Machinists' Tools** for railroad and other shops; such as Engine and Hand Lathes, Large Driver Lathes, Car Wheel Boring Mills, Power and Hand Planers, Drill Presses, Punch and Shears, Axle Lathes, Power Wheel Presses, Bolt Cutters, &c.

J. W. HOOKER, Buffalo, N. Y.

Fire! Fire! Fire!
 Preserve your books in one of Duryee & Forsyth's celebrated **Fire King** safes. They are perfectly secure and excel in finish.

J. W. HOOKER, Agent, Buffalo.

Railroad Track, Suspension and Depot Scales, Dormant, and Portable Warehouse Scales, Trucks, Baggage Barrows, and Manifest Presses.

Buffalo Machinery Depot,

General Agency for Rochester Scale Works.

H. C. BROWN, Sup't.

J. W. HOOKER.

Port Morris Manufactory.

WESTCHESTER COUNTY, N. Y.

ARE prepared to execute orders for all kinds railroad work and have on hand the approved Railroad Box with the raised Journal; also Car Couplings (Lewis' Patent) and Ratchet Wrenches from \$5 to \$10 each.

All orders punctually attended to by addressing the above.

M. G. BAKER.

 NB. Long Iron Planing done on reasonable terms,
 37 6m. 108 Front street, up stairs.
NOTICE.
THE Copartnership heretofore existing between the undersigned, under the firm of Smith & Tyson, is this day dissolved by mutual consent. Either partner is authorized to settle the business of the concern.

J. HOPKINSON SMITH,

RICHARD W. TYSON,

No. 25 South Charles st.

Baltimore, July 1st, 1854.

Notice of Copartnership.
THE undersigned have this day formed a Copartnership under the firm of J. Hopkinson Smith, in which Richard W. Tyson is a special partner, and J. Hopkinson Smith is the general partner.

J. HOPKINSON SMITH,

RICHARD W. TYSON.

Baltimore, July 1st, 1854.

33 3m

Notice of Copartnership.
MR. PETER MARIE, heretofore of the firm of DECOPPET & CO., has this day formed a copartnership with Mr. RUDOLPH KANZ, (for many years with the banking house of Messrs. L. Von Hoffman & Co.), under the firm of MARIE & KANZ, at No. 27 William street.

Their attention will be devoted to the purchase and sale on Commission of Stocks, Bonds and Foreign Exchange, and to the negotiation of Business Paper.

New York, 1st September 1854.

36 St

Steam Engine and Blowing Cylinders for Blast Furnace for Sale.
A STEAM ENGINE, 20 inch cylinder, and five feet stroke, together with Blowing Cylinders, five feet diameter, and six feet stroke, in perfect working order, for sale. Apply to

EDW. BECH & KUNHARDT, 62 Beaver st.,
 or, **A. TOWAR**, Agent Poughkeepsie Iron Works,
 23 1f Poughkeepsie, N. Y.
For Sale.
BY the Baltimore and Ohio Railroad Company, 24 crate ears adapted to railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

or, **BRIDGES & BRO.**,

64 Courtland st., New York.

19 1f

Machinists' Tools.
SHRIVER & BROTHERS,
 Cumberland, Maryland,

(on Baltimore & Ohio R. R., midway between Baltimore and the Ohio River)

MANUFACTURERS of Engine Lathes, Planing Machines, Drill Presses, Hand Lathes, and other **Machinists' Tools**. These tools are built in a superior manner, from the very best materials, and are particularly adapted for railroad shops and all others repairing first rate machinery. Our location is very advantageous for shipping work to the West or South. Orders and communications receive prompt attention. Address

SHRIVER & BROTHERS, Fulton Works,

Cumberland, Maryland.

August 19th, 1854.

32 6m

Low Moor iron.
A FULL ASSORTMENT of this superior brand, which for strength, soundness, and uniform quality, is confidently recommended for all work requiring good iron, consisting of Round, Square, and Flat sizes of all dimensions, constantly in store and for sale in lots to suit purchasers, at

W. BAILEY LANG & CO.,

64 Cliff street

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
 Columbus, Ga., Sept. 5th, 1854.

SEALED PROPOSALS, will be received by the undersigned at this office until the 1st day of December, for the clearing, graduation, Track-Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 180 miles.—The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work 5½ miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two rivers will be crossed with the common pile bridging, with Truss Pivot draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The country is healthy, with no swamps after leaving the Tensas River; from Mobile to the river (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third (⅓) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common stock of the Road, and relying upon the earnings of the same for dividends; the balance (⅓) to be paid in the (.08) per cent. Convertible Bonds of the Company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus, Ga., Mobile, Ala., or in N. Y., at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding (½) the amount of the contract, for the timely and faithful completion of the same.

22½ miles of the Road from Girard west will be open for business the first of November, and 52 miles nine months thereafter. It is the intention to have the entire line of 245 miles open for business early in 1858.

St. 37.

GEO. S. RUNEY.

New York Locomotive Works, JERSEY CITY.
THIS COMPANY are prepared to execute with despatch orders for Locomotive Engines, Tenders, and Railroad Machinery generally, embracing the latest improvements. The works being located near the water, and in the immediate vicinity of the New Jersey and Erie Railroads offers great conveniences for shipping.

BRESEE, KNEELAND & CO.,

Proprietors,

38 Exchange Place.

 E. P. GOULD, Superintendent,
 late Master Machinist on Hudson River R. R.

[40. 1f]

500 TONS No. 1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

99 and 101 John st.

N. B.—The above Iron constantly imported.

32 1f

Rensselaer Polytechnic Institute.
DESIGNED for the education of ARCHITECTS and CIVIL ENGINEERS,—including Railway, Hydraulic, Topographical, and Mining Engineers.

 For copies of the *Annual Register*, giving full information respecting the Institute, apply to

R. FRANKLIN GREENE, Director, R. P. I.

32 2m

Troy, New York.

For Sale.

A STATIONARY Engine having cylinders 13 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New York.

Jul. 14 29 tf.]

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and PASSENGER LOCOMOTIVES of different classes, with the most modern improvements,—

also MACHINISTS' TOOLS,

especially adapted to Railroad Repair Shops, and to the construction of machinery generally. These Tools are of the most approved construction and consist in part of Engine Lathes, Hand Lathes, Vertical Drilling Lathes, and Planers of various sizes and lengths, Compound Planers, Shaping Machines, Slotting Machines, Bolt and Nut Machines, Gear Cutting Engines, Chucks, Compound Slide Rests, Machines for boring Crank Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c. COTTON MACHINERY of all descriptions, BOILERS, SHAFTING and MILL WORK, CASTINGS, and all work usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Sup't, Lowell, Mass.
J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

WANTED.—To take charge of the sale or introduction of certain valuable PATENTED MECHANICAL INVENTIONS, a person who can furnish satisfactory evidence of character and ability, for such business.—Address, stating views as to remuneration, &c., L. P. C., Post Office, New York. 44 3t.

NEW YORK AND ERIE RAILROAD LOAN.

The Committee appointed to report in regard to the financial affairs of the New York and Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed proposals, to be opened on the 10th of January next, for the purchase of \$4,000,000 7 per cent. Bonds, redeemable in twenty years, with interest, coupons payable 1st February and 1st August.

And that for the purpose of gradually reducing the debt of the Company, the New York and Erie Railroad Company pledge themselves in said Bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of Trustees, to be by them invested, as well as the accruing interest on the investments, in the Bonds of the New York and Erie Railroad Company of the new issue, as long as they can be purchased at or under par. And that whenever the said Bonds of the new issue cannot be purchased at or under par, then the said Trustees to invest the said monthly payments and the accruing interest in any Bonds of the New York and Erie Railroad Company, which can be purchased at or under par.

And whenever it shall be impossible to purchase any of the Bonds of the New York and Erie Railroad Company at or under par, then the said Trustees shall invest the said monthly payments and all accruing interest in such Bonds of the New York and Erie Railroad Company as can be purchased at the lowest rate.

And all Bonds on being purchased by said Trustees shall be canceled by writing or printing on the face "Held by the Sinking Fund of the New York and Erie Railroad Company," but that the interest warrants on said cancelled Bonds shall be collected by said Trustees, as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest or the conversion of convertible Bonds into Stock of this Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in said Trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to the Company.

And the Committee would further recommend that the Board of Directors adopt the following resolutions:

Whereas, The period has arrived when it is expedient and necessary to close the construction account of this Company, to be reopened only when the imperative necessity of the increasing traffic on the road, and the state of the finances

of the Company will render it perfectly evident that it is proper and justifiable to reopen it, so as to increase the present capacity of the Road.—Therefore

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after reimbursing the Income Bonds due 1st February next, be charged to transportation expenses.

Resolved, That as often as the Bonds purchased by the Sinking Fund amount to 10 per cent. on the Capital Stock, this Company will, upon receiving due authority from the Legislature of this State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in the daily papers, so that the public have cognizance of the future policy of the Company.

(Signed.)

CHARLES MORAN.
SHEPHERD KNAPP.
WILLIAM E. DODGE.
NELSON ROBINSON,
GEORGE F. TALMAN.

Special
Finance
Committee.

New York, Oct. 21, 1854.

Sealed proposals will be received at the office of the NEW YORK AND ERIE RAILROAD COMPANY in the City of New York, until the 10th of January, 1855, for the purchase of \$4,000,000 of the bonds of the Company, bearing 7 per cent. interest payable semi-annually on the 1st day of February and August, redeemable in twenty years.

The NEW YORK AND ERIE RAILROAD COMPANY pledge themselves in said bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And whenever it shall be impossible to purchase any of the bonds of the NEW YORK AND ERIE RAILROAD COMPANY at or under par, then the said trustees shall invest the said monthly payments and the accruing interest, in such bonds of the NEW YORK AND ERIE RAILROAD COMPANY as can be purchased at the lowest rates. And all bonds when purchased by the said trustees shall be cancelled by writing or printing on their face: "Held by the Sinking Fund of the NEW YORK AND ERIE RAILROAD COMPANY;" but the coupons on such cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the NEW YORK AND ERIE RAILROAD COMPANY, and the accruing interests, or the conversion of convertible bonds into stock of the Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in such Trustees be closed, and all cancelled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay 10 per cent. in cash on the notice of the acceptance of their bids; 20 per cent. on the 20th of January; 30 per cent. 1st February; 20 per cent. 15th February, and the balance on the 1st of March.

The Income Bonds of the NEW YORK AND ERIE RAILROAD COMPANY will be received in part payment at par, and the accrued interest till day of surrender to the Company.

The Directors of the NEW YORK AND ERIE RAILROAD COMPANY, in offering the present loan to the public beg leave to state that it will be amply sufficient to pay the Income Bonds redeemable on the 1st February next, and the entire present floating debt of the Company, as well

as to complete all the unfinished work now under way.

By a resolution of the Board of Directors, all future outlays of every kind beyond the proceeds of the present loan, will be charged to expense account, and paid from the income of the Company, after payment of the interest on the funded debt, and the monthly payment to the Sinking Fund.

After the negotiation of the present loan and the redemption of the Income Bonds, the position of the Company will be—

Stock	\$10,024,000
Bonds of 1867, First Mortgage	3,000,000
Bonds of 1859, Second Mortgage	4,000,000
Bonds of 1853, Third Mortgage	6,000,000
Bonds of 1862, Convertible	3,500,000
Bonds of 1871, Convertible	4,351,000
Bonds of 1875, present loan	4,000,000

Total

In the opinion of the Directors it is perfectly safe to estimate the gross earnings of the Road, for the coming year, at \$6,000,000, from which must be deducted:

Expenses 55 per cent.	\$3,300,000
Seven per cent. on debt \$24,-	
851,000	1,739,570
Sinking Fund	420,000
	\$5,459,570

Net revenue equal to over 5 per cent. on stock applicable to cash dividends and contingencies

The Directors of the Company are confident these estimates will be fully realized. The gross receipts since the Road has been in operation to Dunkirk, have been for passengers and freight alone—1851 to 1852 \$3,047,748

1852 to 1853 4,138,424 \$1,690,676, say 35½ per cent.
1853 to 1854 5,122,666 934,242, say 23½ per cent.

The business of the road depending mainly on the local traffic, must inevitably increase in the same ratio as the population of the Counties through which it passes. In the opinion of the Superintendent, Mr. McCollum, the road in its present position and with its present equipment, can earn \$8,000,000. If the future increase in the receipts be estimated at only 15 per cent. per annum, which is not much over one-half of the average increase of the past the above utmost capacity of the road will be tested in 1858.

As to the running expenses, as they were only 53½ per cent. in 1853 and 1854, there is every probability that with rigid economy and an increase in the traffic, they can be reduced to 50 per cent., but they have been estimated at 55 per cent., so as to leave ample margin for contingencies.

The effect of the monthly purchases by the Trustees, of the Bonds of the present issue on their market value, cannot fail to be immediate, and will insure to the original purchasers a certain profit within a moderate time; for whilst the amount outstanding will decrease each month, the absorption by the Sinking Fund will constantly increase by the accruing interest on the Bonds in the hands of the Trustees. In 8½ years the Sinking Fund will absorb \$4,768,053, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among our most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie-place.

HOMER RAMSDALL, President.

NATHANIEL MARSH, Secretary.
New York, Oct. 23, 1854.

The British Quarterlies AND Blackwood's Magazine.

LEONARD SCOTT & CO., New York, continues to re-publish the following British Periodicals, viz:

- 1.—THE LONDON QUARTERLY REVIEW, (Conservative.)
- 2.—THE EDINBURGH REVIEW, (Whig.)
- 3.—THE NORTH BRITISH REVIEW, (Free Church.)
- 4.—THE WESTMINSTER REVIEW, (Liberal.)
- 5.—BLACKWOODS EDINBURGH MAGAZINE, (Tory.)

The present critical state of European affairs renders these publications unusually interesting. They occupy a middle ground between the hastily written news items, crude speculations, and flying rumors of the daily Journal, and the ponderous Tome of the future historian, written after the living interest and excitement of the great political events of the time shall have passed away. It is to these Periodicals that readers must look for the only really intelligible and reliable history of current events, and as such, in addition to their well-established literary, scientific, and theological character, we urge them upon the consideration of the reading public.

Arrangements are made for the receipt of early sheets from the British Publishers, by which we are able to place all our Reprints in the hands of subscribers, about as soon as they can be furnished with the foreign copies. Although this involves a very large outlay on our part, we shall continue to furnish the Periodicals at the same low rates as heretofore, viz:

	Per annum.
For any one of the four Reviews.....	\$3 00
For any two of the four Reviews.....	5 00
For any three of the four Reviews.....	7 00
For all four of the Reviews.....	8 00
For Blackwood's Magazine.....	3 00
For Blackwood and three Reviews.....	9 00
For Blackwood and the four Reviews.....	10 00
Payments to be made in all cases in advance. Money current in the State where issued will be received at par.	

CLUBBING.

A discount of twenty five per cent. from the above prices will be allowed to Clubs ordering four or more copies of any one or more of the above works. Thus: Four copies of Blackwood, or of one Review, will be sent to one address for \$9; for copies of the four Reviews and Blackwood for \$30; and so on.

POSTAGE.

In all the principal cities and towns, these works will be delivered, through Agents, FREE OF POSTAGE. When sent by mail, the Postage to any part of the United States will be but TWENTY-FOUR CENTS a year for "Blackwood," and but TWELVE CENTS a year for each of the Reviews.

Remittances and communications should always be addressed, post-paid, to the Publishers.

LEONARD SCOTT & CO.,
54 Gold Street, New York.

To Civil Engineers.

A GRADUATE of one of the best schools of Civil Engineering in Europe, lately returned to this country, wishes to connect himself with an Engineer of eminence and experience as assistant.—References unexceptionable as to qualifications and character.—Address Engineer, Box 3285, P. O., New York. 2t 45

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lb. per lineal yard. For sale by

THEODORE DEHON,
26 1/2 Broadway,
New York.

Contracts made as above for Rails delivered at English or American ports at lowest rates.

ASHCROFT STEAM GAUGE.



AMERICAN
STEAM GAUGE
COMPANY.
SOLE PROPRIETORS
AND
MANUFACTURERS
FOR THE
UNITED STATES.

THE COMPANY
ARE PREPARED TO
EXECUTE
ORDERS FOR THEIR
GAUGE
AT THEIR MANUFACTORY
No. 4 Charlestown Street,
BOSTON, MASS.

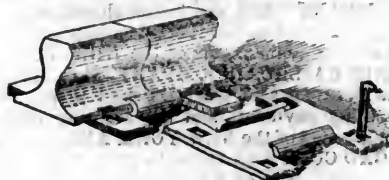
THIS Company purchased of Mr. M. H. ASHCROFT the Patent for the above Gauge in February last, and they presume there is no necessity of stating the benefit of this celebrated Gauge, which has obtained so much repute throughout the Country during the last three years, as a matter of economy and safety for Railroads, Stationary Boilers and Steamers its equal has never been discovered. The Company also purchased of Mr. ASHCROFT the Patent for the Fountain Moreau or India Rubber Gauge of which the Eastman, Lowe and German Gauge are considered by them to be infringements. They will furnish the India Rubber Gauge if desired, although they think it cannot be depended upon.

41 ly



LOCOMOTIVE TYRES made from one bar. Low Moor Bar Iron of every description, Boiler Plates, Rivets, and Car Axles; also, Wrought Iron Wheels, Spring, Tool, and Machinery Steel, Iron and Brass Tubes, Locomotive Balances, Horse Nails, English Iron Wire, Telegraph Wire, &c., for sale at the manufacturer's prices, by W. BAILEY LANG & CO., 54 Old St., New York, and 9 Liberty Square, Boston, sole agents in America to the Low Moor Iron Company. 42t

RAILROAD SPIKES.



WROUGHT IRON

Chairs and Fastenings.

THE undersigned will continue to manufacture with increased facilities, HOOK & FLAT HEAD RAILROAD SPIKES, of all patterns, WROUGHT and CAST CHAIRS and FASTENINGS, BOILER RIVETS, BOLTS, SHIP and BOAT SPIKES, &c., &c.

The best quality of Refined Iron is used, and all orders filled with despatch.

J. HOPKINSON SMITH,
No. 25 South Charles str.

Please direct the name in full.
Baltimore, July 1st, 1854.

33 1/2

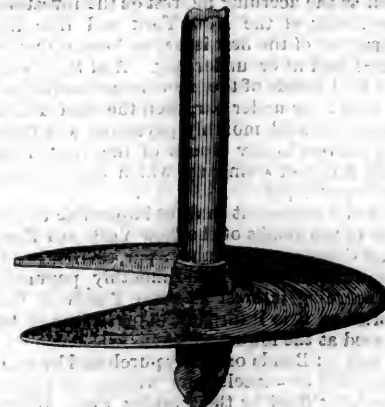
SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his New Patent Boiler for burning Anthracite Coal; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

Screw Pile Foundations.



ALEXANDER MITCHELL'S

Patent Iron Screw Pile,

FOR obtaining permanent foundations on Rivers, Morasses, and Quicksands, for Railway Bridges, Viaducts, Depots, Wharves, &c.

I. W. P. LEWIS, O. E.,

Agent in the United States,

No. 30 South 5th street, PHILADELPHIA.

NUGENT'S COLLEGE

OF

ENGINEERS AND MECHANICS,

Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 46.]

SATURDAY, NOVEMBER 18, 1854.

[WHOLE No. 970, VOL. XXVII.

Mr. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

Hudson River Railroad.....	721
American Securities abroad.....	723
Journal of R. R. Law.....	724
Internal Improvements in Virginia.....	725
Orange and Alexandria R. R.....	727
New York and Erie R. R.....	728
Mississippi Central R. R.....	728
Boston and Lowell R. R.....	728
Baltimore and Ohio R. R.....	730
St. Louis and Iron Mountain.....	730
Marietta and Cincinnati.....	731
New Albany and Salem.....	732
Grand Trunk R. R.....	732
New York and New Haven R. R.....	733

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, November 18, 1854.

Hudson River Railroad.

No men stand higher in this community than the directors of the Hudson River Railroad, but we think they have been guilty of an act in bringing out their *new* loan which cannot be defended upon any other ground than that of *necessity*. Some two years since, the company made an issue of *convertible* bonds to the amount of \$2,000,000, which carried their *funded* debt to \$8,000,000, and the entire cost of the road to nearly \$12,000,000. As the estimate of the company, made so late as the fall of 1849, placed the total cost of the road at something less than \$8,000,000, the takers of the convertible bonds had a right to suppose, and did suppose that they would produce a sum sufficient to complete the road. They were sold at 90, but they have still left a floating debt of about \$1,000,000, and the road still unfinished. Only a small portion of the double track between Poughkeepsie is yet completed. To meet the floating debt and to provide for their future wants, the company have made a further issue of *third* mortgage bonds, which take precedence of the *convertibles*. The company provide to be sure that the holders of the convertibles may exchange the *unsecured*, for mortgage bonds, provided they will take an amount of the *new* loan equal to one-

half of the convertibles held by them. Otherwise they are shut out of the mortgage and their securities may be rendered entirely worthless. Now it strikes us that here is a great wrong, and a very great hardship. The holders of the convertibles took them, thinking that they would furnish sufficient means to build the road. They now find out their mistake, and that a new class of creditors are to come in and take precedence of them, and unless they make a new contribution, defeat their claims altogether. They may be too poor, and, probably, many of them are, to take any part of the new loan, and must pay the penalty for their poverty by losing what little they have.

Clearly the company could not have sold their convertibles had it for a moment been supposed that a preference would have been given to a further loan. We think, from the acts of the company the public had a right to infer that the convertibles would furnish a sum sufficient to complete the road. They were sold therefore under a representation, or supposition of facts, that have been shown to be without foundation. The company would be the less censurable, had they kept the public informed as to their wants and the condition of the road. But upon all such matters they have maintained an unbroken silence. A person might as well attempt to guess the cost of the *Pyramids* as that of the Hudson River Railroad. To take advantage of their own wrong and spring a trap upon an unsuspecting public, is wrong in itself, is discreditable to the parties. It cannot be defended; only explained away on the ground of *necessity*.

But why are the holders of the floating debt of the company to be preferred? Certainly, their *equities* are less than those of the holders of the *funded* debt. They trusted the company with a debt of \$8,000,000 hanging over it which the purchasers of the convertibles would not have done. They trusted the company without security, which is now to be given to them at the expense of a meritorious class of creditors. The reason of this preference, we presume, is that the holders of the floating debt are the officers of the company and their particular friends, who we contend, have less claim for preference than outsiders who trusted the company upon an assumed condition of affairs since proved to be incorrect, and known to

such by the holders of the floating debt, who had the power of taking care of themselves, if anything should go wrong.

Now we believe in the ultimate success of the Hudson River Railroad, and that both the principal and interest of its funded debt will be met as stipulated, but such belief is no apology for an act which stripped of all subterfuge, cannot be defended upon any principal of fair dealing.

From facts that have come to our knowledge since the above was written, we think it may turn out that we have spoken too favorably of the prospects of the above company. We are not certain that there are not parties in the direction whose interests are hostile to those of the stock, and convertible bond holders. Why should leading men in the steamboat business on the river, which is the great competitor of the road, seek a place in its direction unless it be their object to embarrass the operations of a work which threatens to ruin their business? We also find in the direction Presidents of two roads, and the leading director in another, the business of all of which would certainly be increased were the Hudson River Road out of the way. We should like to have these questions answered. Certainly the interests of all the directors named are strongly opposed to the success of the Hudson River Road. To make way for these men, others were left out whose interests and those of the road were certainly identical. The Hudson River Road forms, with the Central, a great line of travel west. The President of the latter, therefore, very properly had a place in the directory of the former. Yet at the last election he was left out and, the great man in the Erie Road took his place. Now we confess we are too green to see any other reason for this change, but the obvious one, to get possession of a *rival* for the purpose of strangling it. If there be any other we should like to be let into the mystery.

It is not to be concealed that the Hudson River Road is in a ticklish position. Although the road has cost some \$13,000,000, any party who will make up a purse of \$500,000, or, probably \$250,000, can control it. The stock which is but a little over \$3,500,000 is selling at 35 per ct., which is equivalent to about \$1,000,000 for the

whole. Now to crush the road the steamboat interest would not hesitate to instantly sacrifice this amount. But one-half of this sum will give it the command of the road. As things go, \$250,000 would probably be all that would be wanted, a mere bagatelle compared with the objects to be gained. In aid to the steamboat interest comes that of the Erie and Harlem Railroads, which all pull together. If therefore the thing suggested is not already consummated, the parties interested have not shown their usual conduct and dispatch in such matters.

We think under these circumstances, that before asking any more money from the public, the company should show their hands. The sum last estimated as necessary to complete the road was \$7,800,000, or thereabouts. This amount has been nearly doubled, and the road is still far from completion. Now where has all this money gone? Echo only can furnish an answer—not any statements furnished or put forth by the company. They remain dumb; or if they say anything, they only make the matter worse. They are now before the market for money, and as an inducement to take their bonds, they gravely tell the public that the road does not earn the interest on its debts! Does not this look like a deliberate attempt to discredit the company; and if so, for what objects?

The relation that this company has sustained toward the public is disgraceful to any project. Irrespective of all estimates they go on spending all the money they can get. For what objects? Who that is not in the direction knows anything about the affairs of the company? We know large holders of their bonds who purchased on the strength of the names of the parties connected with the road, who know no more about the interior management of the company, than about the interior of Japan. But this state of things can go on no longer. The company can get no more money, unless it be at the sacrifice of the convertible bonds in the manner stated. They are not entitled to any, unless they furnish satisfactory pledges as to its application, and as to the policy that is to guide in the management of the road. Who now control the road? Owners of North River steamboats; managers of the Erie and Harlem Railroad; or parties sincerely desirous to advance the interests of the work? What is the malign influence that keeps up such a constant change of subordinate officers? Why does the road change its superintendent every six months? Why do men who have acquired a good reputation on other roads, fail to give satisfaction here? There is a screw loose somewhere. The directors are either incompetent to select suitable servants, or they do not know when they are well served.

Notwithstanding what has been said, the road possesses elements of success. Shall these be allowed to save it?

Railroads Completed.

Two important lines of railroad in Ohio have been opened for business in the past week—the Central and the Ohio and Indiana. We shall give an account of opening celebration next week.—The Steubenville Railroad is also nearly, if not quite completed. Ohio is rapidly bringing her works to a close.

New York Wrought Iron Railroad Chair Works—Jersey City.

It is but a very few years since Jersey City was deemed quite an insignificant suburb of her great neighbor opposite, and was looked upon as one which could never become of great consequence, being built upon a point of land which projected into the river and flanked on either side by low marshy grounds which were often submerged at high-tides. We were agreeably surprised then, upon a recent visit, to notice the changes of ten or twelve years. In the place of a small suburb consisting of a handful of houses on the point, of rising ground with two manufactories of iron and glass on the lower bay, we discovered a large and flourishing city, extending over the Harsimus flats to Bergen Hill; Northward to an easy junction with Hoboken, while Southward, its limits are rapidly nearing Bergen Point and Newark Bay.—On the shores we saw the spacious Cunard docks, the docks of the various Railway companies in all stages of progress from commencement to completion and numerous private wharves for the convenience of manufacturers and tradesmen. Here, is received all the immense traffic of the Erie, the Union, the Morris and Essex and the New Jersey Railway Companies. Here are their engine houses and their repair shops for this terminus, giving employment to hundreds of laborers and mechanics. The marshy grounds on the northern flank of the point above mentioned have been filled up, and the flats extended far out into the bay, so that its waters now afford admirable facilities for the shipment of the heavy products of the various manufactories which are ranged along their border. Thus it is seen that the very impediments which it was formerly supposed lay in the way of its considerable growth have been converted into its greatest aids.

On either bay, as we have chosen to designate the waters which flank the city on the North and South, are situated numerous furnaces and manufactories which have sprung into existence in answer to the increasing demands for their products. They are principally stocked and sustained by New York capital, while Jersey City has been chosen as the site for their location on account of its comparatively low rents, cheap fuel, greater advantages for shipment in all directions, &c.

Among other establishments we noticed the New York Locomotive Works, and the New York Wrought Iron Railroad Chair manufactory. As their names indicate they are both the creations of New York capital and the principal offices of the works are kept in this city.

We were particularly interested in the Chair Works which we saw in full operation and which we will endeavor briefly to describe, reserving for another article what we saw at the locomotive shop.

Railroad chairs, which are now so generally used for holding the ends of the rails in adjustment where they come together in forming the track were at first, whether they were composed of cast or wrought iron, made after very awkward and clumsy patterns involving much expense without affording requisite security. But, like all other portions of Railway equipment, vast improvements have been made, till now, we have railway chairs made entirely of wrought iron, of the exact dimensions of the rail, (a pattern section of

which is given with the order,) as light as is consistent with safety and perfect security of the rail-ends from displacement, and the whole work is done by machinery, without a single blow from a hammer in the hand of man.

The New York Wrought Iron R. R. Chair Company have a shop one story in height about 45 X 60 feet containing a small furnace or oven in the back part, a twelve horse power engine at one side a pair of huge shears about in the centre, a large punch with two points some six feet back from the shears and a sort of nondescript machine in front of the oven, or furnace, we suppose it is more properly termed, which is in reality the chair maker. The shears, punch and furnace prepare the material and the huge, uncouth, ungainly looking thing denominated nondescript finishes the chair at one revolution.

By the politeness of Mr. BENJ. T. SMITH, the Superintendent, we saw the *modus operandi*, as follows:

A load of wrought bars is thrown in at the door; one of these bars, about 6 inches wide and half inch thick, is raised by one man and placed on a roller-frame of the height of the shears toward which it is rolled, and by means of which, with a gauge, it is measured and cut into pieces of equal length, say about eight inches. These are taken by another man, who places them one by one, first one side and then the other, in the punch, by which the four necessary spike holes are made neatly and smoothly without defacing or stretching the other parts of the plate at all. About one hundred and fifty of these are now put into the furnace and gradually brought to a red heat, occupying from half to three-fourths of an hour.—When the proper degree of heat is attained, they are passed from the furnace to the cutting and bending machine, which finishes them. This process requires the whole force of the shop—four men; one to haul them to the mouth of the furnace, another to pass them to an iron stand, so that the third may seize them at a particular point to place them rightly in the machine, and a fourth to catch them as they pass out, and toss them over upon a bed of sand near the scales to cool, after which they are strung up, weighed, and are ready for shipment to any part of the world.—One set of this apparatus can turn out about 10,000 chairs per week, of ten hours per day with the aid of four men. The last apparatus, as mentioned in the above manufacture, or the cutting and bending machine, was invented by Mr. WM. VAN ANDEN, of Poughkeepsie, N. Y., and was patented about a year since. We regard it as one of the most ingenious contrivances we ever saw, performing all its requirements with the utmost precision and exactness. Mr. VAN ANDEN has disposed of his right to this important invention to the N. Y. W. I. R. R. Co.

The machine alluded to consists of a suitable frame, a shaft propelled by power, on which is secured a cam for operating a lever for depressing the die for holding the metal while being cut by a pair of roller shears, which are forced upwards by a second lever, operated by a second cam, also on the driven shaft; the operation of the rollers being to cut the grain of the metal more perfectly than by a fixed or punching cutting arrangement and, at the same time, increasing the thickness of the metal which is cut to be formed into the lips

of a chair; also, in combination with the said roller shears, two adjustable benders secured at each side of the machine for the purpose of bending the lips of the chair, and giving them a proper and finished shape, as they are cut and raised by the roller shears, so as to give them the form of the dies from which the chair is discharged by a forked rod attached to the end of a connecting rod, working on the main driving shaft, as the shears benders and die are restored to their original position. The operation of this machine will be made more clear to the mind by looking at the cut of the chair in the advertisement of the Company.—One of the most important features in the chair is the contraction of the iron lip into greater thickness and consequent strength, by the process of cutting and bending, instead of the natural result of drawing and weakening it just where the greatest strength is required. Having the curiosity to test this matter, we tried some of those chairs which we saw made, and found the thickness of the bend of the lip increased about one-eighth of an inch above the original thickness of the bar.—The natural tendency of such a bend would be to decrease it in about the same degree. So long as the present patterns of rail are used, strong and are satisfied that the one we have just described reliable chairs are of the greatest importance, and we at such length is of that character. The office of the Company, where Mr. Jacob Rowe, the President, can be found, is No. 8 Beaver.

American Securities abroad.

We have been permitted to make the following extracts from a private letter addressed to a Banking house in this city from a leading German House to which we invite attention.

"Messrs. M. & S.

GENTLEMEN—We hope the gradual improvement of your money market and quotation of stocks will continue. Here, transactions in American securities are very limited, and the German Press more than ever feels called upon to direct the general opinion against them by all sorts of articles made up of truth and fiction; showing knowledge on some points, but ignorance on a great many others, but all tending to frighten the holders of American securities.

The great question now is, what measures will the railroad companies take to place the owners of mortgage bonds on a safe footing; and what plan will be adopted to pay off their loans as they may mature; as the best answer to all such questions we have been able to obtain is, that such companies as may have the good fortune to finish their roads will be able, from a credit due to their success, to borrow, or renew at a low rate of interest, loans that were contracted at high rates.

Answers to those questions, by events that have recently taken place are more urgently demanded; and we hope the efforts of the leading Banking Houses in your city will be directed to secure the creation of *sinking funds*, without which, you may be assured no further loans can be sold here. Railroad companies cannot hope for success unless they come before the public with their finances better regulated than heretofore. Unless the proper reforms are effected, we must side with the opposition, or may have to become the leaders of it.

It would be very desirable if the crisis which

agitates the money market throughout your whole country, could be made the occasion for a better regulation of your financial affairs.

In this country the people do not forget what they have experienced so easily as Americans do; and they will be careful when they have committed one mistake not to get caught a second time; especially since the Buffalo and New York City Railroad has given proof that holders of mortgage bonds meet with many difficulties in prosecuting their claims, and are not even safe in the possession of their property against the interests of the directors, which is sold to pay their private claims.

Yours

H. K. & CO."

These above suggestions are very proper, and we have no doubt the present crisis will form the occasion for a better regulation of their finances by our railroad companies. There is abundant need of reforms, and the stringency in the money market, and the low prices of railroad property of all kinds, will direct attention to railroad management, which, with high prices, and good times, might have almost entirely been neglected. We are certain, from the reforms that have been effected and are steadily going on, that railroad property is much more valuable now than it was six months ago, or than it would have been with an easy money market and quotations at par, for securities that are selling at 50 cents on the dollar. There is a double inversion. *Values* have gone up, while *prices* have gone down. Witness the Erie Railroad. Are not the bonds of this company which are now selling at 70, worth more under the new regime, with prudent management, and with an application of a-half a million a year to a sinking fund, than when they were at par, and the company rushing onward in their headlong career. When the bonds were the highest, the policy that characterized the company was a false one, that, pursued, could end in no other way than disastrously. Now that it is a sound one, which renders the securities safe beyond a peradventure, they are at a discount at 80 per cent. We presume to say that the case cited, which is a very palpable illustration of the point under discussion, is equally applicable to a great many other roads whose securities are equally depreciated, the extent of which depreciation is regarded as the measure of the loss of the holders, while in fact they are never so well off as at the present moment. The present market price is no criterion of *value*, as we have shown. If the purchaser has all that he contracted for; if the road into which he purchased is doing as well as he supposed it would do, what has he to complain of. Not of a mistake of judgment, for he has committed none; not that he has not a good security; nor that he is in any danger of losing either his principal or interest; only if he had his money in hand, he could make a better bargain now than formerly. But unless the roads had been built he could not now have had them at a lower price. Had he withheld his purchases, there would have been no roads to buy into. A man cannot eat his cake and have it at the same time.

We have in previous numbers attempted to account for the present low price of securities. We shall again refer to this matter. With regard to the few lapses that have taken place in the pay-

ment of interest on bonds, we may safely challenge the world to show any kind of business where there have been so few failures as among our railroads. It must be remembered that there are over 300 railroads in operation in the United States, and 100 more in progress, upon many of which large sums have been expended. Estimating their funded indebtedness at only \$10,000 per mile, for 25,000 miles in operation and progress, or \$250,000,000 on the whole, there is not one per cent. of this amount that is not sufficiently secured. It would be hard work to show where one-half per cent. of this sum is in danger of being lost. The average of these securities bear on their face seven per cent. interest and upwards. The purchasers got them at rates that yield them over 8 per cent. It may be safely affirmed therefore that, under any contingencies, with all possible losses, the holders of our securities will secure at least seven per cent. on their entire investments. We should like to know any kind of investments that in the long run pay so well.

We shall pursue this matter in a future number of the JOURNAL.

York and Cumberland Railroad

The following is an estimate of the amount required to meet the liabilities of the York and Cumberland Railroad Company, and complete the road, in case judgment shall be rendered in favor of Myers:

Present floating debt, including coupons overdue.....	\$100,000
Myers' award, say.....	165,000
Cost of completing the road, viz:	
Land damages.....	\$28,000
Fencing.....	26,000
Buildings, &c.,.....	7,000
Construction, 35 miles, Saco River to Great Falls, \$25,000 per mile, Wood's contract....	910,000
	\$970,000

Less, estimated value of work done on Western Division...	70,000
Aggregate required.....	\$1,165,000

RESOURCES, VIZ:	
Bond payments, \$13,000 per mile, for 35 miles.....	\$455,000
Stock payment, \$6,500 per mile. 227,500	682,500
Cash required.....	\$482,500
Estimated available amount of uncollected subscriptions to the present stock.....	535,000
Contribution from present stockholders, 6000 shares.....	300,000
Contribution from present bondholders, 33½ per cent. on \$343,000.....	214,000
New stock subscriptions, say.....	\$485,500

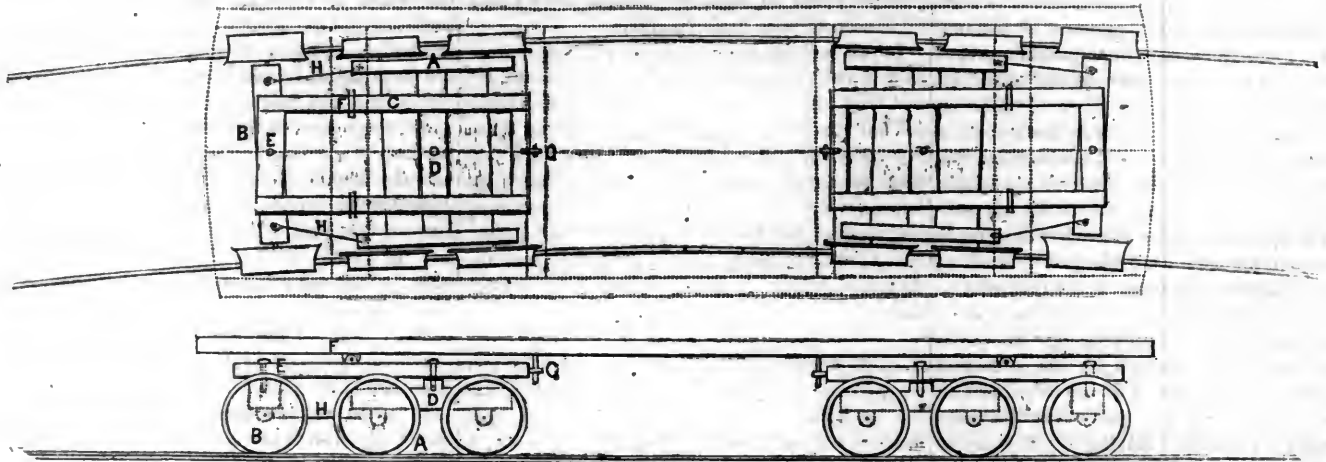
Upon obtaining and applying the resources above indicated, the credit of the company would be promptly restored, and its securities would have value in the market.

The early completion of additional divisions of the road, would enlarge the net income, to an extent sufficient to meet the current interest on the Company's bonds.

Satisfactory assurance can be given of the entire completion of the road, within twelve or fifteen months, after securing the cash contributions and subscriptions as above proposed.

In that case the shareholders and bondholders may entertain the most reliable confidence that the whole amount invested in this enterprise will become productive and available, within a very early period after the complete line is put in operation.

G. D. Smith's Six-wheel Car Truck.



G. D. Smith's Six Wheel-Car Truck.

Fig. 1 represents the car on a curve—it is an ordinary four wheeled truck—B. is an additional pair of wheels, which are slightly conical about half their breadth, or thickness—C. is a frame, bearing on the truck at D. and on the additional pair of wheels at E. This frame is always held in a line with the car body (represented by the dotted lines,) by the bearing at F. and also by the pin in the end of the frame at G. which plays up and down in a guide attached to the car body, thereby making the bearing uniform in case of any unevenness in the rails &c.

It will be observed that when the car is on a curve these leading wheels will be carried over the outer rail, just in proportion to the radius of the curve and the distance between the points D and E—consequently the wheel on the outer rail is increased in diameter, and at the same time

brought in the right position to turn the curve, as their axle will always point to the centre of the curve, whatever may be its radius—this is accomplished by the bars H. connecting the leading axles with the main truck, being set at an angle. When the car is on a straight line, the conical parts of these wheels are altogether inside, or between the rails, allowing them to run on their flat surfaces with the common track. Now if the whole weight rested on the two axles next to the ends of the car it would naturally turn the curve, without flanges or any thing else to guide it, but as half the entire weight (in the cut) is on these axles, the bearing being about half way between the points D. & E, then half the weight is in the right direction, or in like proportion. If these wheels increase in diameter a little more than to overcome the difference in the two rails, the outer wheel would incline to travel still faster—the effect of which would be to crowd the main truck from the outer rail, by pulling on one rod and pushing on the other, this axle turning on a bolt immediately over its centre at E. It will be observed from the foregoing cut and description, that the object of Mr. SMITH'S invention is to aid in running curves without breaking axles, by increasing the diameter of the outer wheel, so that it will travel the increased distance of the outside of the curve with the same number of revolutions that it requires to traverse the inner rail with a lesser diameter. This operation relieves the main truck of one half its load and constantly attracts it in the direction of the curve. We bespeak for this invention the careful attention of railway engineers and practical men as one of the numerous and not least meritorious projects for security against broken axles and wheels and the accidents resulting therefrom.

Journal of Railroad Law.

FRAUDULENT OVER-ISSUES OF STOCK.

The first of the two following decisions, borrowed from the N. Y. Times, discloses a distinguished jurist's (Judge Oakley's) opinion concerning the vexed legal question of the day:

Harlem R. R. Co. vs. Kyle.—The facts in this case are probably sufficiently familiar to the public. Mr. Kyle, Secretary of the Harlem Railroad Co., was arrested on a complaint and affidavits setting forth the facts of the issuing of fraudulent stock. Shortly after his arrest, he moved, without putting in any answer, to be discharged from arrest, and the motion was denied. He then put in an answer, denying many of the allegations of the complaint. The motion for a discharge of the order of arrest was then renewed and denied at Special Term *pro forma*. The case now comes upon appeal from this order at Special Term, denying the motion to discharge Kyle from arrest. The opinion of the Court was rendered by

OAKLEY, C. J.—Who, after stating the facts in the case, proceeded substantially as follows: The answer does not deny the fraudulent issuing of the stock, but the defendant insists that the Company as such is not injured by the fraud. The complaint contains an allegation to the effect that this fraudulent stock cannot be distinguished from the genuine, and that therefore the Company believe that they will be obliged to assume the fraudulent stock. The fact that this stock cannot be distinguished from the genuine is not denied by the defendant. And the question is whether there is such a probable cause of action by the Company against the defendant as will warrant his arrest. If it is true that the fraudulent stock cannot be

distinguished from the genuine, it is difficult to see how the Company can possibly refuse to receive the stock. It would seem to follow, if this is the case, that the defendant would be responsible. We think, as at present advised, that a sufficient case is made out to hold the defendant to arrest.

Motion to discharge the order of arrest denied.

ACTIONS FOR LOSS OF LIFE.

Safford vs. Newton.—This was an action brought by Chester Safford, personal representative of George R. Safford, to recover damages under the statute for the loss of life of George R. Safford, through the negligence of the defendants, who are the owners of the steamboat *Empire*, running between this City and Troy. The deceased was scalded to death on this boat by steam which escaped from the boiler into his state-room. The accident was caused by a collision with a sloop.

This complaint stated that the plaintiff was the son of the deceased, but did not state that he was his next of kin, or that he had legal capacity to sue, nor did it state any pecuniary damage. The defendant for these reasons demurred.

OAKLEY, C. J., rendered the opinion of the Court. He said that the practice in relation to complaints of this character was not well settled. Complaints had been tried without these averments—the matter being open to proof upon the trial—and there had been cases where the complaint particularly set forth pecuniary damage, and the plaintiff's legal capacity to sue as next of kin.

The Court, however, had come to the conclusion, and such would be the rule of practice which they would hereafter adopt, that it was necessary that the complaint should contain these averments.

Judgment on the demurrer, with leave to the plaintiff to amend his complaint. Costs abide the event.

THE RIGHT OF WAY.

A suit was lately tried in the Superior Court, in which the 8th Avenue Railroad Co. was plaintiff, and Michael Tracy defendant, for detaining the cars by traveling upon the track. Judge Oakley charged the jury that such hindering of the cars is illegal. A verdict was awarded to plaintiffs of \$50.

LIMITATION OF RAILWAY CHARTERS.

In the case of Tolman against the Eastern Counties Railroad Company, a bill was filed by a shareholder in the English Court of Chancery, to restrain the directors of the company from completing a contract they had made, or were about to make, with a steam packet company, in order to provide communication between the port of Harwick, in England, (one of the *terminus* of the company's road,) and different ports on the continent. An injunction was granted, as prayed for in the bill. On a motion to dissolve this injunction, Lord Langdale, Master of the Rolls, held; That the Directors of the Eastern Counties Railway Company had no right to enter or pledge the funds of the company in support of any project not pointed out by their act, although such project might tend to increase the traffic upon the railway, and although assented to by a majority of the shareholders, and although the object of such project might not be against public policy; and that acquiescence by the shareholders in a project, for however long a period, afforded no ground whatever for the presumption that such project was legal.

Sir John Jervis, Chief Justice of the Court of

Common Pleas in the case of "The East Anglian Railway Company" against "The Eastern Counties Railway Company" said:

"This act is a public act, accessible to all, and supposed to be known to all—and the plaintiffs (a corporation) must therefore be presumed to have dealt with the defendants (also a corporation) with a full knowledge of their respective rights, whatever these rights may be. It is clear that the defendants have a limited authority only, and are a corporation only, for the purpose of making and maintaining the railway sanctioned by the act, and that their funds can only be applied for the purposes directed and provided for by the statute."

"* * * They cannot engage in any new trade, because they are a corporation only for the purpose of making and maintaining the Eastern Counties Railway. What additional power do they acquire from the fact that the undertaking may in some way benefit their line? Whatever be their object or prospect of success, they are still but a corporation for the purpose only of making and maintaining the Eastern Counties Railway; and if they cannot embark in new trades because they have only a limited authority, for the same reason they can do nothing not authorized by their act and not within the scope of their authority.—Every proprietor, when he takes shares, has a right to expect that the conditions upon which the act was obtained will be performed—and it is no sufficient answer to a shareholder, expecting his dividend, that the money has been expended upon an undertaking which, at some remote period, may be highly beneficial to the line."

"If the contract is illegal, as being contrary to the act of Parliament, it is unnecessary to consider the effect of dissenting shareholders, for, if the company is a corporation only for a limited purpose, and, a contract like that under discussion is not within their authority, the assent of all the shareholders to such a contract (though it may make them all personally liable to perform such contract) would not bind them in their corporate capacity, or render liable their corporate funds."

In *Salomons against Laing*, Lord Langdale said: "A railway company incorporated by act of Parliament is bound to apply all the moneys and property of the company for the purposes directed and provided for by the act, and for no other purposes whatsoever." The same principle was adopted by Lord Cottonham in *Bagshawe* against the *Eastern Union Railway Company*; by Lord Cranworth in *Beman* against *Rufford*. The same principles have been adjudicated by the Supreme Court at Washington in the leading cases of *Dartmouth College* against *Woodward*; *Bank of Augusta* against *Earle*; and *Charles River Bridge* against the *Warren Bridge*; and by the late Supreme Court and by the present Court of Appeals of this State. The result is, that it is the settled law of the English Courts in England and in the United States, that a corporation is the mere creature of the statute or law creating or authorizing it, and can exercise no power and do no act not authorized in terms by its charter. In this State every act of a corporation not authorized by its charter is expressly prohibited by a statute, which declares that, "In addition to the powers enumerated in the first section of this title, and to those expressly given in its charter, or in the act under which it is or shall be incorporated, no corporation shall possess or exercise any corporate powers, except such as shall be necessary to the exercise of the powers so enumerated and given."

The learned revisers of the statutes of this State, in 1830, wisely incorporated this provision in the Revised Statutes; thus making the common law principle a part of the statute law of this great State. The safety of all investments in the shares of railroad, banking, insurance and other incorporations, depends entirely upon the strict and rigid adherence of our courts to the principles enumerated in the above prohibitory statute, and in the leading cases to which we have referred, decided by the most eminent English and American judges. If the directors of railway and other corporations are allowed to embark the corporate proper

ty, and capital in sustaining and promoting schemes and prospects wholly unauthorized by their charters upon the plea that they hoped thereby to increase the profits of the shareholders, then there can be no security for any investment in the shares of any corporation. For, in the language of Lord Langdale, "There is no project, however wild, which has not been encouraged by some one or more of these companies; there is no project, however wild, which the shareholders have not acquiesced in from one cause to another, either from cupidity and the hope of gaining extraordinary profits beyond their first anticipation, or from terror of entering into a contest with persons so powerful."

Virginia.

The Virginia papers are publishing series of letters upon the subject of internal improvements in that State, written by Lieut. M. F. Maury, of the U. S. Observatory, and addressed to his son now at school at Newburgh, in this State. The letters, although written in that familiar style suited to the relation of parent to child, are really, we take it, designed for the people of Virginia.

The discoveries and improvements in science, and in the mechanical arts made with the present century have so increased the capacity of man for anything that relates to his maternal progress, that the condition of a people a thousand years ago contrasts not more strongly with what it is at the present time, than that of two adjoining States, one of which plods along in the old path, while the other calls to its aid whatever human ingenuity and skill has contrived as aids to efforts. So potent are all these agencies in changing the whole aspect of society, that we measure exactly what a community is doing by the visible results. In the general advance, a people that are stationary appear to retrograde; to move in the opposite direction.

The people of Virginia find themselves this category. Once, their State stood at the head of the Confederacy; a position to which she is still entitled by her central situation, by the extent of her territory and natural resources. This position has been lost through the superior enterprise, industry and intelligent policy of other States.—To the recovery of the lost ground the best minds of the State are directed; among the foremost of which is the writer of the letter from which we have so largely quoted.

One of the most interesting facts connected with the progress of this country is the influence of works of internal improvement on the course of trade. The most striking examples of their influence is the vast commerce of the City of New York, which has been rendered the most accessible of all others from the interior. Railroads are undoubted circulated to neutralize many of the advantages secured to her by the Erie Canal, which, for a time, was the only Eastern outlet for the West. The extent of their influence in the diversion of this trade, and of transferring it to Norfolk, among other cities, is an interesting problem for future solution.

Below we give such portions of the two first letters of Lieut. Maury as are appropriate to the subject under discussion. We shall continue extracts in our next.

Let us take a map of the United States—a globe will be better—without any internal improvements, any turnpikes, canals or railroads, whatever, marked out upon it, for I want to show you, first, what nature has done for Virginia; then,

we will take another map, with all the railways and canals upon it, to see what man has done.

With this, and such other information as I shall give you from authentic sources, we shall be able to understand the true situation and present condition of the Old Dominion. We shall see how far she has been distanced in the commercial race; how far she has been left behind by sister States, in the development of resources; and then we shall be able, understandingly, to discuss the great question which is now engaging the attention of her sons, viz: the true policy of the State with regard to her internal improvements. Perhaps we shall be able to satisfy ourselves how, (if you and I were the people and State of Virginia) we could recover for her at least a portion of her lost commercial advantages.

With a common terrestrial globe before you, elevate the North pole, bring Vera Cruz under the brazen meridian, and put your finger on Norfolk,—you now have a clear view of its geographical relations seaward. As to the natural advantages of position, depth of water and accessibility by land and sea, Norfolk has no competitor among the seaport towns of the Atlantic.

Midway of the Atlantic coast line of the United States, Norfolk is the most convenient (because the most central,) point where the produce of the interior may be collected, and whence it may be distributed north and south, right and left, among the markets of the seaboard.

Its climate is delightful. It is exactly of that happy middle temperature where the frosts of the North bite not and where the pestilence of the South wakes not. Its harbor is commodious, and as safe as it can be. It is never blocked up with ice, and as to the egress and ingress between it and the sea, it possesses all the facilities that the mariner himself could desire. It has the double advantage of an outer and inner harbor. The inner harbor is as smooth as any mill-pond; in it, vessels lie with the most perfect security, where every natural facility imaginable is afforded for lading and unlading. Being ready for sea, the outward bound trader dropping down from this snug mooring and approaching the sea, finds a storm raging from outside. The outer harbor then affords shelter and the fury of the gale is spent, when the white winged messenger trips her anchor, trims to the breeze and goes forth rejoicing on her way to the haven where she would be.

Moreover, the prevailing winds, in the parallel of Norfolk are westerly winds, which are fair for coasting, and for going seaward in any direction. A little to the south of that parallel you find the North East trades, which are fair winds for the inward bound Norfolk vessel.

Then there is the Gulf stream, that mighty river in the ocean, upon the verge of which Norfolk stands. It bows by with a current which, without the help of sweeps, sails or steam, will carry the European bound vessel, out of Norfolk at the rate of nearly one hundred miles a day, directly on her course.

Then at the sides of this, and counter to it, are eddies which favor the same vessel on her return to Norfolk. These *hapse* her along and shorten her voyage by many a long mile.

Next, to complete the survey seaward, cast your eye down to the great Amazonian water-sheet of South America. That river drains a district of country twice as large as the whole Mississippi Valley. The volume of water discharged by the Amazon into the sea, exceeds by six-fold, that which the Mississippi empties into the Gulf; and it opens a highway for commerce and navigation from the sea to the foot of the snow-capped mountains that rise up on the rim of this great basin, and touch the clouds under the Equator. This country is to be the *cornucopia* of the world. Its climate is that of an eternal Spring; its soil the most prolific on the face of the earth, and its minerals the richest and the rarest, and the most abundant that ever adorned the person, or ministered to the convenience of man.

But you have read Lieut. Herndon's Explorations of the Amazon—you have studied with me

the physical geography of the country drained by it, and you understand how and why the winds are constant and fair both ways, for vessels trading between that river and Norfolk.

Now, take a string, and with your finger hold of one end of it in the mouth of the Amazon, then with the distance thence to Norfolk as a radius, sweep on the globe an arc of a circle from Florida to Newfoundland, and you will be surprised to find that the Atlantic coast is very nearly a perfect arc of a circle, of which the mouth of the Amazon is the centre, and Norfolk the middle.

Such are the natural advantages of Norfolk seaward. Let us look ashore and consider them landward. You will better appreciate these by studying them in contrast. Therefore, we will compare them with the natural inland advantages of New York.

A bay or harbor which is conveniently accessible to the sea, is supposed to offer natural advantages for a commercial city in proportion to the fertility and extent of the back country that is tributary to it. Thus, we say, that when the Valley of the Amazon is fully peopled up, the largest city the world ever saw will be at its mouth. Social affairs, political relations, or the requirements of trade, may modify this calculation, and place the commercial emporium of Amazonia at some other point, and not at that indicated by nature. But you will recollect we are considering at present only the natural advantages of New York and Norfolk; their artificial advantages we will consider at another time.

The back country that is naturally tributary to the city of New York, is confined to the counties that are drained by the Hudson or washed by the waters of the Sound. And, if there were no such things as internal improvements, no way in the interior by which produce and merchandise could be transported from one water shed to another, the people for whom New York would export and import, would be those who live in the valley of the Hudson, or who inhabit the shores of Long Island Sound.

Now contrast the fertility and extent of this country with the back country that is tributary to Norfolk. Both shores of the Chesapeake Bay are tributary to it; and this magnificent sheet of water is the natural receptacle, also, of the drainage and surplus produce of the valley of the James River, the York, the Rappahannock, the Potomac and the Susquehanna, and with a perfect net-work of creeks and coves that indent their shores. The back country, therefore, which, without portage, is naturally tributary to Norfolk, not only surpasses that which is tributary to New York, in mildness of climate, in fertility of soil, and variety of production, but also in geographical extent, by many square leagues; the proportion being as three to one in favor of the Virginia port.

But there are such things as natural portages, by which commerce, even in a rude state, may pass from one river valley to another on its way to the sea. Now let us see what portions of country are nearer to New York, what to Norfolk, assuming that if these natural portages be equally improved, all that country which they will bring nearer to Norfolk will be tributary to Norfolk, and all that they may bring nearer to New York, will, in like manner, be tributary to New York.

Therefore, to divide and lay off this back country, turn to the globe once more; stretch a string upon it from Norfolk to New York, and make a dot half way between them. Now seek a point on the south shore of Lake Erie, that is equidistant from New York and Norfolk; draw a line from the dot to this point, and thus you will have a dividing line of distance between the two places, every point along which will be just as far from the one place as the other. Transfer this line to the map,—to which you will presently be referred—and you will find that it runs through Delaware and cuts Lake Erie near Cleveland, Ohio.

Now as you are on the banks of the Hudson, all the country that is on your side of this line is nearer to New York, and all on my side of it is nearer to Norfolk. Thus you perceive that Chi-

cago, Illinois, and St. Louis, Missouri, are actually nearer to Norfolk than they are to New York even by an air line.

You see, moreover, that as between New York and Norfolk, the natural advantages here are greatly in favor of the latter. The most direct way to the sea through either of these ports, from most of the lake country, and from almost the entire Mississippi valley, lies through Virginia. The natural advantages then in relation to the sea or to back country, are superior beyond comparison to those of New York.

I have pointed out to you the superior natural advantages which Norfolk combines for a great commercial town. It was designed by Providence that the emporium of trade on this continent should be situated either upon the shores of New York harbor or the Chesapeake Bay. Nature, as you have seen, did much to turn the scale in favor of the Bay, for she threw on its side of the balance many a broad river valley, with long threads of navigable streams, piles of mountains filled with valuable minerals and healing waters, and at the end of the level, reaching far out to the west, she placed an empire.

That such is the fact, that Norfolk or New York one of the two, was destined to be the great seaport town of this country, has been patent to the thinking minds of Virginia for the last hundred years at least.

Now to understand what the advantages of New York are, and how gained, let us dispense with the Globe and turn to the map. The best for this purpose is the Railroad map of the United States, by Poor, the editor of the Railroad Journal. I take him to be a very clever man; for both his Journal and map are excellent.

As soon as the Erie canal went into operation, its commercial influences were felt for good throughout all the upper States of the Mississippi valley. They began forthwith to dig canals, or to push slack water navigation up to the Lakes, which operated as feeders to the New York improvement and served to impel that city upward and onward in her dazzling career. The State of Ohio constructed no less than five such feeders leading from the Ohio river up into the Lakes.—Indiana followed suit; and even Illinois, though scarcely out of her swaddling clothes, attempted to cut a through-ship canal between the Mississippi and the Lakes. It was too much for her, and broke her down for a while, for she had to abandon the design.

Pennsylvania followed the example of New York, and made haste at great costs, to connect Philadelphia with the Ohio. Maryland, too, was early in the field with the Chesapeake and Ohio Canal, for railroads in those days were not in vogue. As soon, however, as it was ascertained that railroads might pay, that gallant little State was quick to perceive and prompt to act. Among the first in the field, her sons planned the Baltimore and Ohio Railroad, and procured a charter for it as early as 1827.

In the mean while, Virginia and North Carolina—for North Carolina is as dependant as Virginia is upon Norfolk for an outlet to the sea—preferred in mercantile phrase, to "look on."

South Carolina and Georgia could build no canals, but as soon as the problem of railroads was solved, they both took the railway mania, as the gentlemen of the stand-still policy termed it, and began with the most indomitable enterprise, to push from Charleston and Savannah, iron ways for commerce over into the Mississippi valley. Of course, no sooner did one of the railways enter that valley than a multitude of others sprang up there to feed and co-operate with it.

Now take Poor's railroad map, and glance your eyes over it. Ohio and Indiana exhibit a perfect network of railways and canals. See how they all run up to the Northward and Eastward, to meet the New York, Pennsylvania and Maryland improvements! Even in Kentucky the railroads turned up to the North and East, where they can find improvements in other States leading to the sea. Though the daughter of Virginia, Kentucky

has not a single railway leading to Virginia, or even pointing towards it.

Now cast your eyes upon Virginia and her neighbor "Rip Van Winkle," as the "Old North State" used sometimes to be called. See how blank they look—not a single railway or canal in operation or completed from their frontier borders to any seaport town, gulf, bight, or bay, in either of them!

Continue the examination a little further, by casting your eye upon South Carolina and Georgia. There again you find on the map a net work of railways, reaching with their main stems also back to the Mississippi valley stretching off far up into Tennessee on their way to Kentucky and Ohio, thus cutting off all western trade from Virginia.—You observe how in Tennessee the railroads also skim Virginia, and run down to the Southeast to meet the South Carolina and Georgia improvements. Charleston is at this time actually importing for Nashville and all the country thence to Abingdon, Virginia.

Thus Virginia, that ought to have been the first to tap the Mississippi Valley with her internal improvements, is the last. All the States West shun her with their improvements. They go round her, and by the disconnection, she presents herself isolated and island-like in the grand system of internal improvements that bind East and West together. What has she lost by it? The commercial dependency and the business of an empire. A loss which I fear cannot now be made good by any sum of money, even though it be as enormous as the British debt.

Before we proceed to discuss the mode by which the State may recover so great a boon as trade with the West, I should explain to you how Virginia came to be so far behind hand, with her internal improvement system, as to lose her share of that business.

Of course, many agencies were concerned in bringing about such a state of things, and as this is growing to be a very long letter, we will discuss, and that briefly, but a few of them.

As prominent among these agencies, I should not be far wrong in naming some of those very natural advantages that preponderated so powerfully in favor of Norfolk, as the great commercial city of the continent, viz: those beautiful rivers, creeks and branches, which, expanding out into the Chesapeake Bay, interlace Eastern Virginia with a perfect net-work of natural canals.

From the Revolution until now, if not now, Eastern Virginia has ruled in the legislature; for the wealth and population of the State have generally been on this side of the mountains.

All the internal improvements, therefore, which the planters of Eastern Virginia wanted for their own personal convenience, was a spout from their farms, which were generally on the banks of the rivers, through which they could scute their wheat and their corn down into the hold of the vessel that came to take it away. They, therefore, wanted no canal, and did not care to have even good turnpike roads; and why should they build them for the people beyond the mountains?

The Erie Canal met with very much the same kind of opposition from the tide-water counties of New York, but fortunately for New York, she had not been over-blessed with such an extent of tide-water country and natural canalization.

There was another circumstance which probably was not without influence, in producing this neglect with regard to internal improvements. Virginia took the lead in the Revolution, and afterwards in forming and putting into operation those great and glorious institutions under which we live and rejoice. She became "the mother of statesmen." With her Washington and Jefferson, her Madison and Monroe, she governed the country up to 1825. There was only a short interregnum during the while. Besides these great lights, she had a host of other sons. Judge Marshall and John Taylor, of Caroline—the best thinker of them all perhaps—among them. They were all from Eastern Virginia.

The mind and the talents of all these great and good men were devoted not to the development of

these resources of their own beloved State, nor to a system of internal improvements for reaching the West, but to the federal government. How material was it that the heart of the mother and her meditations should go with such sons, and that their friends and neighbors at home should be thinking their thoughts and occupying their minds with the subjects which they knew were engaging the attention of these statesmen. And as an evidence that this was so, the Legislature of Virginia was so long accused of occupying itself with federal affairs to the neglect of those of the State, that the accusation at last assumed the semblance of truth, and became a by-word.

Under these circumstances the Old Dominion began to lag behind. Her commercial cities languished, and property went down. There is and has always been, common notions to the contrary notwithstanding, a high degree of enterprise and energy among the people of Virginia; and in this state of things, some of the most enterprising among them, resolved to abandon the State and seek their fortunes in the Western wilds. They flocked to the West. There they carved out new States and added them as bright ornaments to the Union. Kentucky and Missouri were settled principally by Virginians. Many of them went also to Tennessee—though she is worthy of North Carolina—and to Alabama, to Mississippi, Florida, Louisiana and other new States, both slave and free.

Thus you see there are reasons and an excuse for the blank that Virginia presents among the railroads on the map.

In my last letter, the statesmen of Virginia, with most of whose leading traits of characters you are familiar, were called to my mind: Pondering over the present condition of the State and the character of these men, the question has been suggested, suppose Mr. Jefferson had been defeated by Burr, what effect would that have had upon the internal improvements and prosperity of Virginia?

The fortunes of States as well as of individuals are often shaped by events, which, as far as we can see at the time of occurrence, have no bearings that way. Mr. Jefferson had an active and an utilitarian mind, and had he lost the election for the Presidency, might and probably would have diverted his thoughts, in a measure at least, from political and national affairs, and given his attention and his energies and his influence towards the development of the resources and the advancement of the prosperity of his own State. In that case Virginia, instead of New York, would have been the first to tap the Mississippi Valley. Then instead of the Erie, we should have had the Chesapeake and Ohio or the James river and Kanawha canal—perhaps both. Then Norfolk might have been as New York now is; Richmond as Albany; Alexandria as Philadelphia or Boston; Eastern Virginia, for wealth and prosperity, the garden spot of the world; and the "Old Dominion" now, as she was then, the greatest State in the Union.

Do you know that Eastern Virginia gets her lumber from Pennsylvania, Vermont and Maine? and that she has such extensive forests of unsettled lands, that the New Yorkers and Baltimoreans send to them for fire wood? It is a fact. You have been among the mountains of Pennsylvania where they cut timber, and doubtless recollect Whitehaven, where we saw all those saw mills and such immense rafts in the river. Well, the mountains of Virginia are clad to the very top with timber just as good; and there it must stand until the roads or canals, which are to bring it away, be constructed.

Ask Mr. Hasbrouck to tell you about De Witt Clinton, the great man of New York, and his connection with the Erie canal. He, no doubt, knew him personally. In carrying that work through, De Witt Clinton turned the Mississippi river upside down. He brought for all the practical purposes of commerce, one of its passes from the Balize and placed it at Sandy Hook; for in consequence

of the Erie canal and other improvements which that work drew after it, most of the upper Mississippi valley is now drained of its commerce via New York, instead of New Orleans.

They are now enlarging the Erie canal and giving it capacity for a commercial drainage, calculated to do a business which during seven months of the year only, when it can be carried on, will pay in the gross for tolls and freight, an annual subsidy to the people and State of New York of twenty millions of dollars.

Draw on your map a line from Albany to the mouth of the Ohio, and continue it thence Westwardly so that it shall pass about 100 miles South of Independence in Missouri. All the country to the North of this line will, by the enlarged Erie canal be made, it is calculated tributary to New York.

You see now what a monument De Witt Clinton has left behind him, and how, with the pick and the spade, he has shaped the destinies of many States.

I do not mean to institute a comparison between him with these implements, and Jefferson with his pen and ink over *The Declaration of Independence*. But I wish you to take Mr. Jefferson's career after his election to the Presidency, and De Witt Clinton's from the time he became identified with the Erie canal, and tell me which you would rather have, the fame due Thomas Jefferson for works after his election to the presidency, or the fame due De Witt Clinton for seeking to develop the resources of his State, and make her welfare the goal of his ambition.

But let us return to the subject of a communication through Virginia, between the waters of the East and those of the West. As early as 1810, the Legislature of Virginia began to think about it, for in this country individuals generally begin to think of great questions long before their Legislatures. In that year it appointed a commission to examine a route. This commission failed to act. The next year it appointed another, of which Judge Marshall was a member; and in that year New York passed an act for building the Erie Canal. The war of 1812, however, intervened and delayed the actual commencement of that work until 1817.

Now Judge Marshall was a wise and great man, and he was consequently too good a citizen not to respond to the call of his State. In obedience to it he explored the New River. He became interested in the subject. He gave the thoughts of his solid mind to it, and like every body who has examined the question before us, he became convinced of the immense importance of the incalculable advantages to his State which such a connection with the Western waters would draw after it.

In the report which he and his associates made to the Legislature upon the subject, there was of course good thinking. Views were expressed there, which, because they were true then, stand out now and look like prophecy.

"The immense works," said the report, alluding to the Erie Canal, "meditated in New York, will certainly, if executed, give to that State great advantages in a competition for the trade of the Lake. But if other convenient and more direct channels be opened, it is not probable that the commerce of the Ohio will take the circuitous route by the Lakes."

So far as Virginia is concerned, "other convenient and more direct channels" have never been opened, and the trade and travel of that Ohio country continues to this day to flow in that "circuitous route" and "take the direction of the Lakes."

Look at Poor's Railroad Map, and see what an elbow all the improvements in the Ohio Valley make to the North to get to New York, instead of coming, as they most certainly would, straight to the seaboard and through Virginia, had she opened a way for them.

This Erie Canal, and the other improvements of New York, have, according to the official report of her State Engineer, extended her channels for trade and travel to the West beyond the State, to

the distance of 1600 miles by Lakes; 7000 by rivers; 1,600 by canals; 3,500 by railways already completed, and as much more in process of construction. And as an illustration of what New York has gained by bringing this back country in connection with her, and of what Virginia has lost by failing to bring it in connection with her seaboard, look at the exports and imports of New York and Norfolk; or compare the revenues received at Norfolk with these at New York.

The Custom House receipts were:

For 1853, at New York.....	\$38,289,341 58
For " at Norfolk.....	31,255 51
For 1854, at New York.....	41,757,085 05
For " at Norfolk.....	62,127 78

With untold natural advantages in favor of Norfolk, New York has won them away by artificial means, and if we measure the degree of her success according to these returns, and only in dollars and cents, we shall see that she is reaping, over Norfolk, business and profit by more than a thousand fold.

(To be Continued.)

Orange and Alexandria Railroad.

The annual meeting of the stockholders of the Orange and Alexandria Railroad Company held its session in Alexandria last Tuesday, when the reports of the President, Chief Engineer and General Superintendent were read, which present the affairs of the company in a favorable light. From the report of Mr. Atkinson, Chief Engineer, we learn that no material change in the line of the Extension from the experimental surveys has been made in the length of the road, the distance from the point in connection with the Virginia Central Railroad, at Charlottesville, the Virginia and Tennessee Railroad at Lynchburg, being about 59 6-10 miles.

The extreme grades are limited to 66 feet per mile, and the curvature is mainly very gentle though in some instances, a radius of 1,000 feet is used, which is the minimum of this road.

The length of straight line is 29½ miles, and of curved line 30 miles.

Forty-nine (mile) sections have been let to contractors of the highest character, and generally at prices for graduation and culvert masonry not exceeding former estimates, the bridge masonry alone being above them. The remaining sections says the report, "are withheld in pursuance of the policy of the Board, to employ the landholders on their own premises, when it can be done so without injustice to other bidders. A few days will settle the question, and complete the award of the whole graduation and masonry, except the section and bridge across James river at Lynchburg.—These jobs are still open, their precise location being affected by the crossing of the James River and Kanawha Canal."

"The parties engaged are prepared and warranted by their contracts and by the state of the subscription, to make an outlay of labor in the next year, in the aggregate of about \$350,000 for a minimum, and it may be extended at the discretion of the Company, provided reasonable notice be given to them, to \$700,000 or even more.

At this last named rate for the ensuing year, and a slightly more enlarged one for 1857, the road might be completed and opened for travel to Lynchburg in the spring or summer of 1857.

I am not so sanguine as to hope, however, that such rapid progress will prevail, and it is only named here as what might be expected under the most prosperous condition possible of the funds of the extension.

The Engineers are already dispatched in small force to prepare this work, by staking the slopes for the contractors.

Some of the contractors have already broken ground near Charlottesville with commendable spirit. Owing to the employment of negro labor, however, the amount of graduation done before the annual hiring at new year, will not be great.—At that time, the contractors will be ready to engage any amount of force to be desired, of which

due notice will be given them from this office."

As respects the cost of the road, Mr. Atkinson says:

"At present, I see no reason to make any modification in my views previously expressed as to the cost. It is to be noted, however, that the estimates of February and March last were made for money payments, while the contractor's prices for earth and solid rock and for culvert masonry have been on the average, as the events have shown, the same as my estimates. The substitution of bonds and stock payments, to a considerable extent may have influenced their offers, especially in the matters of loose rock and masonry, which in some instances are above my figures. But the margin assumed in these estimates was large, and the circumstances in other respects are so much the same that I do not feel justified in making any change in their amount."

American Railroad Journal.

Saturday, November 18, 1854.

Caution.

As we understand a man named Crawford has been presenting bills to several of the advertisers in the *Journal*, purporting to emanate from this office, and to be for sums due the *Journal*, we deem it our duty to put our patrons on their guard.

Monies due this office should be paid to no one outside the office except the editor, proprietors, or Mr. N. Davidson, their business agent; or some person showing their written authority to receive them.

New Map—Pocket Edition.

We have now ready a few copies of Mr. Poor's new map of all the Railroads in the United States and Canada; put up in covers for carrying in the pocket. It will be found very convenient for travellers.

Price by mail \$1. Usual discounts to the trade. Address AMERICAN RAILROAD JOURNAL OFFICE 9 Spruce st., New York.

Baltimore and Ohio Railroad.

The official report of the business of the road for the month of October showed the revenue of the road for the month to have been as follows:

	Main stem.	Wash. Br.	Totals.
For Passengers.....	\$55,147.08	\$28,876.43	\$84,023.51
For Freight.....	267,988.90	8,110.35	276,099.25
	\$326,135.98	\$36,986.78	\$360,122.76

As compared with the corresponding month of last year an increase is shown of \$65,259 on the main stem, and \$4,695.55 on the Washington Branch—total increase \$69,954.57. As compared with the previous month of September there was an increase of \$15,000 on the main stem and a small decrease on the Washington branch.

New York and Erie Railroad.

The more we reflect upon the recent determination taken by the New York and Erie Railroad Company, to devote nearly a half million yearly till the funded debt of the Company is reduced to \$20,000,000, the more are we disposed to commend the policy, and the moral courage that led to such a step. It cannot be spoken of in too high terms of praise. A Board that could, under the circumstances, take such a step, is equal to any emergency. Had no dividend ever been paid, and had the value of the stock been previously problematical, then the directors would have been free to

follow their own sense of duty, or propriety; but it must be remembered that only a year since the Erie was regarded as a dividend paying work, and as such, was bought for investment at a little below par. For a body of men to forego all prospect of a full dividend for years, which will have the effect to reduce the market value of the stock some 50 per cent. below what it cost them, is, in the highest degree, creditable to the integrity of our people, and the management of our Roads. It shows, as already stated, that our railroad companies can meet a crisis as the interest of the public and duty demands.

We think that in the above instance, the stockholders have conceded to the bond holders all the latter have a right to ask. It renders their interests safe beyond a peradventure. In 1855 the road will earn 30 per cent. on 20,000,000, and at least 14 per cent. net on the same sum! Can an instance be cited when stockholders of a company have made greater sacrifices, and a more munificent provision for the security of their creditors, especially when there seemed to be no reason to doubt that the road was earning an ample dividend upon its whole capital.

Mississippi Central Railroad.

A survey of the Tennessee extension of the above road from the State line of Mississippi, to Jackson in Tennessee, has just been made. The whole distance is 50.86 miles. A very favorable route has been found, involving no grade exceeding 48 feet to the mile, and no curvature with a radius of less than 1910 feet. Of the whole line, 41.15 miles are straight, and 9.71 curved.

The estimated cost will be as follows:

Graduation, Masonry, &c., ready for superstructure.	
From State Line to M. & C. R. R.....	\$29,987 79
From M. & C. R. R. thro' Hardeman Co.....	155,204 89
Through Madison co.....	58,860 38
	\$243,053 06

Average per mile.....	4,543 86
" " including cross ties	4,963 86

The total cost of the iron, chairs, spikes and equipment, will be \$640,821, or \$11,977 per mile of which \$10,000 per mile has been provided for by Bonds of the State.

The report estimates the number of through passengers after all the connections are made, at \$150,000 per annum. This, together with local passengers, freight, and mail service, are estimated to produce \$190,385 annually, or 21 per cent. on the cost of the road.

As the road traverses a very rich portion of Tennessee we presume there will be no difficulty in raising with the State aid, sufficient means for its construction.

Atlantic and North Carolina Railroad.

On Monday last we had the pleasure of an introduction to John D. Whitford, Esq., President of the Atlantic and North Carolina Railroad Co., who is now visiting this city on business connected with the Company. This is a most important work to South Carolina, as it will connect with the North Carolina Railroad at Goldsboro', and terminate at Beaufort Harbor, on the Atlantic Ocean. This port must be the principal outlet for the productions of a great portion of the interior of the State, as Beaufort is one of the best, if not the very best, harbors on the Southern coast. We learn from Mr. Whitford that the surveys, so far, show but very lit-

tle heavy work on the whole route with but slight curves and comparatively no grades. Indeed the country through which it will pass is nothing more than an extended plain for the entire distance.—The first shipment of iron for the road will be made this week, from our city, and as it is in the hands of honest and competent men—men who look to the interest and honor of their State, as well as to their own pockets, we may look forward with certainty for its speedy and economical construction.

Boston and Lowell Railroad

President. George W. Lyman.

Treasurer. J. Thomas Stevenson, Office, 5 Tremont st., Boston.

Agent. William Parker, Office at the station, foot of Lowell st., Boston.

Annual meeting first Wednesday of January.

CHARTER.

The Boston and Lowell Railroad Corporation was incorporated by the Legislature of Massachusetts, June, 1830, and authorized and empowered to construct a railroad from or near the city of Boston to Lowell, in the county of Middlesex, in such manner and form as they shall deem to be most expedient, laying out their road four rods wide and taking as much more land as might be necessary for the proper construction and security of the road. The capital stock was limited to one thousand shares, no share to be assessed more than \$500. Tolls were granted for the transportation of passengers and property; the Legislature reserving the power, after four years, from the opening of the road, if the net receipts from tolls and profits shall have exceeded ten per cent. per annum on the cost of the road, to reduce the rate, in such manner as to take off the overplus for the next four years,—calculating the amount of transportation to be same as the four preceding years; the same proceedings to be had at the expiration of four years. The 12th section of the act declared that no other railroad within thirty years should be authorized to be made, leading from Boston, Charlestown, or Cambridge to Lowell, or from either of these places to any place within five miles of the northern terminus of the Boston and Lowell Railroad; the State reserving the right to authorize any company to enter with another railroad at any point on said Boston and Lowell Railroad, on certain conditions; and also the right to purchase the Boston and Lowell Railroad at any time, during the continuance of the charter, after the expiration of ten years from the opening for use of said railroad, paying therefor the cost of construction, repairs &c., with interest at the rate of ten per cent. per annum, after deducting the profits and dividends received at the rate of ten per cent. per annum by the stockholders; and in case of this purchase, the limitation as to parallel or competing roads to be of no effect. Subsequent Acts of the Legislature of 1830—1849, increased the capital stock, provided for the purchase of the road by the Commonwealth after twenty years from the opening and not before, for the construction of the road in several particulars; the acceptance for the charter for the Woburn branch, the building of branches in the city of Lowell and in Boston, and various other matters of a local character.

CONSTRUCTION AND PHYSICAL FEATURES.

The grading of the Boston and Lowell Railroad

was commenced in the summer of 1831, and the road was opened its whole length June 26th, 1835. The second track was completed in 1841.

In the Monthly Chronicle for July, 1840, vol. 1, page 195 (in an article by Hon. Nathan Hall, one of the earliest and most devoted friends of the railroad system in Massachusetts,) occurs the following description, which, with some changes as to sleepers and rails, is substantially correct at the present time. "The Lowell Road is built in the most substantial and imperishable manner of any in the country. The rails are chiefly supported on sleepers of granite, extending across the road, at intervals of three feet. On some parts of the road the rails are laid on stone blocks, or blocks intermixed with cross sleepers. The stone sleepers are seven feet long, and from eight to twelve inches in the other dimensions. The stone blocks are of a size of three or four cubic feet. In the first track, and a part of the second, the sleepers and blocks are laid on a foundation consisting of a continuous dry stone wall, laid beneath each rail, in trenches from two and a-half to four feet deep. *** The sleepers and blocks of the second track (with the exception of three miles which are laid in the same manner as the first,) are laid on a bed of clean gravel, of seven and a-half feet in width and two and a-half and three feet in depth.

The Boston and Lowell Railroad crosses Charles River upon a viaduct built of wood upon piles of oaken timber and surmounts, by a gradual inclination the height of land between Boston and the Merrimac River. The greatest elevation of track 118.52 feet above the level of high tide, is at the summit in Billerica. The termination at Lowell is 87.21 feet above high tide.

Length of main road, (double track) $25\frac{3}{4}$ miles 59 71-100 feet.

Length of branches, single track $1\frac{3}{4}$ miles, 585 33-100 feet.

Sidings and other tracks, 15 23-100 miles.

Weight of rail on main road, 56 lbs., 63 lbs. and 60 lbs per yard.

Ditto in branches, 56 lbs. per yard.

Maximum grade in main road (except 1,500 ft. of 30 ft. per mile rising from station at Lowell), 10 feet per mile for 6 28-100 miles.

Maximum grade in branches, 54 feet per mile for 5,000 feet.

Total rise and fall in main road, 189 93-100 ft.

Shortest radius of curvature and length of curve in main road (except about 900 ft. of 1,200 ft. radius at station in Lowell), 2,800 feet radius, 1,694 $\frac{1}{2}$ ft. long.

Total degrees of curvature in main road 665° 1' 42".

Straight line in main road, 18 $\frac{1}{2}$ miles 824 ft.

Length of wooden bridges, 2,397 ft.

Way stations, 9. Flag stations, 12. Total, 21.

The only branch road is from Winchester to Woburn Centre, a distance of about two miles. It was built in 1844-45 and has a single track, with a heavy T rail, 56 lbs. to the yard, upon chestnut sleepers resting upon a bed of clear gravel at least 2 feet deep. The cost was \$45,522-17.

The equipment, 1853, was reported as follows.

Locomotives, 22.

Passenger Cars, equal to 44 four-wheel.

Baggage Cars, " " 15 four-wheel.

Merchandise Cars, 260.

Gravel Cars, 48.

The Boston and Lowell Railroad is in every respect a first class road, thoroughly built and kept in complete repairs and provided with ample stations, freight houses, &c.

CHARACTER OF BUSINESS.

Running to the City of Lowell, this road carries a large amount of freight for the various cotton and woolen factories, machine shops, and other branches of business of that place, as a local road. By its connection with the Nashua and Lowell and the Concord (N. H.) Roads, it becomes a trunk road and receives merchandise and passengers from the various roads in New Hampshire and Vermont, extending to Northern New York and Canada—being similarly situated in this respect to the Boston and Fitchburg Road.

THE FINANCIAL CONDITION

of Boston and Lowell Railroad, according to the report of 1853, was—

Capital Stock, (all paid in).....\$1,830,000 00
Funded Debt..... 39,500 00
Floating Debt..... 166,690 00

Average rate of interest paid during the year, 6 per cent per annum.]

The receipts from the business of the road for the past year, have been as follows:—

FROM PASSENGERS.

Boston and Lowell R. R.....\$137,808 58
In connection with Nashua R. R..... 14,612 52
" " " Concord R. R..... 7,134 41
" " " Northern R. R.....
" " " Boston, Concord & Montreal R. R.
" " " Vermont Central R. R..... 5,589 47
" " " Passumpsic R. R. 2,568 94
" " " Claremont R. R..... 173 97
" " " Contoocook R. R. 347 74
" " " N. Hampshire Central R. R..... 64 42
" " " Merrimac & Connecticut Riv'r R. R. 503 64
\$172,882 01

FROM FREIGHT.

Boston and Lowell R. R.....\$124,838 57
In connection with Nashua R. R..... 18,899 77
" " " Concord R. R..... 31,717 01
" " " Northern R. R..... 10,070 44
" " " Boston, Concord & Montreal R. R. 3,424 38
" " " Vermont Central R. R. 39,061 67
" " " Passumpsic R. R. 13,166 58
" " " Claremont R. R. 117 20
" " " Contoocook R. R. 336 41
" " " Stony Brook R. R. 2,399 03
" " " Wilton R. R. 6,858 05
" " " N. Hampshire Central R. R. 4 55
" " " Merrimac & Connecticut Rivers R. R..... 1,680 25
Mails, expresses, &c., &c. 9,144 07
\$261,717 98

Total amount of receipts.....\$434,599 99

Statement showing the Cost, Mileage, &c., &c., of the Boston and Lowell R. R., from 1835 to 1853 inclusive.

Year.	Cost of Road and Equipment.	Length in Miles.	Cost &c., per Mile.	Gross Receipts.	Current Expenses.	Net Receipts.	Dividend.	Receipts from Passengers.	Receipts from Freight.	Miscellaneous.	Earnings per Mile.	Per cent. of Gross Earnings.	Per cent. of Net Earnings.
1835.....	\$1,312,239	25 $\frac{3}{4}$	\$50,960	\$64,654	\$19,125	\$45,529	3 $\frac{1}{2}$ per ct.	....	....	....	\$2,509	5	3 $\frac{1}{2}$
1836.....	1,505,645	....	58,470	165,124	75,326	89,798	2	....	....	....	6,653	11	6
1837.....	1,508,394	....	58,570	180,770	78,508	102,261	7	\$117,643	\$63,137	....	7,020	12	7
1838.....	1,575,663	....	61,190	191,778	75,597	116,180	7	109,083	82,697	....	7,447	12 $\frac{1}{4}$	7 $\frac{1}{2}$
1839.....	1,698,476	....	65,960	241,168	92,151	149,017	8	135,037	106,131	....	9,365	14 $\frac{1}{2}$	8 $\frac{1}{4}$
1840.....	1,729,242	....	67,077	231,575	91,400	140,157	8	127,007	102,614	\$1,953	9,000	13 $\frac{1}{2}$	8
1841.....	1,834,893	....	71,257	267,541	119,469	148,072	8	145,953	119,691	1,896	10,340	14 $\frac{1}{2}$	8
1842.....	1,978,286	....	76,826	278,310	165,174	113,135	8	148,042	122,059	8,209	10,808	14	5 $\frac{1}{4}$
1843.....	1,863,746	....	72,318	277,315	109,366	167,948	8	141,427	134,272	4,615	10,846	15	9
1844.....	1,902,555	27 $\frac{3}{4}$	68,605	316,909	169,293	147,615	8	165,284	145,915	5,709	11,420	16	7 $\frac{3}{4}$
1845.....	1,932,597	....	69,742	356,067	179,042	177,025	8	166,951	173,442	5,673	12,903	18 $\frac{1}{2}$	9 $\frac{1}{4}$
1846.....	1,940,418	....	69,925	384,102	212,233	171,868	8	185,234	193,836	5,031	13,837	20	9
1847.....	1,956,719	....	70,512	448,555	253,408	195,147	8	209,611	234,815	4,129	16,164	23 $\frac{1}{2}$	10
1848.....	2,013,687	....	72,565	461,339	268,707	192,631	8	201,218	255,147	4,973	16,630	23	9 $\frac{1}{4}$
1849.....	1,945,646	....	70,116	416,488	266,287	150,200	8	177,789	230,174	6,523	15,022	21	7 $\frac{3}{4}$
1850.....	1,945,646	....	70,116	406,421	257,884	148,536	8	177,372	221,210	7,837	15,241	20 $\frac{1}{4}$	7 $\frac{3}{4}$
1851.....	1,945,646	....	70,116	409,152	268,029	141,123	8	174,240	226,053	8,858	14,675	20 $\frac{1}{2}$	7 $\frac{1}{4}$
1852.....	1,995,249	....	71,901	388,108	257,227	130,881	7 $\frac{1}{2}$	157,169	222,005	8,934	13,985	19 $\frac{1}{2}$	6 $\frac{3}{4}$
1853.....	2,044,536	....	73,676	434,599	320,501	114,098	6	172,882	252,563	9,144	15,573	21 $\frac{1}{4}$	5 $\frac{1}{2}$
Totals.....	\$34,629,283	....	....	\$5,919,975	\$3,278,727	\$2,641,248	....	....	....	....	av. 17	av. 7 $\frac{5}{7}$	....

Terre Haute and Alton Railroad.

The Alton Telegraph of the 26th Oct. says:

"The track on this end of the Terre Haute and Alton Road, we are informed, is now put down from this place to a point several miles beyond Gillespie, nearly thirty miles out. The construction trains make daily trips out with materials for the track. The road-bed is nearly complete to Hillsboro', and the work of track-laying is progressing at the rate of half a mile per day. On the eastern end of the road, all the remaining sections from Hillsboro' to Paris were put under contract on the 27th of September last, and a large force is distributed along the line, preparing the road-bed. The track from Terre Haute to Paris is laid, and trains are running over it. Altogether, about sixty miles of the road are completed, and the remainder will be as speedily as money and labor can accomplish the work.

Baltimore and Ohio Railroad.

We make the following extract from the late report of the Baltimore and Ohio Railroad as published in the Baltimore papers. We have not received the reports of the Treasurer and Superintendent.

THE MAIN STEM.

The operations of the past year cannot but be considered as highly encouraging and satisfactory, more particularly when it is taken into consideration, that unlike the rival works, we have no Western Railroad connexions, which has given them such a decided advantage over this road.

The revenue from all sources during the year amounts to \$3,645,609.43, shewing an increase of \$1,612,189.63, as compared with the results of the previous year's operations. Of this sum \$569,091.51 have been derived from passengers, and \$3,076,517.92 from freights and mails. By reference to the tabular statements accompanying this report, it will be seen that seventy per cent. of the revenue earned from passengers during the year, has been derived from the local travel of the road. The increase in revenue from passengers over the last year, has been but \$104,846.60, but better results may, with certainty, be anticipated, when we can offer to the traveller an unbroken railroad route to any point in the West. Table "A" presents a statement of the monthly earnings, from passengers and merchandise, from the 1st of April, 1853, to the 30th September, 1854, and shews in detail the business of the road, from the opening through to Wheeling, down to the end of this fiscal year. The total disbursements of all kinds, under the head of expenses, have been \$2,026,211.69, which being deducted from the gross earnings, gives as the net earnings, the sum

of.....	\$1,619,397 74
To which add dividend from the Washington Branch Stock.....	81,344 00
And Rent of Depot and Work Shops chargeable to Washington Branch Road.....	10,000 00
Makes the total receipts.....	\$1,710,741 74
From which deduct—	
Interest on bonds and floating debt.....	\$739,385 69
Ground Rents.....	25,998 84
	765,384 53

Leaves the net balance of receipts...\$945,357 21
If from the loss on sale of bonds
No. 6 be deducted..... 121,758 85

Shews the amount to profit and loss...\$823,598 36

The above exhibit makes the working expenses of the road 55 3-5th per cent. of the sum earned.

II.—OF THE WASHINGTON BRANCH.

The operations of the Washington Branch exhibit the following results:

The receipts from all sources have been \$369,229.63, of which \$278,302.13 was derived from passengers, and \$90,927.50 from mails and

freights; shewing a decrease, as compared with last year, of \$15,830.78. The actual decrease in passenger receipts being \$30,883.64, while the increase in revenue from freights amounts to \$15,052.86. The anticipated increase in travel which it was presumed would follow a reduction in the fare to \$1.25, not having been realized; on the 1st of May last the fare was advanced to \$1.50.

Statement of Revenue and Expenses of the Baltimore and Ohio Railroad Company for the fiscal year ending Sept. 30th, 1854.

Revenue as per Ledger balance....	\$3,645,609 43
Expenses under the following accounts, viz:	
Expenses of transportation.....	\$872,805 51
Repairs of railway....	579,240 96
do. bridges....	64,179 30
do. depots....	18,380 98
do. water stations....	19,197 42
Watching bridges and pumping water....	15,712 99
Repairs of locomotives	290,511 85
do. passenger cars....	41,875 62
do. burden cars	179,275 90
do. stationary machinery	22,278 37
General Expenses.....	42,821 88
Losses by accidents, &c.....	27,178 12
	\$2,173,458 90
From which deduct amount reported by the master of road for extra materials on hand to be passed to and used next year.....	147,247 21
	2,026,211 69

Net revenue carried to profit and loss...\$1,619,397 74

Which exhibits the following as the proportion of working expenses.....\$2,026,211 69

To revenue 3,645,609 53—55,579 or 55 3-5th per ct.

St. Louis and Iron Mountain Railroad.

The annual meeting of this company was held at St. Louis on the 6th instant. The President of the Company Hon. L. M. Kennett submitted a report from which we make the following extracts.

At the date of our last report, November, 1853, the construction of the road bed from St. Louis to the Maramec River had been let to Messrs. Holmes & Co., and shortly after a section of some six miles below Mrs. Waters', extending West about two miles beyond Dunklin's, (at which point the road leaves the Mississippi River,) was let to the same parties. They commenced work and prosecuted it with vigor during the winter and spring. A contract was also closed with Messrs. Conran and Bennet for the Bridge Masonry at Maramec River, and with Messrs. Brown & Co., for the pile work necessary for foundations, but not in time for any thing of consequence to be done before the spring and summer flood. These contracts were based upon cash payments by the Company as the work progressed. Afterwards, on the 28th day of Feb'y, 1854, the proposition of Messrs. Wm. M. and Charles N. Watts, and Wm. M. Roberts, of Pennsylvania, was accepted, and a contract entered into with them for the graduation, masonry, bridges, ties and track laying on the entire line from St. Louis to the Pilot Knob, (excepting the work already let) payment to be made in the bonds of the city and county of St. Louis, and of the State of Missouri at par, five per cent. being added to the schedules of monthly estimates, and an additional five per cent. on the total estimates of the work to be paid them in stock at a bonus, should

the whole work be completed in contract time, viz: from St. Louis to Big River (47 miles) by 1st July, 1856, and through to Pilot Knob by 1st December, 1856, the Company furnishing the rails, chairs and spikes six months in advance of those periods. The prices per yard for earth excavation, rock work, masonry, ties, &c., were considered reasonable by the Engineer, and are in fact less than have since been paid by other roads in the State, now under construction. Messrs. Watts & Co. had also the privilege of making an arrangement with Holmes & Co., by which said Watts & Co. might also take the work let to Holmes, on the same conditions as the rest of the line, which they have done, thus becoming responsible for the whole work, except the Maramec bridge and a small section of graduation adjacent, and the graduation through the lands of Messrs. Keyser and others, between the Arsenal and Carondelet, which was reserved to them in settlement of land damages.

Messrs. Watts and Roberts have sub-let the work on all the sections throughout the line, except between the Iron Mountain and Knob, about six miles, and they expect to sub-let this portion to a party now examining the grounds, in a few days.

Their contractors are mostly men of experience in railroad work, known to Mr. Roberts (in charge as Chief Engineer of the Alleghany Valley Railroad, Pa.) as such, and from the manner in which they are generally taking hold and making their preparations, the directors have reason to believe, will not be deterred by any ordinary obstacles from urging their work to completion. The grubbing and clearing is done on the large portions of the line, and the excavations both in earth and rock cuts is commenced at nearly all of the most difficult points.

They are now fully prepared to go on as rapidly as may be desired, and as the price of labor is coming down, no further delay is anticipated, should the prices of our bonds justify pushing the work.

Upon this depends its ultimate success; and it is evidently better policy (however anxious we may be to complete the road at an early day) to work slowly and wait patiently, whilst the securities are greatly depressed, rather than to force the contractors to sacrifice them at ruinous rates, thus breaking them down and wasting our own resources. Our means being, in the best possible view of the case, considerably short of the amount requisite to put the road in operation, no argument is needed to show that the company cannot afford, in the very beginning of the enterprise, recklessly to waste them.

The subscriptions to the stock of the Company are as follows:

County of St. Louis, payable in Bonds.....	\$500,000 00
City of St. Louis, do. do....	500,000 00
City of Carondelet, do. do....	50,000 00
Am. I. Mountain Co., do. do....	25,000 00
Am. I. Mountain Co., payable in cash.....	50,000 00
Madison Iron and Mining Co., do.	50,000 00
County of Washington, do.	75,000 00
Contractors, do.	30,000 00
Individual Stockholders, do.	212,300 00

Making a total of subscription of...\$1,492,300 00
To which add State credit..... 750,000 00

And the sum of.....\$3,242,300 00

appears, as the amount of means at the disposal of the Directors, counting the bonded securities at par value. The revised estimate of Engineers, as per report herewith submitted, makes the cost of the road, finished complete to the Pilot Knob, including rolling stock, depots, land damages, interest, engineering, office expenses and contingencies, \$4,100,000, leaving a deficit of nearly two millions of dollars to be otherwise provided. A part of this amount can, however, be dispensed with for a time, by making temporary depot

buildings, and reducing the allowance for rolling stock to a bare sufficiency to start with, leaving the residue to be added as the business of the road requires it. To raise this amount on the construction bonds of the Company, as originally contemplated, would in the present condition of the market for railroad securities, be utterly impracticable.

But we may rely upon the aid of the Legislature to place our road on an equal footing with the other great trunk roads of the State. The \$750,000 State credit we have, was granted for a branch road from the Pacific Road to the Iron Mountain about sixty miles in length, and transferred to the direct road on the failure of that Company to commence construction within the prescribed time.—Our road direct, is eighty-six miles long from Hazel street to the Pilot Knob, and counting its entire length, to the State line of Arkansas, about 210, or nearly the same as the North Missouri, and but eighty miles shorter than the Pacific to Kansas.—Looking to its vast importance to the State, not only as a local road, opening up a communication between, the terminus of the other great trunk roads, and the iron and lead regions of Washington, St. Francois and Madison counties, but also as a link in the great Mississippi Valley Railroad giving connexions with Cairo, New Madrid, Memphis, Helena, Little Rock, and by the improvements already in progress East of the Mississippi, with Nashville, New Orleans, Mobile and Charleston, we may certainly expect for this equal favor with any other road, at the hands of the Legislature.

To put us on a like footing with the North Missouri we should have \$1,250,000 additional State credit, with the help of which St. Louis herself may and should be relied on to furnish the balance of the means necessary.

It is not considered necessary to enlarge upon the vital necessity to St. Louis of the Iron Mountain Railroad. But one opinion prevails amongst our citizens on that subject. It must be built.—And that it will be a paying road when completed if due regard is had to economy in its construction and management, there cannot be a doubt. It will commence with a mineral and lumber business almost or quite sufficient to sustain it, without having to wait for the settling and improvements of the country, consequent upon the building of the road itself, and the thousand new sources of trade thus to be opened up, which it is impossible, with any degree of certainty to estimate, or even form a conception of at present.

No arrangement has yet been made for the purchase of rails. The price has been so high, and still is, that it was not deemed advisable to purchase a year or more before it is wanted, even had the means been at hand, and in the condition of the fiscal affairs of the company it could not be done on favorable terms at any rate. There is time enough yet, and it is reasonable to hope that some months hence the supply and demand for this important article will be more evenly balanced and a reduction in price will take place. A contract for three locomotives has been made with Messrs. PALM & ROBERTSON, of our own city, to be ready as soon as they will be required either on construction or starting a passenger train to Carondelet or Jefferson Barracks. It was necessary to provide for these in advance, as the shops usually have orders many months ahead, and considerable time is required in building engines after they are ordered.

The total amount collected from stock subscriptions to date, in cash and bonds, is \$445,170, viz:

In bonds of the city and county of St.	
Louis	\$325,000 00
Bonds city of Carondelet.....	25,000 00
In cash from subscribers.....	95,170 00
To which add prod. of bills	
payable.....	19,391 59
First instalment of the State	
bonds	50,000 00
	69,391 59

And the total receipts in cash and bonds are.....\$514,561 59

Of which there has been paid out:

For construction, in cash.....	28,951 61
In bonds of the State.....	25,000 00
In bonds of the city and	
county of St. Louis.....	46,000 00
	71,000 00
Together.....	\$99,951 61
For engineering, cash.....	43,822 27
For contingencies and office expenses,	
including salaries of President, Sec-	
retary, Treasurer and Counsellor....	10,443 09
For land, and damages for right of	
way.....	10,742 70
For real estate.....	20,177 10
For interest.....	948 63
For fencing.....	30 00

Making disbursements.....186,115 40

Balance	\$328,446 19
On hand, city and county	
bonds	279,000 00
Carondelet bonds.....	25,000 00
State bonds.....	25,000 00
	\$329,000 00

Over drawn on Treas. in cash, diff.... 553 81

\$329,000 00

The following gentlemen were elected directors for the ensuing year:

L. M. KENNETT,	Dr. C. CAMPBELL,
JAMES HARRISON,	EDWARD HAREN,
LOUIS V. BOGY,	ADOLPHE ABELES,
MADISON MILLER,	HENRY T. BLOW,
A. H. HACKNEY,	WM. M. McPHERSON,
F. P. BLAIR, Jr.,	JOHN SIMONDS,
	JOHN J. ANDERSON.

Marietta and Cincinnati Railroad.

CHILLICOTHE, O., November 13, 1854.

H. V. POOR, Esq.

Dear Sir:—Inasmuch as the opening of the Marietta and Cincinnati Railroad from Chillicothe to a Cincinnati connexion, has given that work a prominent place among the first class roads of the West, I permit me to post up your readers, in a few words, as to its condition and prospects.

1. The line has been located, and under contract, from Cincinnati to Wheeling, 260 miles, since July, 1853. Particular attention, however, has been given to finishing, first, the Western Division which extends from Athens, on the Hooking river and canal, to the "Queen City." Thence, although there are but short intermissions, between working stations, along the whole route, yet the western division of the road shows the greater forwardness. The grading, masonry, bridging and "righting up," ready for the iron, is nearly all done from Chillicothe to Athens, 60 miles. West of Chillicothe, the iron is down, to Blanchester, (57 miles,) a point on the Hillsboro and Cincinnati road—united with the works I am describing.—Owing to the more difficult character of the work it has been necessary nevertheless, to expend more money thus far, on the eastern, than on the western division,

2. The opening hence to Cincinnati, forms a direct railway line almost as short as nature will admit, from the heart of this great provision-producing region, to the commercial centre of the west. Heretofore, the transit has been via the Ohio and Erie canal and the Ohio river, a distance of 165 miles when it could be traversed at all, (by permission of drought or ice.) The railroad distance is less than 100 miles—time $5\frac{1}{2}$ hours under present arrangements, to be reached to 4.—

You may well suppose, therefore, that the road is already doing a good business, both in freight and passengers—which is the fact.

3. It is by pushing the track laying some 32 miles eastward of this point, however, that the most marked benefit of the work, as a freight-carrier, remains to be demonstrated. That will open the line from the village of Charleston, Vinton county, through the northern portion of Jackson county, and middle of Ross, to Cincinnati, and the Ohio canal, at this place. Six new iron furnaces, and quite a number of old ones, running from 10 to 15 tons of pigs daily, each, await impatiently the track-laying to Charleston, in order to give this road their business. Even now, ox-teams form the furnaces, are arriving in Chillicothe with the metallic treasure, every few days, while much more of it seeks the Ohio river, waiting for a rise of water, while prices are going down. The M. & C. road will enable the furnace-men to regulate their prices according to their ability to produce.

Again, 27 miles east of this, the road strikes the coal fields. Bituminous coals, of remarkably fine qualities for furnace, forge or domestic purposes, abound in this region, in hills which jut up to the road, in many places. The owners of these mines are making preparations for coal digging on a scale commensurate with the wants of the market. These wants are likely to become clamorous and pressing, towards spring, from the fact that the low condition of the stream of the Ohio river these six months past, prevented any thing like an adequate supply of coal from reaching Cincinnati. The article is even now very high priced in that city.

At Charleston, (above named,) the Scioto and Hocking Valley road, (projected from Portsmouth, at the mouth of the Scioto, to Newark, the present southern terminus of the Sandusky and Mansfield road,) is intersected. The union of these two roads at Charleston, will enable the lines to compete with the Ohio river for the travel of Southern Ohio.

4. The M. & C. road has, of course, sympathized deeply with the works of similar character, during the late and pending money difficulties.—It has been fortunate, however, in the ability of its directory, as well as in the intrinsic value of its securities, based upon the condition and necessity of the work. Its favorable grades and curves, and superior weight and pattern of rail (Winslow's Compound T.) expressly fit the road for its great prospective business, the transportation of coal and iron; and its directness, East and West, in view of the important Philadelphia, Baltimore and St. Louis connexions, at its terminal points, and Southern and south-eastern communications along the line, point the work out, as perhaps the most promising unfinished line existing in the West.—It is these properties and qualities which have sustained the work while others of less intrinsic value have been obliged to suspend. These have secured to this road the countenance and co-operation of Philadelphia, Wheeling, the Pennsylvania Railroad Company, the counties and cities along the line, the \$150,000 subscription by the city of Cincinnati, and private subscriptions, making the aggregate subscribed capital some \$5,000,000.—These have given the work the prestige of success even among the cautious capitalists of Paris and London, who have, during the present autumn

purchased more liberally of the securities of this than of any other unfinished road in America.—These, during the past week, have placed the bonds of the Marietta company, in the hands of purchasers in your city, at 91 per cent., a price now accorded only to first class securities on great lines.

By a modification, recently, of the corps of officers, Noah L. Wilson, Esq., (a director from the beginning,) has been chosen President of the M. & C. R. Co.; W. S. Nye, Vice President; John Maderia, Treasurer; D. Putnam, Marietta, and A. B. Walker, Athens, Assistant Treasurers; and Seneca W. Ely, Secretary. The engineering department is unsurpassed in ability, consisting of John Waddle, Esq., (for twenty years a leading engineer on the State Works of Ohio,) C. Engineer; Sylvester Medbery, (well known in the west) consulting engineer; and Jacob Blickensderper, (just elected by 75,000 majority, to the State Board of Public Works,) Chief Engineer of the Eastern Division of the road.

I should have stated above, that the iron for the whole line, from Cincinnati to Wheeling has been purchased—enough of which has reached this point to extend into the mineral region above alluded to. Thus far, some \$200,000 have been expended in locomotives and road furniture.

Respectfully, yours,

J. P. R.

New Albany and Salem Railroad.

This company was originally organized under a law of the State of Indiana passed in 1842, authorizing private companies to take up and finish works which had been abandoned by the State in consequence of financial embarrassment. Among the works commenced was a McAdamized road from New Albany and Crawfordsville, in Montgomery County, but which was abandoned after having been graded to New Salem, 35 miles. In 1846, the Legislature passed a law authorizing such company as might be formed, to construct a railroad upon the line of the proposed McAdamized road. Under the above acts, the New Albany and Salem Company was organized. By subsequent acts the personal liability clause in the law of 1846 was repealed; and also the clause by which the State had reserved to itself the right to repeal, or amend the charter. The amendments also give the company authority to extend their road to any point, or points, within the State. The company are under no restrictions as to rate of tolls or profits to be received.

The work of construction on that portion of the road between New Albany and Salem was commenced in the spring of 1848, and the road opened to Salem in August, 1850. The second division from Salem to the East Fork of White River was put under contract in August, 1849, and opened to White River in May, 1852. On the first day of July, 1853, 173 miles of road had been completed; viz 67 miles between Lafayette and Michigan City; 28 between Crawfordsville and Lafayette, and 78 between New Albany and Bloomington. In September of the same year the entire division between Lafayette and Michigan City was opened for business; and on the 24th of June, the whole line of 288 miles. Under the charter which authorized the extension of the road to any part of the State, a road has been constructed from Michigan City to the State Line of Illinois, a distance of 40 miles, under the auspices of the Michigan

Central Railroad. As a consideration for the right to avail themselves of the above provision in the charter of the New Albany and Salem Railroad, the former subscribed \$500,000 to the stock of the latter, to be expended on that portion of the road between Michigan City and Lafayette, and have built and run that portion of the road from Michigan City to Chicago, which is only nominally a portion of the New Albany and Salem Railroad. The New Albany and Salem Company are also constructing a branch road from Gosport to Indianapolis, a distance of 28 miles.

The following is a statement of the financial condition of the company on the 20th of July, 1854, the date of the last annual report.

Ten per cent. mortgage bonds, payable \$100,000 annually from 1859 to 1864.....	\$500,000
Eight per cent. mortgage bonds, payable from 1864 to 1875.....	2,325,000
Seven per cent. mortgage bonds, payable in 1862.....	175,000
Seven per cent. mortgage bonds, payable in 1883.....	1,000,000
Floating debt.....	302,250

Total funded and floating debt.....	\$4,302,250
Capital stock paid up.....	2,387,900

Total amount of capital and debt.... \$6,690,150
Of the last issue of bonds, \$227,000 are reserved to pay interest.

The total cost of the road up to the same date has been as follows.

Locomotives.....	\$233,400 86
Freight and Passenger Cars.....	301,891 56
Depots and Water Stations.....	114,277 14
Engine Houses and Machinery.....	100,041 54
Real Estate.....	108,001 58
Interest on Stock and Bonds during construction.....	\$451,876 61
Less net earnings of Road.....	245,936 18
Discount on Bonds.....	205,931 43
Construction of Road, including grading, bridging, right of way, iron, ties, track-laying, &c.....	4,393,156 87
Engineering.....	26,090 38
Incidental expenses, officers salaries, &c.....	43,710 73
	\$6,034,524 59

The unexpended means of the Company, in addition to the proceeds of the sale of bonds reserved for the payment of interest, as stated above, is—

The bonds of Montgomery County, taken for a subscription of stock, and pledged as collateral security on \$175,000 of 7 per cent. bonds, sold by Crawfordsville and Wabash Railroad Company, previous to the consolidation of the two Companies.....	\$100,000 00
Balance due on stock subscriptions East and West.....	270,425 41
Real Estate on hand not necessary for use of Road.....	60,000 00
	\$430,425 41

Of the above amount, there will be available for the current year, collections on stock.....	211,000 00
Sales of Real Estate.....	10,000 00
To which may be added the net receipts of the road for the current 6 months.....	180,000 00

Total available means\$401,000 00

The receipts of the road for the six months ending June 30th, were, from

Freights.....	\$107,950 97
Passengers.....	98,422 24
Mail.....	5,759 55

\$212,132 76

Expenses, including fuel, oil, repairs of track and machinery, station and train service, &c.....	97,788 96
---	-----------

Net Receipts.....\$114,343 80

Progress of the Grand Trunk Railway.

The Grand Trunk Railway of Canada, as established by the several acts of the Provincial Parliament, consolidating various lines previously chartered, extends from the city of Portland, Maine, to Port Sarnia, C. W., at the foot of Lake Huron, on the West—with a branch line to Quebec, which line is to be extended Eastward as far as Trois Pistoles. The lines finished and under contract, are as follows:

Portland to Montreal.....	292 miles.
Quebec to Richmond.....	100 "
Quebec to Trois Pistoles.....	153 "
Montreal to Toronto.....	345 "
Toronto to Sarnia.....	172 "
Belleville to Peterboro.....	60 "

Total.....1,112 miles.

Of these two sections, that from Portland to Montreal is opened for business. The Quebec and Richmond section is about to be opened. The line from Montreal to Brockville, 125 miles, will be opened for traffic in September, 1855, and from Toronto to Stratford, 90 miles, Oct. 1st, 1855, from Toronto to Whitley, 38 miles, and from Quebec to St. Thomas, 40 miles, in the course of the same month, making 290 miles to be opened in the autumn of 1855, or 682 miles in all, including the Montreal and Portland, and Quebec and Richmond sections. In 1856, 197 additional miles will be opened, making an aggregate of 879 miles to be opened for traffic within two years from the present time. As to the remaining 233 miles the time for their completion is not determined.

These facts, and all other information contained in this article, are furnished us by Sir Cusack Roney, Managing Director of the Grand Trunk Railway, and are the same as stated in the testimony recently given by him in writing, to the Railway Committee of the Parliament of Canada.

The capital of the Grand Trunk Company, is £9,500,000 sterling, or \$46,075,000. The total amount subscribed to the Grand Trunk Railway in London in April, 1853, was £8,083,600. The remaining portion of the £9,500,000 consists of capital raised prior to the amalgamation, by the following Companies:

St. Lawrence and Atlantic Railroad shares.....	£246,100
Bonds of the Province.....	400,000
Other bonds.....	233,000

Total.....	£879,100
Quebec and Richmond shares.....	£305,000
Bonds.....	100,000

Total.....	£405,000
Toronto and Guelph shares.....	£132,300
	£132,300

Total.....	£1,416,400
Subscriptions in 1853.....	8,083,600

Total.....£9,500,000

The capital subscribed, consisted of stock £4,181,400, Company's bonds £2,090,700, Province Debentures £1,811,500.

Of this capital there has been paid, upon stock £883,156, Company's bonds £553,327, Provincial Debentures £735,417, or a total of £2,171,900, or \$10,533,715.

It may be proper in this connection to say, that since the foregoing statements were prepared, a further assessment of £2 10s. per share, payable

October 9, 1854, has been called in, which was very promptly paid, adding very largely to the amount of the Company's receipts, as above stated.

The contracts for the Grand Trunk Railway include also the building of the Victoria Bridge.—Taking these contracts by sections the prices are as follows:

The Victoria Bridge.....	£1,400,000
Montreal to Toronto, 345 miles.....	3,000,000
Belleville to Peterboro, 50 miles.....	400,000
Toronto to Sarnia, 172 miles.....	1,376,000
Quebec to Richmond, 100 miles.....	650,000
Quebec to Trois Pistoles, 153 miles....	1,224,000
Total.....	\$8,050,000

The contract for the Victoria Bridge provides that an additional £100,000 may be paid to the contractors, in case the Engineer in Chief of the Company shall, on the completion of the work, be satisfied that that additional sum should be paid to Messrs. Peto & Co., therefor.

The section from Toronto to Sarnia is under contract to Canadian contractors, Gzowski, Galt, Holton & McPherson. All other portions of the line including the Victoria Bridge, to the English contractors, Messrs. Peto, Brassey, Betts & Jackson.

There has been already expended, on the Victoria Bridge about.....	£150,000
Toronto and Montreal section.....	1,131,063
Quebec and Trois Pistoles section.....	165,350
Quebec and Richmond section about....	50,000
St. Lawrence and Atlantic section about.	315,000
Toronto and Sarnia section.....	576,578

The amount of money actually expended by the Grand Trunk Company, including the capital paid in on the Quebec and Richmond, and the St. Lawrence and Atlantic lines, which are now consolidated into it, is £3,721,900, or \$18,051,215. To this should be added the cost of the line from Portland to Island Pond amounting to about \$6,000,000 more, including the large expenditures in Portland for stations, wharf accommodations, &c., at the India St. Station.

The contracts for the various lines require them to be equal to any first class English Railway, and superior to any now known in use on this continent. The bridges are to be of masonry, or brick work, with iron tubes across the spans. All these tubes are on the plan of the well known Britannia Bridge across the Menai Straits in Wales. The stations and all other buildings, such as repair shops, &c., are to be of brick, or stone, covered with slates or metal. The contracts include a supply of engines, cars, both passenger and freight, as well as gravel cars, snow ploughs, repair shops, water houses, wood sheds, in short every article required for the efficient working of the railway. The only exception to the above is on the Quebec and Richmond section where wooden buildings are allowed.

Extensive as are the preparations for the transaction of business at Portland, they appear quite insignificant in comparison with those in progress at Montreal. The Company have purchased for their depot grounds at Point St. Charles over 100 acres in one extended flat or plain, upon which they are now erecting engine and car works, on a most extended scale, and upon which station houses for passengers and freight, are already in progress.

But the most imposing as well as the most attractive of all the works of the company, and, in fact the most observable object at Montreal, is the work already done on the Victoria Bridge. £200,000 will be expended upon it the present year, and it is intended to expend from £200,000 to £250,000 each year during its construction. All the preliminary arrangements for carrying out the work have been organized, and Pier No. 1, next to the north'n abutment, is finished. It is 90 feet long, 15 feet wide and 36 feet above the summer level of the river. No. 2 is progressing very satisfactorily.—The northern abutment, which is 242 feet long by 90 feet wide, is already brought nearly as high as

the winter level of the St. Lawrence, and is to be carried 34 feet above the bed of the river. From this abutment to the North shore of the St. Lawrence there is a solid stone embankment, faced in rough masonry, toward the current 1,200 feet in length, and is so far finished as to be occupied by a railroad over which the stone for the piers is now transported. The Titanic proportions of the works already executed, involuntarily excite the strongest emotions of wonder and admiration.

The bridge will consist of 25 spans or spaces for navigation between the twenty-four piers (exclusive of the two abutments) for the support of the tubes. The centre span will be 330 feet wide and each of the other spans will be 242 feet wide. The clear distance between the ordinary summer level of the St. Lawrence and the under surface of the centre tube is to be 60 feet, and the height diminishes towards either side, with a grade of 1 in 136 or 140 feet in the mile, so that the outer or river edge of each abutment the height is 36 feet above the summer level.

The bridge is so located as to be in full view from all parts of the city of Montreal, where it will always remain the greatest object of attraction to the pleasure tourist and the lover of art,—throwing far into the shade the most renowned of all the works of ancient and modern times—not excepting even the Pyramids of Egypt, the Parthenon of Athens, or the Roman Coliseum.—*State of Maine.*

Meeting of the Stockholders of the New Haven R. R.

At an adjourned meeting of the stockholders of the New York and New Haven R. R., held on the 7th instant at New Haven, the following resolutions, which were adopted by a stock vote of 7,635 to 4,381 shares will indicate the action of the meeting.

Whereas, It is apparent that to promote the prosperity and success of the New York and New Haven Railroad Company, its affairs should be conducted by Managers or Directors enjoying the full and entire confidence of the stockholders, and it is believed that the gentlemen at present holding the place of Directors do not possess that confidence believed to be so essential, therefore,

Resolved, That the Directors be, and they are hereby requested to form a new Board, by successive resignations and by filling vacancies, agreeable to the 6th section of the act of incorporation.

Resolved, That the following persons be, and they are hereby proposed as suitable persons to fill such vacancies, viz: James I. Roosevelt, New York; J. Phillips Phoenix, do.; Geo. W. Miller, New York; Dennis Kimberly, New Haven; Nath'l A. Bacon, do.; Moncure Robinson, Philadelphia; Wm. L. Lyon Greenwiche; Peter T. Homer, Boston; Wm. W. Billings, New London.

Resolved, That we approve of the course of the Directors in having submitted the question of liability to the eminent counsel, Messrs. Noyes and Wood, and we recommend said opinion as a safe guide for their future action, and that it would be unwise, inexpedient, and hazardous for this meeting, this corporation or its Directors, to attempt in any form to subject the Stockholders to a burden which neither the law nor equity impose upon them.

Resolved, That the Directors be requested to engage the services of Hon. Roger S. Baldwin, of New Haven, as associate counsel with Messrs. Noyes and Wood, to defend the corporation in all actions which may have been or may be brought against it.

The meeting was numerously attended, and the resolutions were adopted after a long and excited discussion.

The action of the stockholders cannot affect the question of the liability of the company on account of the over-issues. They cannot vote off their liabilities, neither could a majority, by vote, bind the company to an illegal act. If the over-

issues be strictly illegal, then any stockholder could enjoin the company against their assumption. The question of liability is one of fact, not of popular opinion, and no progress is made by conventions, or the resolutions of stockholders. The matter will have to be settled by the courts of law, and the sooner their decision is obtained, the better.

But the case is full of difficulties from the different relations that the holders of the fraudulent stock sustained toward Schuyler. The equities of an innocent purchaser at second hand may be very different from those who purchased direct from Schuyler. It may be decided that the offering for sale of two thousand shares, say, in one certificate, and by a man who for a long time had been an inveterate borrower, was calculated in itself to awaken suspicion that all was not right; and if taken under such circumstances it was at the peril of the buyer. All such questions may have to be considered, so that one decision may settle only a class of cases instead of the whole.

In view of this fact a compromise which should result in the fair thing to all parties would seem to be very desirable; otherwise the property of the company may be sacrificed to numerous and interminable law suits.

With regard to the solicited resignation of the directors; it is stated that they will not resign, at present, at least. We should say that a proper appreciation of their position before the public, taken in connection with their past history would have induced them to resign long ago. Just look at the facts of the case. Here is a road that has been grossly mismanaged for years, with substantially the same direction as at present. That both in the case of the Schuyler fraud, as well as in other matters, they are culpable to an extent, which in the opinion of many of our best lawyers, is sufficient to create a personal liability; there is no dispute. Look at a fact to which we recently called attention, their omission to make the customary report to the legislature for the past year. The incipient peculations of Schuyler were undoubtedly the reason why it was not made. Why did they not look into the matter, and compel him to make one. Had they done so, the fraud might have been discovered, or put a stop to. Will they answer this question?

Here is a palpable, tangible charge of misconduct. But no one, we presume, believes that they knew or cared how the company was managed. They had no pecuniary interest in the road to amount to anything. As far as the company were concerned, they were mere puppets of Schuyler, to enable him the better to play out his schemes. That such men after such a history, followed by such a catastrophe, should not take the first hint to clear out, is new proof of their want of a common appreciation of the duties of their position. They are at best but agents of the company unaccompanied by any interest that can constitute an apology for holding on.

Have not railroad companies a right to turn away incompetent or unfaithful agents at pleasure? If not, matters have come to a pretty pass. Did the directors sustain similar relations to an individual, the only notice they would have to quit, would be a *vis a turgis*, sufficient to remove them instantly both from their positions and responsibilities.

Notice to Contractors.

OFFICE OF THE ALA. & FLA. R. R. CO. OF ALABAMA.
Montgomery, Ala., Nov. 3d, 1854.

SEALED proposals for the Graduation, Masonry and Bridging of sixty (67) seven miles of the Ala. & Fla. Railroad of Alabama, extending from Montgomery to the junction of the Sepalgat and Persimon Creeks in Convent County will be received at the office of the Company until the first Monday in December next.

Plans, specifications and profiles will be ready for inspection on and after the 15th inst.

The work on the first 25 miles is light, and the time allowed for the completion of contracts on this portion of the line will be 12 months.

On the remainder of the line two years will be given.

The payments offered are $\frac{2}{3}$ in cash and $\frac{1}{3}$ in the capital stock of the Company.

The provision crop along the line has been abundant, the country is perfectly healthy and work of such inviting character both in profile and material is rarely offered.

46 3t. SAMUEL G. JONES, Chief Eng'r.

Iron Rolling Mill Property for Sale.

The particular attention of capitalists desiring to enter AT ONCE (WITHOUT THE DELAY of putting up new works,) into the manufacturing of Iron, is called to the following:

The mill is situated UPON TIDE WATER (and ACCESSIBLE at ALL SEASONS of the year for shipments) between New York and Philadelphia—Coal can be had at the very lowest rates—and in point of convenience and situation is perhaps SECOND to NONE in THE COUNTRY. In ADDITION to its PRESENT adaptation to the manufacture of MERCHANT AND BOILER IRON, it has machinery in operation for making WROUGHT IRON RAILROAD CHAINS AND SPIKES, and could readily be prepared for MAKING RAILS together WITH ALL THE advantages of a first-class establishment. It is well known that in the present prosperous condition of the business THE PROPERTY WILL PAY ITSELF IN ONE YEAR and the reason of the property being disposed of, is that the owner is engaged in a heavy business in the State of New York. A VERY LIBERAL SPECIAL charter may BE BOUGHT, under which the Mill can be worked, if wanted. It is needless to say more, as parties interested can obtain all information by applying to

J. WOOD & SON,
76 South 4th street, Philadelphia.

P. S.—A portion of the purchase money may remain on the property, or otherwise. 44. 4t.

THOS. M. CASH,
PHILADELPHIA RAILWAY AGENCY,
FOR THE PURCHASE OF ALL ARTICLES
required by
RAILROAD COMPANIES
ON COMMISSION.

Office No. 80 South Fourth Street, near Walnut,
PHILADELPHIA.

REFERENCES.

RICHARD NORRIS & SON, Locomotive Builders, Philadelphia.
WM. D. LEWIS, Esq., Pres't Catwissa R.R. Co., "
CHARLES H. FISHER, Esq., "
JOHN CALDWELL, Esq., Pres't S. Caro'a R.R. Co., Charleston.
J. PINCKNEY HEWELL, Esq., Pres't N. East'n R.R. Co., "

SEYMOUR, MORTON & CO.,
GENERAL RAILROAD AGENCY,

Office, Metropolitan Bank Building, No. 110 Broadway.
HAVE to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:
LOUISVILLE CITY BONDS, at 30 years.
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.
MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.
LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.
They are prepared to negotiate contracts for the construction and equipment of railroad in any part of the country, including furnishing corps of engineers and contractors, locomotive engines and cars, railroad bridges, McCollum's Patent, railroad iron, chairs, spikes, switch irons, &c., &c.

New York and Erie R. R.

On and after Wednesday, Sept. 20th, and until further notice

PASSENGER TRAINS
will leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a.m. for Buffalo.
DUNKIRK EXPRESS, at 6 a.m. for Dunkirk.
MAIL, at 8 1/2 a.m. for Dunkirk and Buffalo, and intermediate stations.

ROCKLAND PASSENGER, at 3 1/2 p.m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAY PASSENGER, at 4 p.m. for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5 1/2 p.m. for Dunkirk and Buffalo.
EMIGRANT, at 6 p.m. for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 5 1/2 p.m.
These Express Trains connect at Buffalo with first-class splendid Steamers on Lake Erie for all ports on the Lake; and at Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

D. C. McCALLUM, General Sup't.

For Sale.

By the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purposes, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
or, BRIDGES & BRO.,
64 Courtland st., New York.

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE
SOUTH AND WEST.

Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$15 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	16 00

An extra charge will be made for meals and state rooms on board the boats.
S. L. SPAFFORD,
27t General Sup't.

Faggotted Car and Engine Axles

FORGED BY RANSTEAD, DEARBORN & CO., BOSTON, Mass.

These Axles are drawn from the faggot entirely by the hammer, and are all warranted.

Boiler and Tank Rivets, Nuts and Washers; All Sizes of Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

Welded Wrought Iron Tubes.

THE subscribers having lately added to their Cumberland Nail and Iron Works an establishment for making Wrought Iron Tubes, are now prepared to supply the trade with tubes two to twelve feet in length, furnished with screws and ferrules on their ends, of the following sizes—inside diameter,
1/2, 3/4, 1, 1 1/4, 1 1/2 and 2 inches.

Warranted and fully proved, equal to the best Pipes manufactured.

All orders addressed to us will receive prompt attention, and liberal discounts from the list of prices will be allowed to the trade.

REEVES, BUCK & CO.,
No. 45 North Water Street, Philadelphia.
26.6m.

July 13, 1854.

Railroad Iron.

THE Undersigned, having made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton Works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchants Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

February 15, 1860.

COOPER & HEWITT
17 Burling Slip, New York.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,

Columbus, Ga., Sept. 5th, 1854.

SEALED PROPOSALS, will be received by the Undersigned at this office until the 1st day of December, for the clearing, graduation, Track-Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 180 miles.—The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work 5 1/2 miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two rivers will be crossed with the common pile bridging, with Truss Pivot draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The country is healthy, with no swamps after leaving the Tensas River; from Mobile to the river (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third ($\frac{1}{3}$) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common stock of the Road, and relying upon the earnings of the same for dividends; the balance ($\frac{1}{3}$) to be paid in the (.08) per cent. Convertible Bonds of the Company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus, Ga., Mobile, Ala., or in N. Y., at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding ($\frac{1}{4}$) the amount of the contract, for the timely and faithful completion of the same.

22 1/2 miles of the Road, from Girard west will be open for business the first of November, and 52 miles nine months thereafter. It is the intention to have the entire line of 245 miles open for business early in 1858.

St. 37.

GEO. S. RUNEY.

Railroad Iron.

500 TONS No. 1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,
99 and 101 John st.

N. B.—The above Iron constantly imported.

32 tf.

Ontario, Simcoe & Huron R.R.

CANADA.

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next, where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day.—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia, whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloohah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

For Sale.

A STATIONARY Engine having cylinders 13 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
[Jul. 14 29 tf.] or 74 Broadway, New York.

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and PASSENGER LOCOMOTIVES of different classes, with the most modern improvements,—

also MACHINISTS' TOOLS, especially adapted to Railroad Repair Shops, and to the construction of machinery generally. These Tools are of the most approved construction and consist in part of Engine Lathes, Hand Lathes, Vertical Drilling Lathes, and Planers of various sizes and lengths, Compound Planers, Shaping Machines, Slotting Machines, Bolt and Nut Machines, Gear Cutting Engines, Chucks, Compound Slide Rests, Machines for boring Crank Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c.

COTTON MACHINERY of all descriptions, BOILERS, SHAFTING and MILL WORK, CASTINGS, and all work usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Sup't, Lowell, Mass.
J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

WANTED.—To take charge of the sale or introduction of certain valuable **PATENTED MECHANICAL INVENTIONS**, a person who can furnish satisfactory evidence of character and ability, for such business.—Address, stating views as to remuneration, &c., L. P. C., Post Office, New York. 44 St.

NEW YORK AND ERIE RAILROAD LOAN.

—The Committee appointed to report in regard to the financial affairs of the New York and Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed proposals, to be opened on the 10th of January next, for the purchase of \$4,000,000 7 per cent. Bonds, redeemable in twenty years, with interest, coupons payable 1st February and 1st August.

And that for the purpose of gradually reducing the debt of the Company, the New York and Erie Railroad Company pledge themselves in said Bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of Trustees, to be by them invested, as well as the accruing interest on the investments, in the Bonds of the New York and Erie Railroad Company of the new issue, as long as they can be purchased at or under par. And that whenever the said Bonds of the new issue cannot be purchased at or under par, then the said Trustees to invest the said monthly payments and the accruing interest in any Bonds of the New York and Erie Railroad Company which can be purchased at or under par.

And whenever it shall be impossible to purchase any of the Bonds of the New York and Erie Railroad Company at or under par, then the said Trustees shall invest the said monthly payments and all accruing interest in such Bonds of the New York and Erie Railroad Company as can be purchased at the lowest rate.

And all Bonds on being purchased by said Trustees shall be canceled by writing or printing on the face "Held by the Sinking Fund of the New York and Erie Railroad Company," but that the interest warrants on said cancelled Bonds shall be collected by said Trustees, as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest or the conversion of convertible Bonds into Stock of this Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in said Trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to the Company.

And the Committee would further recommend that the Board of Directors adopt the following resolutions:

Whereas, The period has arrived when it is expedient and necessary to close the construction account of this Company, to be reopened only when the imperative necessity of the increasing traffic on the road, and the state of the finances

of the Company will render it perfectly evident that it is proper and justifiable to reopen it, so as to increase the present capacity of the Road.—Therefore

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after reimbursing the Income Bonds due 1st February next, be charged to transportation expenses.

Resolved, That as often as the Bonds purchased by the Sinking Fund amount to 10 per cent. on the Capital Stock, this Company will, upon receiving due authority from the Legislature of this State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in the daily papers, so that the public have cognizance of the future policy of the Company.

(Signed.)

CHARLES MORAN.
SHEPHERD KNAPP.
WILLIAM E. DODGE.
NELSON ROBINSON,
GEORGE F. TALMAN.

Special
Finance
Committee.

New York, Oct., 21, 1854.

Sealed proposals will be received at the office of the NEW YORK AND ERIE RAILROAD COMPANY in the City of New York, until the 10th of January, 1855, for the purchase of \$4,000,000 of the bonds of the Company, bearing 7 per cent. interest payable semi-annually on the 1st day of February and August, redeemable in twenty years.

The NEW YORK AND ERIE RAILROAD COMPANY pledge themselves in said bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And whenever it shall be impossible to purchase any of the bonds of the NEW YORK AND ERIE RAILROAD COMPANY at or under par, then the said trustees shall invest the said monthly payments and the accruing interest, in such bonds of the NEW YORK AND ERIE RAILROAD COMPANY as can be purchased at the lowest rates. And all bonds when purchased by the said trustees shall be cancelled by writing or printing on their face: "Held by the Sinking Fund of the NEW YORK AND ERIE RAILROAD COMPANY;" but the coupons on such cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the NEW YORK AND ERIE RAILROAD COMPANY, and the accruing interests, or the conversion of convertible bonds into stock of the Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease; and the trust vested in such Trustees be closed, and all cancelled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay 10 per cent. in cash on the notice of the acceptance of their bids; 20 per cent. on the 20th of January; 30 per cent. 1st February; 20 per cent. 15th February, and the balance on the 1st of March.

The Income Bonds of the NEW YORK AND ERIE RAILROAD COMPANY will be received in part payment at par, and the accrued interest till day of surrender to the Company.

The Directors of the NEW YORK AND ERIE RAILROAD COMPANY, in offering the present loan to the public beg leave to state that it will be amply sufficient to pay the Income Bonds redeemable on the 1st February next, and the entire present floating debt of the Company, as well

as to complete all the unfinished work now under way.

By a resolution of the Board of Directors, all future outlays of every kind beyond the proceeds of the present loan, will be charged to expense account, and paid from the income of the Company, after payment of the interest on the funded debt, and the monthly payment to the Sinking Fund.

After the negotiation of the present loan and the redemption of the Income Bonds, the position of the Company will be—

Stock	\$10,024,000
Bonds of 1867, First Mortgage	3,000,000
Bonds of 1859, Second Mortgage	4,000,000
Bonds of 1883, Third Mortgage	6,000,000
Bonds of 1862, Convertible	3,500,000
Bonds of 1871, Convertible	4,351,000
Bonds of 1875, present loan	4,000,000

Total

\$24,875,000
In the opinion of the Directors it is perfectly safe to estimate the gross earnings of the Road, for the coming year, at \$6,000,000, from which must be deducted:

Expenses 55 per cent.	\$3,300,000
Seven per cent. on debt \$24,851,000	1,739,570
Sinking Fund	420,000
	\$5,459,570

Net revenue equal to over 5 per cent. on stock applicable to cash dividends and contingencies

540,480
The Directors of the Company are confident these estimates will be fully realized. The gross receipts since the Road has been in operation to Dunkirk, have been for passengers and freight alone—
1851 to 1852 \$3,047,748 INCREASE.

1852 to 1853 4,138,424 \$1,690,676, say 35 1/2 per cent.

1853 to 1854 5,122,666 984,242, say 23 1/2 per cent.

The business of the road depending mainly on the local traffic, must inevitably increase in the same ratio as the population of the Counties through which it passes. In the opinion of the Superintendent, Mr. McCollum, the road in its present position and with its present equipment, can earn \$8,000,000. If the future increase in the receipts be estimated at only 15 per cent. per annum, which is not much over one-half of the average increase of the past the above utmost capacity of the road will be tested in 1858.

As to the running expenses, as they were only 53 1/2 per cent. in 1853 and 1854, there is every probability that with rigid economy and an increase in the traffic, they can be reduced to 50 per cent., but they have been estimated at 55 per cent., so as to leave ample margin for contingencies.

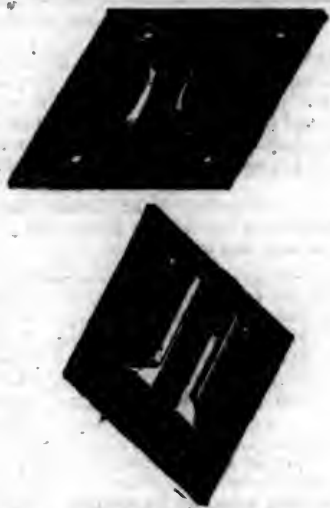
The effect of the monthly purchases by the Trustees, of the Bonds of the present issue on their market value, cannot fail to be immediate, and will insure to the original purchasers a certain profit within a moderate time; for whilst the amount outstanding will decrease each month, the absorption by the Sinking Fund will constantly increase by the accruing interest on the Bonds in the hands of the Trustees. In 8 1/2 years the Sinking Fund will absorb \$4,768,063, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among our most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie-place.

HOMER RAMSDALL, President.

NATHANIEL MARSH, Secretary.

New York, Oct. 23, 1854.



Patent Wrought Iron Railroad Chair.

THE undersigned are now prepared to manufacture their Patent Wrought Iron Railroad Chair, at the rate of fifteen tons per day. They are made exclusively from best Trenton Iron, which received the prize medal for strength at the World's Fair at London.

The patent is for the CHAIR itself—which is formed by raising the lip out of the plate sufficiently high to receive the rail. It is obvious that while the strain upon the lip is so slight as to remove all danger of its breaking, it becomes less the more tightly the lip is made to clasp the rail. The cheapness and durability of the chairs, and the facility with which the track can be adjusted, commend them to public favor.

SIZES AND PRICES.

A Chair 8 by 7 1/2 inches, 3-8 inch thick, cost 28 1/2 cents.	
" " " 7-10 " " " 33 "	
" " " 1-2 " " " 37 1/2 "	
" " " 5-8 " " " 47 "	

Other sizes are made to order at equivalent rates. Sample Chairs will be forwarded, free of charge, on application to
COOPER & HEWITT,
 17 Burling Slip, New York.
 December 1, 1852.

SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER
OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 25 Summer st., Philadelphia.

To Civil Engineers.

A GRADUATE of one of the best schools of Civil Engineering in Europe, lately returned to this country, wishes to connect himself with an Engineer of eminence and experience as assistant.—References unexceptionable as to qualifications and character.—Address Engineer, Box 3285. P. O., New York. 2t 45

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per lineal yard. For sale by

THEODORE DEHON,
 26 1/2 Broadway,
 New York.

Contracts made as above for Rail deliveries at English or American ports at lowest rates.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.
E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

ENGINEERS.

Atkinson, T. C.,
 Mining and Civil Engineer,
 Alexandria, Va.

Barnes, Oliver W.,
 Chief Eng. Pittsburg and Connellsville R.R. Co., Pittsburg, Pa.

Edward Boyle,
 Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York,
 Office 123 Chambers st.

Clement, Wm. H.,
 Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,
 Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
 Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
 Steam Marine and Railway Engineer,
 64 Broadway, New York.

Davidson, M. O.,
 Civil and Mining Engineer, Cumberland, Md.

C. Floyd-Jones.,
 Division Engineer 3d and 12th Divisions,
 ILLINOIS CENTRAL RAILROAD,
 Vandalia, Ill.

Gay, Edward F.,
 Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
 Syracuse and Binghamton Railroad, Syracuse, N. Y.

Gzowski, Mr.,
 St. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,
 New Orleans and Nashville R.R., Aberdeen, Miss.

Holcomb, F. P.
 Ohio Eng. Augusta and Waynesboro, and Savannah and P. ne-
 cola Railroads, Marthasville, Macon Co., Ga.

S. W. Hill,
 Mining Engineer and Surveyor, Eagle River,
 Lake Superior.

Huger, T. P.,
 Northeastern Railroad, Charleston, S. C.

D. Mitchell, Jr.,
 Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley
 Railroads, Pittsburg, Pa.

Samuel McElroy,
 Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,
 Sackets Harbor and Saratoga R. R., 24 William St., N. Y.

Miller, J. F.,
 Buffalo and Conchocton Valley Railroad, Avon, N. Y.

Morris, Ellwood,
 Engineer and Agent DAUPHIN & SUSQUEHANNA CO.,
 Cold Spring, Lebanon Co., Pennsylvania.

Septimus Norris,
 Civil and Mechanical Engineer, Philadelphia.

Saml. & G. H. Nott,
 Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,
 Civil Engineer, Office 73 South 4th st., Philadelphia.

Prichard, M. B.,
 East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
 Chief Engineer Alleghany Valley Railroad, Pittsburg, Pa.

Shanly, Walter,
 Chief Engineer Bytown and Prescott Railway,
 Prescott, Canada.

Roberts, Solomon W.,
 Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
 South Side Railroad, Virginia.

Schlatter, Charles L.,
 Civil Engineer, Ogdensburg, N. Y.

Straughan, J. R.,
 Ohio and Indiana Railroad, Bucyrus, Ohio.

Steele, J. Dutton,
 Pottstown, Pa.

Charles B. Stuart,
 Civil Engineer, New York.

Edward W. Serrell,
 Civil Engineer, 157 Broadway, New York.

P. J. Tournadre,
 Chief Engineer Vicksburg, Shreveport and Texas R.R.,
 Vicksburg, Miss.

Trautwine, John C.,
 Civil Engineer and Architect, Philadelphia.

Troost, Lewis,
 Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,
 Chief Engineer, Susquehanna Railroad, Harrisbu Pa.

Whipple, S.,
 Civil Engineer and Bridge Builder, Albany, N. Y.

Wm. J. Young
 HAS removed his Engineering and Surveying Instrument Man-
 ufactory to No. 33. North Seventh Street, Philadelphia.

BUSINESS CARDS.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES AND LEVELS
 on a new principle, with Fraunhofer Munich Glasses, Sur-
 veyors' Compasses, Barometers, Chains, Drawing Instruments,
 etc., all of the best quality and workmanship, for sale at unus-
 ually low prices by **E. & G. W. BLUNT,**
 New York, Dec. 1, 1851. No. 179 Water street.

James Herron, Civil Engineer,
 OF THE UNITED STATES NAVY YARD,
 PENSACOLA, FLORIDA,

PATENTEE OF THE
HERRON RAILROAD TRACK
 Models of this Track, on the most improved plan may be
 seen at the Engineer's office of the New York & Erie Railroad.

W. G. ATKINSON,
 MINING ENGINEER, SURVEYOR AND DRAFTSMAN
 CUMBERLAND, MARYLAND,

Will attend to business in his Profession in the Coal Region and
 vicinity.

REFERENCES:

Jerry Coates, Esq., New York.
Col. Wm. Young, do.
Jas. W. McCulloch, Esq., late U. S. Treas., Washington.
 June 26, 1853.

To Engineers, Architects and Draughtsmen.

THE undersigned begs respectfully to inform Gentlemen in
 the above professions, that he has constantly on hand a
 great variety of instruments for Field and Office use.

JAS. PRENTICE,
 Feb. 9, 1853. 1 Chamber street, New York.

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings
 Private Dwellings, Stores and Factories, manufactured by
 the subscriber in great variety. Orders by Mail, or left at the
 Factory on Causeway street, will be promptly attended to.
HENRY N. HOOPER & CO.
 Boston, March 23, 1850. 6ml3

H. SAWYER

(of the late firm of SAWYER & HOBBY),
 Manufacturer of Transits and Levels,
 HAS removed to Union Place near Warburton Av., Yorkers
 N. Y.

Sewall & Crehore

CIVIL ENGINEERS,
ST. PAUL MINNESOTA.
JOSEPH S. SEWALL. CHAR. FRD. CREHORE.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the
 best of Steel, and Warrant every variety of Edge Tools for
 the New England, Southern and Western trade, including Axes,
 Adzes, Picks and Chisels; all of which are constantly kept on
 hand at their Warehouse, 53 Kilby street, Boston.
 December 18, 1852. **WM. A. RAMPSON, Agent.**

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 47.]

SATURDAY, NOVEMBER 25, 1854.

[WHOLE No. 971; VOL. XXVII.]

Mr. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

Railway Policy and Railway Morals . . .	745, 738
Funded Debt of Philadelphia	742
Produce of Gold in California	742
Journal of R. R. Law	742
Pacific R. R. of Missouri	743
New Roads Opened	744
Earnings of R. R. for October	744
Iron Bridges	747
Watertown and Rome R. R.	748
Coinage at the U. S. Mint	748
Ohio and Indiana R. R.	748
Ohio Central R. R.	748
Illinois Central R. R.	749
Eastern R. R.	749

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, November 25, 1854.

Railway Morals and Railway Policy.

(From the October Number of the Edinburgh Review.)

Believers in the intrinsic virtues of political forms might draw an instructive lesson from the politics of our railways. If there needs a conclusive proof that the most carefully framed constitutions are worthless, unless they be embodiments of the popular character,—if there needs a conclusive proof that governmental arrangements in advance of the time will inevitably lapse back into congruity with the time; such proof may be found over and over again repeated in the current history of joint-stock enterprises. As devised by Act of Parliament, the administrations of our public companies are almost purely democratic. The representative system is carried out in them with scarcely a check. Shareholders elect their directors, directors, their chairman; there is an annual retirement of a certain proportion of the board, giving facilities for superseding them; and, by this means, the whole ruling body may be changed in periods varying from three to five years. Yet, not only are the characteristic vices of our political state reproduced in each of these mercantile corporations—some even in an intenser degree,—but the very form of government, whilst remaining nominally democratic, is substantially so remedied as to become a miniature of our national constitution. The direction, ceasing to fulfil its theory as a deliberative body whose members possess like powers, falls under the control of some one member of superior cunning, will, or wealth, to whom the

majority become so subordinate, that the decision on every question depends on the course he takes. Proprietors, instead of constantly exercising their franchise, allow it to become, on ordinary occasions, a dead letter; retiring directors are so habitually re-elected without opposition, and have so great a power of insuring their own re-election when opposed, that the board becomes practically a close body; and it is only when the misgovernment grows extreme enough to produce a revolutionary agitation among the shareholders that any change can be effected. Thus a mixture of the monarchic, the aristocratic, and the democratic elements is repeated with such modifications only as the circumstances involve. The modes of action, too, are substantially the same; save in this, that the copy outruns the original.—Threats of resignation, which ministries hold out in extreme cases, are commonly made by railway boards to stave-off a disagreeable inquiry. By no means regarding themselves as servants of the shareholders, directors rebel against dictation from them; and frequently construe any amendment they may urge into a vote of want of confidence. At half-yearly meetings, disagreeable criticisms and objections are met by the chairman with the remark, that if the shareholders cannot trust his colleagues and himself, they had better choose others. With most, this assumption of offended dignity tells; and, under the fear that the company's interests may suffer from any disturbance, measures quite at variance with the wishes of the proprietary are allowed to be carried. The parallel holds yet further. If it be true of national administrations, that those in office count on the support of all public employees, it is not less true of incorporated companies, that the directors are greatly aided by their officials in their struggles with shareholders. If, in times past, there have been ministries who spent public money to secure party ends, there are, in times present, railway boards who use the funds of the shareholders to defeat the shareholders. Nay, even in detail, the similarity is maintained. Like their prototype, joint-stock companies have their expensive election contests, managed by election committees, employing election agents; they have their canvassing with its sundry illegitimate accompaniments; they have their occasional manufacture of fraudulent votes. And, as a general result, that class-legislation, which, until of late, was habitually charged against statesmen, is now habitually displayed in the proceedings of these trading associations; constituted though they are on purely representative principles.

These last assertions will probably surprise not a few. The general public who have little or no direct interest in railway matters,—who never see a railway journal, and who skip the reports of half-yearly meetings that appear in the daily

papers—are under the impression that dishonesties akin to those gigantic ones so notorious during the mania, are no longer committed. They do not forget the doings of stags and stock-jobbers and runaway directors; they remember how men of straw held shares amounting to 100,000*l.* and even 200,000*l.*; how numerous directorates were filled by the same persons—one having a seat at twenty-three boards; how subscription contracts were made up with signatures bought at 10*s.* and 4*s.* each, and porters and errand boys made themselves liable for 20,000*l.* and 40,000*l.* apiece. They can narrate how boards kept their books in cypher; made false registries, and refrained from recording their proceedings in minute books; how in one company half a million of capital was down to unreal names; how in another, directors bought for account more shares than they issued, and so forced up the price; and how in many others, they repurchased for the company their own shares, paying themselves with the depositors' money. But, though more or less aware of the iniquities that have been practised, the generality think of them solely as the accompaniments of bubble schemes. More recent enterprises they know to have been *bona fide* ones, mostly carried out by established companies: and knowing this they do not suspect that in the getting up of branch lines and extensions, there are chicaneries near akin to those of Capel Court, and quite as disastrous in their ultimate results. Associating the ideas of wealth and respectability, and habitually using respectability as synonymous with morality, it seems to them incredible, that many of the large capitalists and men of station who administer railway affairs should be guilty of indirectly enriching themselves at the expense of their constituents. True, they occasionally meet with a law report, disclosing some enormous fraud, or read a "Times" leader, characterising directorial acts in terms that are held libellous; but they regard the cases thus brought to light as entirely exceptional; and, under that feeling of loyalty which ever idealises men in authority, they constantly tend towards the conviction, if not that directors can do no wrong, yet that they are very unlikely to do wrong;

A history of railway management and railway intrigue, however, would quickly undeceive them. In such a history, the doings of projectors and the mysteries of the share-market would occupy less space than the analysis of the multiform dishonesties that have been committed since 1845, and the genesis of that elaborate system of tactics by which companies are betrayed into ruinous undertakings that benefit the few at the cost of the many: Such a history would not only have to detail the doings of the personage famed "for making things pleasant;" nor would it have merely to add the misdeeds of his colleagues; but it would have to de-

scribe the kindred corruptness of other railway administrations. From the published report of an investigation committee, it would be shown how, not many years since, the directors of one of our lines allotted among themselves 15,000 new shares then at a premium in the market,—how to pay the deposits on these shares they used the company's funds,—how one of their number thus accommodated himself in meeting both deposits and calls to the extent of more than 80,000%. We should also read in it of directors who made loans to themselves out of the company's floating balances at a low rate of interest, when the market rate was high; and who paid themselves larger salaries than those assigned; entering the difference in an obscure corner of the ledger under the head of "petty disbursements." There would be documents showing that the proxies enabling boards to carry contested measures have, in some cases, been obtained by garbled statements; and, again, that proxies given for a specific purpose have been used for other purposes. One of our companies would be proved to have projected a line, serving as a feeder, for which it obtained shareholders by offering a guaranteed dividend, which, though understood by the public to be unconditional, was really contingent upon a condition not likely to be fulfilled. The managers of another company would be convicted of having carried party measures by the aid of preference shares standing in the names of station masters; and of being aided by the proxies of the secretary's children too young to write.

That the corruptions here glanced at are not mere exceptional evils, but result from some deep-seated vice ramifying throughout our system of railway government, is sufficiently proved by the simple fact that, notwithstanding the depreciation of railway dividends produced by the extension policy, that policy has been year after year continued. Does any tradesman, who, having enlarged his shop, finds a proportionate diminution in his rate or profit, go on, even under the stimulus of competition, making further enlargements at the cost of further diminutions? Does any merchant, however strong his desire to take away an opponent's markets, make successive mortgages on his capital, and pay for each sum thus raised a higher interest than he gains by trading with it? Yet this course, so absurd that no one would insult a private individual by asking him to follow it, is the course which railway boards at meeting after meeting persuade their clients to pursue.—Since 1845, when the dividends of our leading lines ranged from 8 to 10 per cent., they have, notwithstanding an ever-growing traffic, fallen from 10 per cent. to 5, from 8 to 4, from 9 to 3½; and yet the system of extensions, leases and guarantees, notoriously the cause of this, has been year by year persevered in. Is there not something needing explanation here—something more than the world is allowed to see? If there be any one to whom the broad fact of obstinate persistence in unprofitable expenditure does not alone carry the conviction that sinister influences are at work, let him read the seductive statements by which shareholders are led to authorise new projects, and then compare these with the proved results. Let him look at the estimated cost, anticipated traffic, and calculated dividend on some proposed branch line; let him observe how the proprietary, before whom the scheme is laid, are induced to approve it as promising a fair return; and then let him contemplate, in the resulting depreciation of stock, the extent of their loss. Is there any avoiding the inference? Clearly, railway shareholders can never have habitually voted for new undertakings which they knew would be injurious to them. Every one knows, however, that these new undertakings have almost uniformly proved injurious to them. Obviously, therefore, railway shareholders have been continually deluded by false representations. The only possible escape from this conclusion is in the belief that boards and their officers have been themselves deceived; and were the discrepancies between promises and results occasional only, there would be grounds for this lenient interpre-

tation. But to suppose that a railway government should repeatedly make such mistakes, and yet gain no wisdom from disastrous experiences—should, after a dozen disappointments, again mislead half-yearly meetings by bright anticipations into dark realities, and all in good faith—taxes credulity somewhat too far. Even then were there no demonstrated iniquities to rouse suspicion, we think that the continuous depreciation in the value of railway stock, the determined perseverance of boards in the policy that has produced this depreciation, and the proved untruth of the statements by which they have induced shareholders to sanction this policy, would of themselves suffice to show the essential viciousness of railway administration.

That the existing evils, and the causes conspiring to produce them, may be the better understood, it will be useful briefly to glance at the mode in which the system of extensions grew up. Earliest among the incentives to it was a feeling of rivalry. Even whilst yet their main lines were unmade, a contest for supremacy arose between our two greatest companies. This presently generated a confirmed antagonism; and the same impulse which in election contests and the like has frequently led to the squandering of a fortune to gain a victory, has largely aided to make each of these great rivals submit to repeated sacrifices rather than be beaten. Feuds of like nature are in other cases perpetually prompting boards to make aggressions on each others' territory—every attack on the one side leading to a reprisal on the other; and so violent is the hostility occasionally produced, that directors might be pointed out whose votes are wholly determined by the desire to be revenged on their opponents. Among the first methods by which leading companies sought to strengthen themselves and weaken their competitors, was the leasing or purchase of subordinate neighboring lines. Of course those to whom overtures were made, obtained bids from both sides; and it naturally resulted that the first sales thus affected, being at prices far above the real values, brought great profits to the sellers. What resulted? After a few recurrences of this proceeding, it was clearly perceived by quick-witted speculators, that the making of lines so circumstanced as to be bid for by competing companies, would be a lucrative policy. Shareholders who had once pocketed these large and easy-made gains, were eager to repeat the process, and cast about for districts in which it might be done. Even the directors of the companies by whom these high prices were given, were under the temptation to aid in this; for it was manifest to them that by obtaining a larger interest in any such new undertaking than they possessed in the purchasing company, and by using their influence in the purchasing company to obtain a good price or guarantee for the new undertaking, a great advantage would be gained; and that this motive has been largely operative, railway history abundantly proves.—Once commenced, sundry other influences conspired to stimulate this making of feeders and extensions. The non-closure of capital accounts rendered possible the "cooking" of dividends, which was at one period carried to a great extent. Under various incentives, speculative and other, expenditure that should have been charged against revenue, was charged against capital; works and rolling stock were allowed to go unrepaired or insufficient additions made to them, by which means the current expenses were rendered delusively small; long-credit agreements with contractors, permitted sundry disbursements that had been virtually made to be kept out of the accounts; and thus the net returns were made to appear much greater than they really were. Naturally the new undertakings put before the moneyed world by companies whose stock and dividends had been thus artificially raised, were received with proportionate favor. Under the prestige of their parentage their shares came out at high premiums, bringing large profits to the projectors. The hint was soon taken; and it presently became an established policy, under the auspices of a prosperity either

real or mock, to get up these subsidiary lines—"calves" as they were called in the slang of the initiated—and to traffic in the premiums their shares commanded. Meanwhile had been developing a secondary set of influences which also contributed to foster unwise enterprises; namely, the business interests of the lawyers, engineers, contractors, and others directly or indirectly employed in railway construction. The methods of projecting and carrying new schemes could not fail, in the course of years, to become familiar to all persons concerned; and there could not fail to grow up amongst them a concerted system of tactics calculated to achieve their common end. Thus partly from the jealousy of rival boards, partly from the avarice of shareholders in purchased lines, partly from the dishonest schemings of directors, partly from the machinations of those whose business it is to carry out the projects legally authorised, partly, and perhaps mainly, from the delusive appearance of prosperity maintained by many established companies, there came the wild speculations of 1844 and 1845. The consequent disasters, whilst they pretty well destroyed the last of these incentives, left the rest much as they were. [Though the painfully undeceived public have ceased to aid as they once did, the various private interests that had grown up, have since been working together as before; have developed their system of co-operation into still more complex and subtle forms; and are even now daily thrusting unfortunate shareholders into losing undertakings.]

Before proceeding to analyse the existing state of things, however, we would have it clearly understood that we do not suppose those to be implicated to be *on the average* morally lower than the community at large. Men taken at random from any class would, in all probability, behave much in the same way when placed in like positions.—There are unquestionably directors grossly dishonest: unquestionably also there are others whose standard of honor is far higher than that of most persons; and for the remainder, they are, we doubt not, as good as the mass. Of the engineers, parliamentary agents, lawyers, contractors and various others concerned, it may be admitted that though daily custom has induced laxity of principle, yet they would be harshly judged were the transactions that may be recorded against them used as measures. Those who do not see how, in these involved affairs, the most inequitable results may be wrought out by men not correspondingly flagitious, will readily do so on considering all the conditions. In the first place there is the familiar fact that the corporate conscience is ever inferior to the individual conscience—that a body of men will commit as a joint act, that which every individual of them would shrink from did he feel personally responsible. And it may be remarked that not only is the conduct of a corporate body thus comparatively lax, but also the conduct towards one. There is ever a more or less distinct perception that a broad-backed company scarcely feels what would be ruinous to a private person; and this perception is in constant operation on all railway administrators and their employees—on all contractors, landowners, and others concerned; leading them to show a graspingness and want of principle foreign to their general behaviour.—Again, the indirectness and remoteness of the evils produced greatly weaken the restraints on wrong doing. Men's actions are proximately produced by mental representations of the results to be anticipated, and the decisions come to largely depend on the vividness with which these results can be imagined. A consequence, good or bad, that is immediate, and clearly apprehended, influences conduct far more potently than a consequence that has to be traced through a long chain of causation, and as eventually reached, is not a particular and readily conceivable one, but a general and vaguely conceivable one. Hence in railway affairs a questionable share transaction, an exorbitant charge, a proceeding which brings great individual advantage without apparently injuring any one, but which, even if analysed in its ultimate re-

sults, can but very circuitously affect unknown persons living no one knows where, may be brought home to men who, could the results be embodied before them, would be shocked at the cruel injustices they had committed—men who in their private business where the results can be thus embodied, are sufficiently equitable. Further, it requires to be noted that most of these great delinquencies are wrought out, not by the extreme dishonesty of any one man or group of men, but by the combined self-interest of many men and groups of men, whose minor delinquencies are cumulative. Much as a story which, passing from mouth to mouth, and receiving a slight exaggeration at each repetition, comes around to the original narrator in a form scarcely to be recognized; so, by a little improper influence on the part of landowners, a little favoritism on the part of members of Parliament, a little intriguing of lawyers, a little manoeuvring by contractors and engineers, a little self-seeking on the part of directors, a little under statement of estimates and over statement of traffic, a little magnifying of the evils to be avoided and the benefits to be gained—it happens that shareholders are betrayed into ruinous undertakings by grossly untrue representations, without any one being guilty of more than a small portion of the fraud. Bearing in mind, then, the comparative laxity of the corporative conscience; the diffusion and remoteness of the evils which malpractices produce; and the composite origin of these malpractices; it becomes possible to understand how, in railway affairs, gigantic dishonesties can be perpetrated by men, who, on the average, are little if at all below the generality in moral character.

With this preliminary mitigation we proceed to detail the various illegitimate agencies by which these seemingly insane extensions and this continual squandering of shareholders' property are brought about.

Conspicuous amongst these is the self-interest of landowners. Once the greatest obstacle to railway enterprise, owners of estates have of late years been amongst its chief promoters. Since the Liverpool and Manchester line was first defeated by landed opposition, and succeeded with its second bill only by keeping out of sight of all mansions, and avoiding the game preserves—since the time when the London and Birmingham Company, after seeing their project thrown out by a committee of peers, who ignored the evidence, had to "conciliate" their antagonists by raising the estimate for land from £250,000 to £750,000—since the time when Parliamentary counsel bolstered up a groundless resistance by the flimsiest and absurdest excuses, even to reproaching engineers with "having trodden down the corn of widows" and "destroyed the strawberry beds of gardeners"—since then, a marked change of policy has taken place. Nor was it in human nature that it should be otherwise. When it became known that railway companies commonly paid for "land and compensation," sums varying from £4,000 to £8,000 per mile; that men were indemnified for supposed injury to their property by sums so inordinate that the greater part has been returned by the heir as conscience money; that in one case, £120,000 was given for land said to be worth but £5,000—when it was bruited abroad that large bonuses in the shape of preference shares and the like were granted to buy off opposition—when it came to be an established fact that estates are greatly enhanced in value by the proximity of railways—it is not surprising that country gentlemen should have become active supporters of schemes to which they were once the bitterest enemies. On considering the many temptations, we shall see nothing wonderful in the fact, that in 1845 they were zealous provisional committeemen; nor in the fact, that their influence as promoters enabled them to get good terms for their own acres; nor in the fact that they committed various acts sufficiently reprehensible from any but their own point of view. If we are told of squires soliciting interviews with the engineer of a projected railway; prompting him to take their side of the country; promising

support if he did, and threatening opposition if he did not; dictating the course to be followed through their domains; and hinting that a fair price would be expected: we are simply told of the special modes in which certain private interests show themselves. If we hear of an extensive landowner using his influence as chairman of a board of directors to project a branch running for many miles through his own estate, and putting his company to the cost of a Parliamentary contest to carry this line; we hear only of that which was likely to occur under such circumstances. If we find now before the public, a line proposed by a large capitalist, serving amongst other ends to effect desirable communications with his property; and the estimates for which line, though considered by the engineering world insufficient, are alleged by him to be ample: we have but a marked case of the distorted representations which under such conditions self-interest is sure to engender. If we discover of this or that scheme that it was got up by the local nobility and gentry—that they employed to make the survey, a third-rate engineer, who was ready, in anticipation of future benefit, to do this for his bare expenses—that principals and agents wearied the directors of an adjacent trunk line to take up their project; threatened that if they did not their great rival would; alarmed them into concession; asked for a contribution to their expenses; and would have gained all these points but for shareholders' resistance—we do but discover the organized tactics which in process of time naturally grow up under such stimuli. It is not that these facts are particularly remarkable. From the gross instance of the land owner who asked £8,000 for that which he eventually accepted £80 for, down to the every day instances of influence used to get railway accommodation for the neighborhood, the acts of the landed class are simply manifestations of the average character acting under special conditions. All that it now behoves us to notice is, that we have here a large and powerful body whose interests are ever pressing on railway extension irrespective of its intrinsic propriety.

The great change in the attitude of the Legislature towards railways from "the extreme of determined rejection or dilatory acquiescence to the opposite extreme of unlimited concession," was simultaneous with the change above described. It could not well fail to be so. Supplying, as the land-owning community does so large a portion of both Houses of Parliament, it necessarily follows that the play of private interests seen in the first, repeats itself in the last under modified forms, and complicated by other influences. Remembering the extent to which legislators were themselves involved in the speculations of the mania, it is scarcely probable that they should since have been free from personal bias. A return proved, that in 1845 there were 167 members of Parliament, whose names were on the register of new companies for sums varying from £291,000 downwards. This supporters of new projects boasted of the number of votes they could command in the House. Members were personally canvassed, and peers were solicited. It was publicly complained in the upper chamber that "it was nearly impossible to bring together a jury, some members of which were not interested in the railway they were about to assess." Doubtless this state of things was in a degree exceptional; and there has since been not only a diminution of the temptations, but a marked increase of equitable feeling. Still it is not to be expected that private interests should cease to act. It is not to be expected that a land owner who, out of Parliament exerts himself to get a railway from his district, should, when in Parliament, not employ the power his new position gives him to the same end. It is not to be expected that the accumulation of such individual actions should leave the legislative policy unchanged. Hence the fact, that the influence once used to throw out railway bills is now used to carry them. Hence the fact, that railway committees no longer require a good traffic case to be made

out in justification of the powers asked. Hence the fact, that the directors and chairmen of boards with seats in the House of Commons, are induced to pledge their companies to carry out extensions. But it is not only, nor indeed mainly, from directly personal motives that legislators have of late years unduly fostered railway enterprises. Indirect motives of various kinds have been largely operative. The wish to satisfy constituents has been one. Inhabitants of unaccommodated districts are naturally urgent with their representatives to help them to a line. Such representatives are not unfrequently conscious that their next elections may possibly turn upon their successful response to this appeal. Even when there is no popular pressure, there is the pressure of their leading political supporters; of large landholders whom it will not do to neglect; of the magistracy with whom it is needful to be on good terms; of local lawyers, important as electioneering friends, to whom a railway always brings business. Thus without having any immediately private ends, members of Parliament are often almost coerced into pressing forward schemes which from a national, or from a shareholders' point of view, are very unwise ones. Moreover, it requires in fairness to be said, that possessed, as most members of Parliament are, with the belief that all railway making is nationally beneficial, there exist in their minds few or no reasons for resisting the influences brought to bear on them. True, shareholders may be injured; but that is their own affair:—the public will be better served; constituents will be satisfied; friends will be pleased; perhaps personal ends gained; and under some or all of these incentives affirmative votes are readily given. Thus from the Legislature also there has of late years proceeded a factitious stimulus to railway extensions.

From Parliament to Parliamentary agents, and the general body of lawyers concerned in railway enterprise, is a ready transition. With these, the getting up and carrying of new lines and branches is a matter of business. Whoever studies the process of obtaining a railway act; or considers the number of legal transactions involved in the execution of railway works; or notes the large sums that figure in half-yearly reports under the head of "law charges," will at once see how strong are the temptations which a new project holds out to solicitors, conveyancers, and counsel. It has been shown that in past years Parliamentary expenses have varied from £650 to £3,000 per mile; of which a large proportion has gone into the pockets of the profession. In one contest £57,000 was spent amongst six counsel and twenty solicitors. At a late meeting of one of our companies it was pointed out that the sum expended in legal and parliamentary expenses during nine years had reached £180,000; or had averaged £53,000 a year. With these and scores of like facts before them, it would indeed be strange did not so acute a body of men as lawyers use vigorous efforts and sagacious devices to promote fresh enterprises.—Indeed, if we look back at the proceedings of 1845 we shall suspect, not only that lawyers are still the active promoters of fresh enterprises, but often the originators of them. Most persons have heard how in those excited times the projects daily announced were very frequently set afloat by local solicitors—how these looked over maps to see where plausible lines could be sketched out—how they canvassed the local gentry to obtain provisional committeemen—how they agreed with engineers to make trial surveys—how, under the wild hopes of the day, they found little difficulty in forming companies—and how most of them managed to get as far as the Committee on Standing Orders, if no farther. Remembering all this, and that those who were successful are not likely to have forgotten their cunning, but rather to have yearly exercised and increased it, we may naturally expect to find railway lawyers amongst the most influential of the many parties conspiring to urge railway proprietaries into disastrous undertakings: and we shall not be deceived. To a great extent they are in league with engineers.—

From the proposal to the completion of a new line the lawyer and the engineer work together; and their interests are throughout identical.—Whilst the one makes the survey, the other prepares the book of reference. The parish plans which the one gets ready, the other deposits.—The notices to owners and occupiers which the one fills in, the other serves upon those concerned. Throughout, there is continual consultation between them as to the dealing with local opposition and the obtaining of local support. In the getting up of their case for Parliament they necessarily act in concert. Whilst before committee the one gets his ten guineas per day for attending to give evidence, the other makes profits on all the complicated transactions which the carrying a bill involves. During the execution of the works they are in frequent correspondence; and alike profit by any expansion of the undertaking. Thus there naturally arises in each the perception that in aiding the other he is aiding himself; and gradually, as in course of years, the proceedings come to be often repeated, and a perfect familiarity with railway politics gained, there naturally grows up a well-organized system of co-operation between them—a system rendered the more efficient by the wealth and influence which each has year by year accumulated.

Amongst the manoeuvres employed by railway solicitors thus established and thus helped, not the least remarkable is that of getting their own nominees elected as directors. Startling though it may seem, it is yet a fact, which we state on good authority, that there are puppet directors who vote for this or that at the instigation of the company's lawyer, whose creatures they are. The obtaining of such tools is by no means difficult. Vacancies are about to occur in the directorate. Almost always there are sundry men over whom a solicitor, conducting the extensive law business of a railway, has considerable power; not only connexions and friends, but clients and persons to whom, in his legal capacity, he can do great benefit or great injury. He selects the most suitable of these; giving the preference, if other things are equal, to one living in the country near the line. On opening the matter to him, he points out the sundry advantages attendant on a director's position—the free pass and the many facilities it gives; the annual £100 or so which the office brings; the honor and influence accruing; the opportunities for profitable investment that are likely to occur; and so forth. Should ignorance of railway affairs be raised as an objection, the tempter, in whose eyes this ignorance is a chief recommendation, replies that he shall always be at hand to guide his votes. Should non-possession of a due amount of the company's stock be pleaded, the tempter readily meets the difficulty by offering himself to furnish the needful qualification. Thus incited and flattered, and, perhaps conscious that it would be dangerous to refuse, the intended puppet allows himself to be put in nomination; and as it is the general habit of half-yearly meetings, unless under great indignation, to elect any one proposed to them by those in authority, the nomination is successful. On subsequent occasions this proceeding can, of course, be repeated; and thus the company's legal agent and those leagued with him may command sufficient votes to turn the scale in their own favor.

Then to the personal interest and power of the head solicitor have to be added those of the local ones, with whom he is in constant business intercourse. They, too, profit by new undertakings; they, therefore, are commonly urgent in pressing them forwards. Acting in co-operation with their chief, they form a local staff of great influence.—They are active canvassers; they stimulate and concentrate the feeling of their districts; they encourage rivalry with other lines; they alarm local shareholders with rumors of threatened competition. When the question of extension or non-extension comes to a division, they collect proxies for the extension party. They bring pressure to bear on their shareholding clients and relatives.—Nay, so deep an interest do they feel in the deci-

sion as occasionally to manufacture votes with the view of influencing it. We have before us the case of a local solicitor, who, before the special meeting called to adopt or reject a contemplated branch, transferred portions of his own shares into the names of sundry members of his family, and so multiplied his seventeen votes into forty-one; all of which he recorded for the adoption of the new scheme.

Greatly as engineers are interested in railway enterprise, it is to be expected that they should be active, and not very scrupulous promoters of it. To illustrate the vigor and skill with which they further new undertakings, a few facts may be cited. Not far from London, and lying between two lines of railway, is an estate that has been purchased by one of our engineers. He has since obtained Acts for branches to both of the adjacent lines. One of these branches he has leased to the company whose line it joins; and he has tried to do the like with the other, but as yet without success. Even as it is, however, he is considered to have doubled the value of his property. To press forward extensions by the companies with which they are connected, they occasionally go to great lengths. Not long since, at a half-yearly meeting, certain projects which the proprietary had already once rejected, were again brought forward by two engineers who attended in their capacity of shareholders. Though known to be personally interested, one of them moved and the other seconded, that certain proposals from the promoters of these schemes be considered without delay by the directors. The motion was carried; the directors approved the proposals; and again, the proprietors negatived them. A third time a like effort was made; a third time a conflict arose; and within a few days of the special meeting at which the division was to take place, one of these engineers circulated amongst the shareholders a pamphlet denying the allegations of the dissentient party and making counter-statements, which it was then too late to meet—nay, he did more; he employed agents to canvass the shareholders for proxies in support of the new undertaking, and was obliged to confess as much when charged with it at the meeting.

Turn we now to contractors. Railway enterprise has given to this class of men a gigantic development, not only in respect of numbers, but in respect of the vast wealth to which some of them have attained. Originally, half a dozen miles of earthwork, fencing, and bridges, was as much as any single contractor undertook. Of late years, however, it has become common for one man to engage to construct an entire railway, and deliver it over to the company in a fit condition for opening. Great capital is necessarily required for this; great profits are made by it; and the fortunes accumulated, in course of time, have been such, that sundry contractors are described as being each able to make a railway at his own expense. But they are as insatiate as millionaires in general; and so long as they continue in business at all, are, in some sort, forced to provide new undertakings to keep their plant employed. As may be imagined, enormous stocks of working materials are needed; many hundreds of earth-waggons, and of horses; many miles of temporary rails and sleepers; some half dozen locomotive engines, and several fixed ones; innumerable tools; besides vast stores of timber, bricks, stone, rails, and other constituents of permanent works, that have been bought on speculation. To keep the capital thus invested, and also a large staff of employees, standing idle, entails loss, partly negative, partly positive. The great contractor, therefore, is alike under a pressing stimulus to get fresh work, and enabled by his wealth to do this.—Hence the not unfrequent inversion of the old arrangement under which companies and engineers employed contractors, into an arrangement under which contractors employ engineers and form companies. Many recent undertakings have been thus set on foot. The most gigantic project which private enterprise has dared—a project, of which, unfortunately, there is now no hope—orig-

inated with a distinguished contracting firm. In some cases, as in this chief one, this mode of procedure may be considered as advantageous; but in a far greater proportion of cases its results are disastrous. Interested in promoting railway extensions even in a greater degree than engineers and lawyers, contractors frequently co-operate with these either as agents or as coadjutors.—Lines are fostered into being, which it is known from the very beginning, will not pay. Of late it has become common for landowners, merchants, and others personally interested, who, under the belief that their indirect gains will compensate for their meagre dividends, have themselves raised part of the capital for a local railway, but who cannot raise the rest—it has become common for such to make an agreement with a wealthy contractor to construct the line, taking in part payment a portion of the shares, amounting to, perhaps, a third of the whole, and to charge for his work according to a schedule of prices to be thereafter settled between himself and the engineer.—By this last clause the contractor renders himself secure. It would never answer his purpose to take part payment in shares likely to return some 2½ per cent., unless he compensated himself by unusually high profits; and this subsequent settlement of prices with one whose interests, like his own, are wrapped up in the prosecution of the undertaking, insures him high profits. Meanwhile, the facts that all the capital has been subscribed and the line contracted for, unduly raise the public estimate of the scheme; the shares are quoted at much above their true worth; unwary persons buy; the contractor from time to time parts with his moiety at fair prices; and the new shareholders ultimately find themselves part owners of a railway which, unprofitable as it originally promised to be, has been made yet more unprofitable by expensiveness of construction. Nor are these the only cases in which contractors gain after this fashion. They do the like with undertakings of their own projecting. To obtain acts for these, they sign the subscription contracts for large amounts; knowing, that in the way above described, they can always make it answer to do this. So general had the practice latterly become as to attract the attention of committees. As was remarked by a personage noted for his complicity in these transactions: 'Committees are getting too knowing; they won't stand that dodge now.'—Nevertheless, the thing is still done under a disguised form: Though contractors no longer enter their own names on subscription lists for thousands of shares, yet they effect the same end by making nominal holders of their foremen and others; themselves being the real ones.

Of directorial misdoings some samples have already been referred to; and more might be added. Besides those arising from directly personal aims are sundry others. One of these is, the still increasing community between railway boards and the House of Commons. There are eighty-one directors sitting in Parliament; and though many of these take little or no part in the affairs of their respective railways, many of them are the most active members of the boards to which they belong. We have but to look back a few years and the unanimity with which companies adopted the policy of getting themselves represented in the Legislature, to see that the furtherance of their respective interests—especially in cases of competition—was the incentive. How well this policy is understood amongst the initiated may be judged from the fact that gentlemen are now in some cases elected on boards, simply because they are members of Parliament. Of course, this implies that railway legislation is effected by a complicated play of private influences; and that these influences generally work towards the facilitation of new enterprises is tolerably obvious. It naturally happens that directors whose companies are not opposed, exchange good offices. It naturally happens that they can more or less smooth the way of their annual batch of new bills through committees. Moreover, directors sitting in the House of Commons not only facilitate the passing

of the schemes in which they are interested, but are solicited to undertake further schemes by those around them. It is a very common sense conclusion that representatives of small towns and country districts needing railway accommodation, who are daily thrown in contact with the chairman of a company capable of giving this accommodation, will not neglect the opportunity of furthering their ends. It is a very common sense conclusion that by hospitalities, by favours, by flattery, by the many means used to bias men, they will seek to obtain his good offices. And it is an equally common sense conclusion that in many cases they will succeed—that by some complication of persuasions and temptations, they will swerve him from his calmer judgment; and so introduce into the company he represents, influences at variance with its welfare.

Under some motives, however—whether those of direct self-interest, of private favour, or of antagonistic feeling, need not here be discussed—it is certain that directors are constantly committing their constituents to unwise enterprises; and that they frequently employ unjustifiable means for either eluding or overcoming their opposition.—Shareholders occasionally find that their directors have given to Parliament, pledges of extension much exceeding what they were authorised to give; and are then persuaded that they are bound to endorse the promises made for them by their agents. In some cases, among the misleading statements laid before shareholders to obtain their consent to a new project, will be found an abstract of the earnings of a previously executed branch or feeder to which the proposed one bears some analogy. These earnings are shown (not always without 'cooking') to be tolerably good and improving; and it is argued that the new project having like prospects offers a fair investment.—Meanwhile, it is not stated that the capital for this previously executed branch or feeder was raised on debentures or by guaranteed shares, at a higher rate of interest than the dividend pays; it is not stated that as the capital for this further undertaking will be raised on like terms, the annual interest on debt will swallow up more than the annual revenue; and thus unsuspecting shareholders—some unacquainted with the company's antecedents, some unable to understand its complicated accounts—give their proxies or raise their hands for new works which will tell with disastrous effect on their future dividends.

To complete the sketch, it requires to say something on the management of board meetings and meetings of the shareholders. For the first—their decisions are affected by various manoeuvres. Of course, on the fit occasions there is a whipping up of those favourable to any project which it is desired to carry. Were this all, there would be little to complain of; but something more than this is done. There are boards in which it is the practice to defeat opposition by stratagem. The extension party having summoned their forces for the occasion, and having entered on the minutes of business a notice worded with the requisite vagueness, shape their proceedings according to the character of the meeting. Should their antagonists muster more strongly than was expected, this vaguely-worded notice serves simply to introduce some general statement or further information concerning the project named in it; and the matter is passed over as though nothing more had been meant. On the contrary, should the proportion of the two sides be more favourable, the notice becomes the basis of a definite motion committing the board to some important procedure. If due precautions have been taken, the motion is passed; and once passed, those who, if present, would have resisted it have no remedy; for in railway government there is no 'second reading,' much less a third. So determined and so unscrupulous are the efforts sometimes made by the stronger party to overcome and silence their antagonists, that when a contested measure, carried by them at the board, has to go before a general meeting for confirmation, they have even been known to pass a resolution that their

dissentient colleagues shall not address the proprietary!

How, at half-yearly and special meetings, shareholders should be so readily led by boards, even after repeated experience of their untrustworthiness, seems at first sight difficult to understand. The mystery disappears, however, on inquiry.—Very frequently contested measures are carried quite against the sense of the meetings before which they are laid, by means of the large number of proxies previously collected by the directors. These proxies are obtained mostly from proprietors scattered everywhere throughout the kingdom, who are very generally weak enough to sign the first document sent to them. Then of those present when the question is brought to an issue, not many dare to attempt a speech; of those who dare, but few are clearheaded enough to see the full bearings of the measure they are about to vote upon; and such as can see it are often prevented by nervousness from doing justice to the views they hold. Moreover, it must be borne in mind that the party displaying antagonism to the board are apt to be regarded by their brother proprietors with more or less reprobation. Unless the misconduct of the governing body has been very glaring or very recent, there ever arises in the mass a prejudice against all playing the part of an opposition. They are condemned as noisy, and factious, and obstructive; and often only by very determined courage avoid being put down. Besides these negative reasons for the general inefficiency of shareholders' resistance, there are sundry positive ones. As writes a Member of Parliament who has been an extensive holder of stock in many companies from the first days of railway enterprise:—"My large and long acquaintance with Railway Companies' affairs enables me to say that a large majority of shareholders trust wholly to their directors, having little or no information, nor caring to have any opinion of their own: . . . some others, better informed but timid, are afraid, by opposing the directors, of causing a depreciation of the value of their stock in the market, and are more alarmed at the prospect of this temporary depreciation than at the permanent loss entailed on the company by the useless and therefore unprofitable outlay of additional capital: . . . others again, believing that the impending permanent evil is inevitable, resolve on the spot to sell out immediately, and to keep up the prices of their shares, also give their support to the directors." Thus, from the lack of organisation and efficiency amongst those

who express their opposition, and from the timidity and double-facedness of those who do not, it happens that extremely unwise projects are carried by large majorities. Nor is this all. The tactics of the aggressive party are commonly as skilful as those of their antagonists are bungling. In the first place the chairman, who is very generally the chief promoter of the contested scheme, has it in his power to favour those who take his own side, and to throw difficulties in the way of opponents; and this he not unfrequently does to a great extent—refusing to hear, putting down on some plea of breach of order, brow-beating, even using threats.* It generally turns out too, that whether intentionally or not, some of the most important motions are postponed until nearly the close of the meeting, when the greater proportion of the shareholders are gone: large money-votes, extensive powers, unlimited permits to directors to take, in certain matters, 'such steps as in their judgment they may deem most expedient,'—these and the like are left to be hurried over during the last half hour, when the tired and impatient remnant will no longer listen to objectors; and when those who have personal ends to serve by outstaying the rest carry every thing their own way. Indeed, in some instances, the arrangements are such as almost to insure the meeting becoming a pro-extension one towards the end.—The result is brought about thus:—A certain portion of the general body of proprietors are also proprietors of some subordinate work—some branch line, or steam-boats, or canal, which the company has purchased or leased; and as holders of guaranteed stock, probably having capital to take up such further stock if they can get it, they are naturally favorable to projects that are to be executed on the preference-share system. These hold their meeting for the declaration of dividend, &c., as soon as the meeting of the com-

*We may remark in passing that the practice of making the chairman of the board also chairman of the half-yearly meetings, is a very injudicious one. The directors are the servants of the proprietary, and meet them from time to time to render an account of their stewardship. That the chief of these servants whose proceedings are about to be examined should himself act as chief of the jury, is absurd. Obviously the business of each meeting should be conducted by some one independently chosen for the purpose, as the Speaker is chosen by the House of Commons.

				Number of Votes
	£50 Preference Shares, with £5 paid up.	Additional Stock or Shares.	Recorded Stock at the Poll as held.	Total scored actual for the Capital Extension. paid up. sion.
The Company's solicitor.....	£500.....	£7,500 stock, and 100 £50 shares, with £42 10s. paid up.....	£75,650	£18,140 188
Ditto in joint account with another.....	778.....	None.....	.....	.....
The solicitor's partner.....	60.....	None.....	3,000	300 20
The Company's engineer.....	150.....	None.....	7,500	750 33
The engineer's partner.....	1,354.....	£4,266 stock.....	71,966	11,036 161
One of the Company's parliamentary counsel.....	200.....	£1,000 stock.....	11,000	2,000 40
Another ditto, ditto.....	125.....	£200 stock.....	6,450	825 30
Local solicitor for the proposed extension.....	7.....	None.....	350	35 7
The Company's contractor for permanent way.....	347.....	£52,833.....	70,183	54,568 158
The Company's conveyancer.....	1,003.....	£333 stock.....	50,483	5,348 118
The Company's furniture printer.....	35.....	£10,000 stock.....	11,750	10,175 41
The Company's surveyor.....	360.....	£1,250 stock.....	19,250	3,050 56
The Company's architect.....	217.....	£14,916 stock; 119 £50 shares, with £42 10s. paid up; and 13 £40 shares, with £34 paid up.....	32,230	20,416 82
One of the Company's carriers.....	17.....	£833 stock.....	1,633	918 14
The Company's bankers:				
One partner.....	—.....	—.....	33,666	32,366 90
Another partner.....	—.....	—.....	2,500	2,500 18
Ditto in joint account with another... ..	—.....	—.....	1,000	850 12

pany at large has been dissolved, and in the same room. Hence it happens that being kept together by prospect of subsequent business, they gradually, towards the close of the general meeting, come to form the majority of those present; and the ordinary shareholders who have been patient enough to stay, are outvoted by those having interests quite distinct from their own—quite at variance with the welfare of the company.

And here this allusion to the preference share system introduces us to a fact which may fitly close this detail of private interests and questionable practices—a fact serving at once to illustrate the subtlety and concert of railway officialism, and the power it can exert. That this fact can be fully appreciated it must be premised that though preference shares do not usually carry votes they are sometimes specially endowed with them; and further, that they occasionally remain unpaid up until the expiration of a time after which no further calls can be legally made. In the case in question a large number of £50 preference shares had thus long stood with but £5 paid. Those desirous of promoting extensions, &c., had here a fine opportunity of getting great power in the company at small cost; and as we shall see they duly availed themselves of it. Already had their party twice tried to thrust the proprietary into a new undertaking of great magnitude. Twice had they entailed on them an expensive and harassing contest. A third time, notwithstanding a professed relinquishment of it, they brought forward substantially the same scheme, and were defeated only by a small majority. The following extracts from the division lists we take from the statement of one of the scrutineers.

To this list some seven or eight of the Company's tradesmen, similarly armed might, be added; raising the amount of the almost factitious shares held by functionaries to about 5200, and increasing the number of votes commanded by them from its present total of 1,068 to upwards of 1,100. If now we separate the £380,000 which these gentlemen bring to bear against their brother shareholders, into real and nominal, we find that whilst not quite £120,000 of it is *bona fide* property invested, the remaining £260,000 is nine parts shadow and one part substance. And thus it results that by virtue of certain stock actually representing but £26,000, these lawyers, engineers, counsel, conveyancers, contractors, bankers, and others interested in the promotion of new schemes, outweigh more than a quarter of a million of the real capital held by shareholders whom these schemes will injure.

(To be continued.)

Funded Debt of the City of Philadelphia.

The funded debt of the Consolidated City is as follows:

Amount of loans issued to Railroad Companies are, viz:

Pennsylvania Railroad	\$5,000,000
North Penna "	1,400,000
Hempfield "	600,000
Sunbury & Erie "	1,200,000
North Western "	75,000

Making in the aggregate \$8,275,900

Amount of funded debt in the city in which the above loans to Railroad Companies are included, is viz:

Amount of five per cent bonds	\$3,552,512 84
" " six " "	12,060,274 73

\$15,612,787 57

To which amount may be hereafter added the following, viz:

Balance of subscription to Sunbury and Erie Railroad not yet issued	\$1,050,000 00
Ditto to North Western Railroad, not yet issued	675,000 00

Amounting in the aggregate to...\$17,337,787 57.

The California Gold Product.

In regard to the gold resources of the State, the mines, notwithstanding the apprehensions frequently expressed abroad, continue to yield their treasure in unabated abundance, and at no time, perhaps, since their discovery, have the prospects been more cheering. It is true that in many localities, where the surface diggings have been exhausted, successful mining requires more labor, and a greater investment of capital than formerly. The surface diggings which "pay" are comparatively few, and the great bulk of the gold hereafter to find its way into the market, will probably be obtained either by tunneling the mountains or fluming their streams. Still, many of the old localities, long since thought to be exhausted, are found since the introduction of water by ditching, to reward well the labor bestowed upon them. Such works as those referred to are invaluable to the mining regions, and it is to be regretted that so little well-directed attention has heretofore been bestowed upon them. Some counties, recently involved in debt, have been redeemed through their operation, and are now prosperous. El Dorado may be mentioned as an instance. Eighteen months ago, her stock could scarcely be sold for thirty cents on the dollar. She is now out of debt and has some \$20,000 surplus in her treasury.—She owns about \$2,000,000 in ditch property.

The introduction of water has opened a new field of operations on the hill sides, and mountains are being washed from their summits to their bases. The present is the commencement of the season for such enterprises, the river beds being relinquished, in consequence of the rise of the waters.

It is doubtful whether the numbers of persons employed in mining are as great as in former years, but at no previous period, perhaps, was individual gain so great as at present. By combining labor, and investing capital in extensive works, miners have become more provident, and save more of their earnings than was formerly the case when they depended on individual enterprise. Moreover, the cost of the means of living is scarcely one-sixth of what it was a few years ago, and hence the miner is enabled to retain a much larger share of his earnings now than then.

By the following tabular statements, it will be seen that, so far as we may judge from the amount of treasure shipped by steamers from this port, or deposited in the Branch Mint for coinage, the yield of the mines the present year, up to the 1st inst, exceeds that of a corresponding period of last year about half a million of dollars. It is probable, however, that much dust, the result of the present year's labor, yet remains in the hands of the miners, as occasions to part with it have been far less pressing during the present than any previous year.

The following have been the semi-monthly shipments, for the first nine months of 1853 and 1854 respectively.

	1853.	1854.
January 16.....	\$1,744,399	\$1,729,532
February 1.....	2,430,000	1,755,488
February 15.....	2,990,559	3,081,729
March 1.....	2,066,338	1,549,647
March 16.....	2,419,400	1,816,624
April 1.....	2,234,308	2,206,789
April 16.....	2,596,560	2,312,424
May 1.....	2,130,738	2,149,681
May 16.....	2,611,086	2,347,444
June 1.....	2,605,583	3,683,615
June 16.....	2,223,870	9,245,213
July 1.....	2,004,149	2,067,876
July 16.....	2,128,052	1,966,953
August 1.....	2,462,488	2,149,318
August 16.....	2,248,094	2,155,898
September 1.....	2,416,709	2,383,551
September 16.....	2,193,864	1,951,456
October 1.....	2,559,636	2,301,738
Total.....	\$41,860,732	\$37,858,076

Decrease the present year.....\$4,002,656

To offset this deficiency, we have the following

amounts deposited at the Branch Mint in this city for coinage, since that establishment went into operation in last April:

GOLD DEPOSITED FOR COINAGE.

	Gross weight.	Value.
April.....	oz.36,393 09	\$667,991 25
May.....	43,388 22	776,322 60
June.....	22,852 76	437,629 02
July.....	25,104 72	467,775 10
August.....	56,580 62	1,042,511 95
September.....	52,049 25	1,124,938 42
Total.....	oz.248,369 66	\$4,527,168 34

By adding, therefore, the amount deposited for coinage, to the amount manifested by steamers, we have \$42,385,244, or \$524,512 more than was shipped during a corresponding period of 1853.

Journal of Railroad Law.

WHEN DOES THE TRANSIT CEASE IN REGARD TO GOODS CARRIED BY RAILROAD?

This question has been of late lucidly discussed and we think, wisely determined by the Supreme Court of Massachusetts in the case of the *Norway Plains Company vs. the Boston & Maine Railroad Company*, 1st Gray, 263. And to promulgate correct rules in regard to the liabilities of carriers by railroad, a mode of transportation in some respects like the transportation by water craft, and in other respects like that by wagons, is one of the most important duties which have recently devolved upon Courts of Justice.

The facts of the above-mentioned case were briefly as follows.

Defendants received of plaintiffs at Rochester, N. H. packages to be transported to Boston. Receipts were signed dated respectively October 31st, and November 9th, 1850, acknowledging the receipt of goods; "numbered and worked as the above which the company promises to forward by its railroad and deliver to, or order at its depot in Boston." The train in which the goods described in the last mentioned receipt were sent usually arrives in Boston at about half past twelve o'clock; but on the day of its arrival Nov. 4th, did not reach the depot until a later time. Amos, plaintiff's truckman, went for the goods and waited from about two until about three and a-half in the afternoon and was then informed that they were in the hindmost car, which was then on the wharf and inaccessible to trucks, and could not then be delivered; and no time of delivery was suggested; and he being satisfied that they could not be seasonably reached on that day, departed proposing to call again on the next morning. For the purpose of timely transportation it was necessary for the truckman to goods by 4 P. M. Before the morning of Nov. 5th, the depot and all that it contained was burnt up. There seemed to have been no unreasonable delay in unloading cars. The only notice usually given to Amos, the truckman, of the arrival of goods was derived from an inspection of the way bill which was shown to him. The goods described in the receipts last-mentioned were put on the platform in a fit state for delivery before 5 P. M., and the depot gates closed according to the usual course. But after Amos left, the cars were put in such a position outside of the depot, that the said goods could have been taken directly from them before 4½ P. M., had Amos remained. The goods described in the receipt first-mentioned arrived on Saturday, 2nd of November and were ready for delivery at least as early as Monday morning, November 4th, of

which Amos had knowledge, although he did not see fit to remove them.

The Court held in this case, that railroad companies as common carriers are liable for any loss which may befall the goods carried, during the transit, except those arising from an act of God or the public enemy. The loss in the case in question did not arise from an act of God, in a legal sense, nor from the negligence of defendants. If at the time of the loss, they were liable as common carriers they must abide by the loss, because as common carriers they were bound as insurers, to take the risk of fire, not caused by the act of God, and in such case no question of negligence can arise. If on the contrary, the transit was at an end, and defendants had ceased to have possession of the goods as common carriers, and held them merely as warehouse men, then they were only responsible for the care and diligence reasonably due from those who stand in that position.

The question then was, when did the transit terminate?

Actual delivery by the carrier to the consignee cannot be required in respect to transportation by railroads. Merchandise transported by railroad can only be conveyed along one line and at fixed stations and termini. The rule in regard to ships is thus stated in 5 T. R. 597. "A ship trading from one port to another has not the means of carrying the goods on land: and according to the established course of trade a delivery on the usual wharf is such a delivery as will discharge the carrier." And the case of railroad transportation is analogous.

From the nature and usages of the business of transportation by railroad companies, the Court was of opinion, that the duty which they assume is that they will carry goods safely to the place of destination, and there discharge them on the platform, and then and there deliver them to the party entitled to receive them, if he is there ready to receive them; or otherwise to keep them safely a reasonable time. This seemed to be the spirit of the agreement unless modified by the parties.

The freight paid, covers the temporary storage as well as carriage. Thus railroad carriers incur two distinct liabilities that of common carriers, and that of warehouse keepers. It might be said that railroad companies need not deliver to consignees goods carried by the former; or it might be said that delivery by themselves as common carriers to themselves as keepers for hire is a delivery which discharges their liability as common carriers. In accordance with this doctrine is the case of *Thomas vs. the Boston and Providence Railroad* in Met. 472. And that the same company may under one and the same contract incur distinct duties and be liable to different degrees of responsibility is shown by *Garside vs. Trent & M. Nav. Co.* 4. T. R. 581. *Hyde vs. the same Company* 5. T. R. 389. *Van Sautvord vs. St. John* 6. Hill 157. *McHenry vs. P. W. & B. R. Co.* 4. Harrington 448.

Thus the liabilities of common carriers are duly enforced and the safety of goods duly secured. Many cases might be cited in support of this rule. The following were deemed sufficient. *Rome vs. Rechford and Taunton* 83. *M. vs. Webb* ib. 443.

It had been argued that the defendants' liability as common carriers continued until they had

notice to consignees of the arrival of their goods. But special notice to consignees would seem be nearly impossible. And in this case plaintiff's agent, Amos, had notice of the arrival of the goods.

In fine, the Court were of opinion that railroad companies which transport goods for hire, and deposit them in their warehouses without additional charge until the party entitled has a reasonable time to take them away, are not liable as common carriers for the loss of the goods by fire, without negligence on their part, after the goods have been placed in the warehouse, but are only liable as warehouse men, and for the want of ordinary care, although the party entitled had no opportunity to remove the goods before the fire.

LIMITING A COMMON CARRIER'S LIABILITY.

Enos S. Preston sued Adams & Co., for the loss of a package of five-franc pieces, two hundred in number, left at their office in New York, to be transported to Brooklyn, Conn. The package was left as an ordinary package, and nothing was said by the person who left it as to its contents or value. A receipt was given for it in the usual form, signed by a clerk of the Company. The action was brought to the county court for the county of Windham, Connecticut, and the declaration consisted of four counts, each on a contract to carry the parcel safely and securely, and safely and securely to deliver it, &c. There was a count added for money had and received. The cause was tried on the general issue.

The plaintiff offered in evidence the deposition of the individual who left the parcel to be transported, with the aforesaid receipt, given by the defendants for the property.

The defendants objected to the admission of this evidence, on the ground that the declaration set forth an absolute contract to carry safely and deliver safely, at all events, whereas the evidence proved a conditional contract by which the defendants were under certain circumstances to be exonerated from all liability to the plaintiff. The Court overruled the objection and admitted the evidence.

The defendants also claimed that the plaintiff could not, in any event, recover more than \$50, the amount mentioned in the receipt as the sum to which damages should in the absence of notice be limited, and prayed the court so to charge the jury. The court omitted so to charge the jury but charged that if the jury found for the plaintiff they might find the whole value.

At the last August term of the County Court the jury found a verdict for the plaintiff, damages \$200. To reverse that decision, a writ of error was brought to the Supreme Court at the October term. Five causes of error were assigned, and the cause was argued by Foster for Adams & Co., and by Welch and Tyler for Preston. The following is the opinion of the Court:

ADAMS & Co. vs. ENOS PRESTON—Writ of error—*Elisworth J.*—I have no doubt that a common carrier can, if the employer will assent to it, limit his responsibility to any fair and reasonable extent, and to the extent claimed in this case by the plaintiffs in error, in the receipt given by them. Nor have I any doubt, if the plaintiff below choose to introduce the receipt as evidence to make out his case, it must, the whole of it, be taken together. The nature, construction and effect of that entire writing is a question of law to the court, and it fully proves a limited undertaking, just so far as it proves any undertaking at all.

Assuming that the defendants below made only a limited agreement to carry, the first error assigned is valid, because the deposition and receipt did not tend to prove any material fact involved in the cause of action stated.

The fourth and fifth errors are fatal, for I hold the agreement is complete and binding, that without notice the property shall not be held to be over \$50.

I find there is manifest error. The plaintiff below can and should sue on the written contract as made.

PARTNERSHIP BETWEEN COMMON CARRIERS.

The following is a late decision of our Common Pleas:

Birdsall agt. N. J. Railroad and Transportation Co.

Where two companies divide profits and fares, and furnish cars and crates, and servants for joint use, they are partners in the particular transaction; and an action is sustainable against one of the companies for an injury occasioned by the negligence of the servants employed by either of them in the business of the joint concern. Judgment affirmed, with costs.

LIABILITY FOR AN AGREEMENT TO USE A PATENT RIGHT.

U. S. Circuit Court—District of New York.

George E. Sellers vs. The Panama Railroad Co.—This suit was brought to recover damages for the breach of a contract. The plaintiff is the inventor and patentee of an improved locomotive for surmounting heavy grades. In 1850 the Panama Railroad Co., having in view a surface road across the Isthmus, negotiated with the plaintiff for the use of his patent. His machines were tested on a little railway built for the purpose at the expense of the Company, and proved satisfactory. Thereupon an agreement was made, as he alleges, that he should oversee the construction of four locomotives of his patent, and such other work as might be called for, for which he was to receive a salary of \$3,500 a year: that the company agreed to take his patent and give to him an opportunity of testing his locomotives on their road, and if his locomotives should be able to overcome grades of 275 feet, and curves of 300 feet radius, he was to have 100 shares or \$10,000 of the capital stock of the company. Under this agreement the plaintiff went on, oversaw the building of the locomotives, &c., and received his salary. But the Company afterwards determined to build a road having no higher grades than 80 feet, and consequently did not use the plaintiff's machines, and they say that they did not agree that they would use them, or to give him the \$10,000 of the stock unless they did use them. The stock was proved to be worth 77 or 78 per cent.

Verdict in favor of the plaintiff for \$8,633 33, including interest.

Pacific Railroad of Texas.

Every body, we suppose, has heard of the great Pacific Railroad scheme of Texas, to which that State was to give unnumbered acres of her soil—providing always the road be built. The aspirants for this scheme, and its perquisites, are the Hon. R. J. Walker and his associates. As a condition precedent, the State requires a deposit in her treasury of \$300,000, as a guarantee that the party who undertakes the road shall build 50 miles within 18 months, for the purpose of proving that he is somebody; then the \$300,000 are to be returned. To make the necessary deposit Mr. Walker and his associates are reported to have sent in \$300,000 of the stock of the "Sussex Iron Company of New Jersey." The Governor of the State objects to the sufficiency of the deposit; but it is stated that the Treasurer has taken it, claiming to be the person to decide. In reference to this matter the Houston Star says:

There seems to be any amount of juggling at Austin about the \$300,000 deposit by Messrs. Walker, King and Co. On the 21st. ult. Mr. Hancock deposited 20,000 shares of \$12 50 each in the Sussex Iron Company, a corporation existing somewhere "Down East," whose stock, Hon. G. M. Dallas, Chancellor Kent and Gov. Rodman, of New Jersey, certify is at par. Governor Pease promptly rejected the stock as insufficient. But

Mr. Raymond, the Treasurer, deeming himself the only proper judge of that question, accepts it.

Per contra, the Galveston News:

No explanation whatever was given of the character of the money tendered. We have, however, learned, on what we believe to be good authority, that the tender was made in the paper of a bank created expressly for the purpose, somewhere in Tennessee, under the free banking law of that State. The amount of just \$300,000 of the new money was issued and \$298,000 of it sent to be deposited in the State treasury, the other \$2,000 being retained for circulation, which, of course, could be easily kept at par. The enormous sum of two thousand dollars in gold and silver was therefore raised and tendered to make up the \$300,000.

We shall probably have to await the official returns to find out how matters are. We hoped Mr. Walker would have laid down the *dollars*, and that he would have built the road in the same manner. Cash is an excellent article to send to Texas, especially if building railroads be the object. We fear Texas must have a few more wings liberated from their *chrysalis* State before she can make any very successful attempts at soaring.

American Railroad Journal.

Saturday, November 25, 1854.

Railway Morals and Railway Policy.

We commence this week the publication of an article on *Railway Morals and Railway Policy*, copied from the *Edinburgh Review*. We have also prepared an article ourselves, upon the same subject, which we shall continue in our next number. The necessity for reform in important particulars, united with the tender state of the public mind in reference to railway property, and railway management, renders the present a peculiarly appropriate time for the discussion of the above subjects. In the hey-day of prosperity, the difficulty is in getting people to listen to any proposition for improved management of railroads. They are now in the proper mood. We do not intend to suffer the present opportunity to pass without making the most of it. Our readers must excuse our running this week almost entirely upon *one* subject.

Railroads Completed.

Among the important lines of railroad that have been opened within a few days, is the Ohio Central, from Zanesville to Wheeling, 79½ miles; the Ohio and Indiana, for its entire length from Crestline, on the Ohio and Pennsylvania and Cleveland and Columbus railroads, to Fort Wayne, 131 miles; and the extension of the Galena and Chicago, from Freeport to Galena (built by the Illinois Central Railroad Company,) a distance of 62 miles. The Southern Division of the Illinois Central railroad is completed to a junction with the Ohio and Mississippi, forming a continuous line of railroad from St. Louis to Cairo. The Evansville and Illinois railroad is on the eve of being completed to Terre Haute, which will carry the Indiana system of railroads to the southwestern corner of the State. The above openings will add very largely to the area of country opened up to railroads, and to the convenience of the commercial and travelling public.

Election.

HON. W. S. ASHE has been elected President of the Wilmington and Raleigh Railroad Company.

The Earnings of Railroads

for October, as far as received, have been as follows:

	October, 1854.	1853.
Baltimore and Ohio.....	\$323,135	\$257,863
Cleveland, Columbus & Cin....	122,019	113,322
Cleveland and Pittsburg....	54,149	44,324
Cleveland, Penn. & Ashtabula.	89,603	61,674
Cincinnati, Ham. & Dayton....	43,615	38,085
Chicago and Rock Island....	176,221	67,697
Cleveland and Toledo.....	85,079	58,253
Chicago and Mississippi....	141,500	New.
Galena and Chicago.....	183,043	99,397
Harlem.....	105,465	90,008
Hudson River.....	160,642	153,258
Michigan Central.....	257,679	200,163
Michigan South. & North. Ind.	286,377	220,804
Milwaukee and Mississippi..	76,674	45,377
Macon and Western.....	23,206	27,347
New York Central.....	638,768	550,206
Norwich and Worcester....	29,325	31,867
Ohio Central.....	43,616	12,872
Indianapolis and Cincinnati.	33,943	New.
Ohio and Pennsylvania.....	142,453	84,039
Terre Haute & Indianapolis.	25,644	16,867

Total 21 roads.....3,052,166 1,973,423
Deducting \$175,443 for the earnings of two new roads, leaves \$2,876,770 as the earnings for October, against \$1,973,943 for October, 1853; showing an increase of \$903,340 over the past year; a rate of increase equal to nearly 50 per cent.

Indianapolis and Cincinnati Railroad.

The receipts of this road for the month of October are as follows:

From passengers.....	\$18,557 88
From freight.....	14,824 35
From Mail.....	562 50
	\$33,944 73

New York Central Railroad.

The following is a comparative statement of this road for October:

	Passengers.	Freight.	Total.
1854.....	\$375,321 53	\$265,263 75	\$640,585 28
1853....	371,822 06	217,582 91	588,864 97

Increase \$3,989 47 \$47,730 84 \$51,720 31

Androscoggin and Kennebec Railroad.

Comparative exhibit of the earnings of the road, for four months in 1853 and 1854:

	1853.	1854.
June.....	\$11,453 45	\$15,088 91
July.....	13,831 81	15,090 91
August.....	15,888 67	18,542 09
September.....	15,143 72	19,533 02

Increase \$56,317 66 \$68,254 93
Increase 21 1-2 per cent.

The earnings of the Michigan Southern and Northern Indiana Railroad, for the first two weeks of this month, as compared with last year, are as follows:

	Passengers.	Freight.	Total.
1854.....	\$81,400 00	\$31,089	\$152,489 00
1853.....	48,344 84	23,302	71,646 84

Increase.....\$40,842 16

The earnings of the Michigan Central Railroad Company for the second week of November, 1854, were

	Passengers.	Freight.	Total.
1854.....	\$28,703 29	\$30,730 22	\$59,433 51
1853.....	14,166 72	17,233 49	31,400 21

Increase. \$14,536 57 \$13,496 73 \$28,033 30

The earnings of the Erie R. R. for the month of October, 1854, were.....\$541,429 07
Earnings for October, 1853 539,675 18

Increase.....\$1,753 89

The earnings of the Watertown and Rome Railroad for October were:

	1853.	1854.
Passengers.....	\$16,742 67	\$16,728 31
Freights.....	21,096 41	27,260 48
Other sources.....	1,246 85	1,146 33
Total.....	\$42,085 95	\$45,075 12

Increase.....\$2,989 18

The receipts of the Cleveland, Columbus and Cincinnati Railroad for the month of October last were.....\$122,019 68
For October, 1853..... 113,897 08

Increase.....\$8,122 60

The receipts of the Cleveland, Painesville and Ashtabula Railroad for October, 1854, were

	\$89,603 32
October, 1853.....	61,764 43

Increase.....\$27,838 89

Railroad Lettings.

We invite attention to the advertisement of letting on the Alabama and Florida Railroad, now in progress from Montgomery to Pensacola. The route is through a health country, where provisions and labor are cheap, and the company offer good pay.

1855

Will be the TWENTY FOURTH year of the existence of the AMERICAN RAILROAD JOURNAL. The present, thanks to our kind friends, has been its most prosperous year. During the *regime* of its present Editor, nearly five years, its circulation has more than quadrupled, and the number of its weekly readers now exceeds thirty thousand, composed of all the principal Railroad men in the country. By railroad men we mean the stockholders, directors, presidents, secretaries, treasurers, engineers, machinists, capitalists, brokers, manufacturers of equipment of all kinds, inventors of railway improvements, whether in the construction or management departments, contractors and statesman; all these are specially interested in the matter contained in a good railroad paper. They wish to keep themselves posted with regard to what is going on in the way of construction, earnings and expenditures.

We shall soon send our bills for arrearages due from old subscribers, and we have made arrangements to send with the first number in January next, a copy of our new railroad map, fully corrected to the first of the year 1855, to each of our subscribers who has paid up for the current year. We are now amending our stock and bond list which will appear, fully corrected, on the first of January. It will show the cost, indebtedness, earnings, dividends, value of shares and amount, date of, maturity and market value of all the bonds issued by the Railroads in the United States and Canada.

The editorial department of the Journal will undergo no change for the worse but will continue under the same management which has proved so successful in the past and which we trust is the best guarantee of success in the future.

Hempfield Railroad.

The Monongohola *Republican* says: "Things seem to be moving again on the Hempfield Railroad. We understand Mr. Fox is commencing work on the tunnel near Torrences', and there is a prospect of the work going vigorously forward."

Railway Morals and Railway Policy.

We copy, on another page of the Journal, an article upon the railway morals and railway policy of Great Britain. It is undoubtedly a truthful picture of the condition and management of railway property in that country. As far as there is a parallelism between the manner in which the railways of the two countries are conducted, the article may be studied with as much profit by our own people as those to whom it is directly addressed. We copy it for the additional object of seeing how far this parallelism holds good, and as a means of obtaining a more correct view of the policy and management which prevails in this country, and of the condition and prospects of our railroads.

We would remark, in the outset, that the article quoted appears to us to touch only upon a part, and perhaps upon the least important of the mistakes and misconduct from which railways have suffered. It is an able statement of the present condition of railway affairs; but it only partially explains the causes, while it hardly suggests a remedy, for the abuses which are shown to exist. From the article, it would seem that English railroads have suffered most from *branches*, or extensions of the *trunk* lines, which have been the occasion of enormous expenditures without any useful object or end. Another great source of evil is *Parliamentary* legislation. Abuses of *legislation* in fact, are the constant theme of complaint on the part of the British press, and undoubtedly with good reason, as erroneous ideas in legislation lie at the foundation of many of the abuses and losses that have been suffered. The article also fails, in our judgment, to point out the proper remedies, mainly for the reason, we think, that the causes of the abuses and mistakes are not correctly appreciated.

But whatever be the causes of the disasters which have befallen British railroads, involving a loss, variously estimated at from \$350,000,000 to \$500,000,000, equal to one-half or two-thirds of the whole expenditure upon such works in this country; the fact stares us fully in the face. Are our roads in a similar category? Is the vice from which the former have suffered inherent in the system, or peculiar to one country? We propose to draw, in connection with the above article, a parallel between the works of the two countries for the purpose of showing how far we are suffering from the influence of similar causes, as well as to point out if possible the appropriate remedy.

We commence with a comparative review of the *Legislation* of the two countries. As already stated the wrongs inflicted upon railways by a partial, unwise, and unjust system of legislation is regarded in England as one of the great sources of the evils suffered. What this legislation is, was well stated by Mr. Robert Stephenson, (himself a member of Parliament,) in a speech made when in this country to the citizens of Toronto, from which we extract as follows.

"In the various railway struggles, the committees of Parliament took into consideration not what was right nor what was wrong, but entered into considerations entirely subsidiary, and not at all connected with the profits of the lines, nor the necessity for making them. The consequence was that the committees sometimes decided upon different lines upon reasons entirely apart from their real merits or the scientific questions involved in the details. There was one district through which

it was proposed to run two lines, and there was no other difficulty between them than the simple rivalry, that, if one got a charter, the other might also. But here, where the Committee might have given both, they gave neither. In another instance, two lines were projected through a barren country, and the Committee gave the one which afforded the least accommodation to the public. In another, where a line was to be run merely to shorten the time by a few minutes, leading through a mountainous country, the Committee gave both; so that, where the Company might have given both, they gave neither;—and where they should have given neither, they gave both. Such a species of legislation was faulty, and he hoped it would not be imitated in this country. There was, indeed, a Committee sitting in England, the attention of which he had called to these facts. After lines were granted, the competition which began within the walls of Parliament continued when the lines came to be put in operation. He could say, upon the authority of the Board of Trade, and from his own knowledge that, since competing lines commenced, out of 300 millions of pounds expended 70 had been wasted; that is in duplicate lines. But in order to mark the inconsistency of the proceedings in railway legislation, when the London and Birmingham was asked for, the feasibility of the route was doubted, great difficulties were suggested as being in the way. Engineers were called in to decide every thing in opposition to it; the estimates were disputed and doubted, it was maintained that the company ought to prove the traffic that was to go over it, and that 6 or 8 per cent. was to be obtained upon the money invested, in fact a most paternal part was taken in the project. Before Parliament granted the charter, before the people were allowed to expend their own money, they were here asked to prove the traffic and the profit, and show a regular contract to establish, that the work was to be done within the estimate."

He concludes by urging upon the Canadian Parliament to be wiser than that of the mother country, and to permit none of the abuses and mistakes which have been followed by such disastrous consequences at home.

Having shown the incompetency of the legislature of his own country to direct the routes and superintend the construction of railroads, the natural inference conveyed to his own mind should have been, we think, that all legislatures are equally incompetent, which is really the case. The Legislature of Great Britain is as competent as that of Canada, or the United States, to interfere in the construction of works of internal improvement. The fact is that none of them are competent to successfully conduct commercial enterprises. Such duties do not come within the function of any government, and where they are assumed the result is always mischief. The proper legislation therefore upon all such subjects is none at all, but to leave the action of the people entirely untrammelled, as we think we can show.

When the right to build a railroad depends upon a special act of government, such right will always be regarded as possessing a value in itself, independent of the work to be constructed under it, and which of itself justifies an expenditure, or a division of its value among the grantees, greater or less according to its assumed worth—expenditures or a division of value, which would not be for an instant thought of, or tolerated, were the construction of such work a common right, like that of a ship, or manufacturing establishment. The idea that a charter confers a value is the great cause of the expensive contests, in the outset, before Parliament, to obtain them, in which those who already possess such, resist every new

application. Hence the *parliamentary* battle upon every charter cost all the way from £2,000 to £3,000, a sum nearly equal to the total cost of many of our roads. The cost of the charter, of course, magnifies its value. As soon as it is obtained, the company organizes upon the most expensive scale, with enormous salaries paid to officers, engineers, officials, &c., &c., salaries for which the services rendered are no equivalent. The fallacy lies in attaching a value to a mere right to construct a railroad. Were this right regarded as valueless, as is the right to build a ship, then not a penny would be paid to obtain it, nor incurred in the organization of the company, nor wasted in its operations. The merits of the project would alone be regarded, and the means exactly proportioned to the end to be accomplished. Without the stimulus of the advantage that a charter is supposed to confer, few projects would be commenced that did not promise to pay. With entire freedom in the matter of the construction of railroads, the people of Great Britain would have acted as rationally as in any similar enterprise; and only such railways would have been built as are needed. The direction of their roads would have been suited to the public convenience, and their cost proportioned to the business, or in other words, their income. Instead of such a result, acting upon the idea that a charter in itself possessed a value, a great number of rival roads have been built, at enormous cost; showing that the tendency of all special legislation is to aggravate the very evil it is intended to cure. Experience has proved that a railroad charter in Great Britain is not only entirely valueless, but its possession is almost certain to entail serious losses upon its possessors.

The first great cause of competing lines, and extravagant expenditures upon the railways of Great Britain, is to be found in the fact that the legislature assumes to determine the routes of the roads, their mode of construction, and to designate the persons who are to have the privilege of constructing them. The tendency of legislation in this country is entirely opposite. Taking the State of New York as a standard, the right to construct railroads is just as common as is the right to construct ships. Any number of individuals may unite to build a railroad, where, and as they chose; no matter how many other roads are built having the same direction and objects. There are two roads from the City of New York to Albany. A dozen more may be built, if there are fools enough to construct them. The Government neither confers special privileges, nor does it assume to act as conservator of individual interests. It does not interfere to prevent a man from making what appears to be a bad investment. The result is that having the right to build railroads when, and where they choose, people cannot be driven to act precipitately, which they often do, when acting under a special charter, the rights which it confers being often forfeited by lapse of time. When they commence the construction of a road, they see that their only safety lies in placing it upon the best route, and building it at the lowest possible cost, as the only means of protecting their investment; as mistakes in either particular will be sure to be corrected by another company, which will thus be able to maintain a successful competition. With perfect freedom there-

fore in the matter of railroad construction, the first road is pretty certain to be built with reference to the public wants, and at the lowest cost, which precludes the necessity for more than one, where with *special* charters there would certainly be two. Our view of the case is, we contend, not only supported by sound reasoning, but is proved by the experience of this country, where with the most liberal legislation, we have but few *competing* roads.

To cease to legislate at all upon the subject of railroads will, in England, be thought to be a singular remedy for *abuses* of legislation, we have no doubt. But why not the proper one? Would Englishmen think commerce would be the gainer by having Parliament yearly designate the number of ships that should be built and who should have the privilege of building them? Would not they say, "we know better what we want than a body of men who have no experience nor interest in commercial affairs?" Should government assume to interfere in reference to *ships* as it does in reference to railroads, could a proper harmony be preserved between the wants of the public, and the means by which they are met? Would not those who first got the right to build ships, think they had secured a valuable boon, and would they not be the less careful about their construction, and the economy with which they were built, than without such supposed boon, or protection? Would they not find in it an excuse for extravagance and inattention? Is not this always the case in similar matters? Does any business pay in the long run that is not conducted with express reference to the end to be gained? Would not outsiders thinking favored ones had secured some great advantage, besiege Parliament for similar grants? Having justice on their side they would in the end be sure to triumph, though at great cost to both parties. As soon as the latter had succeeded in securing their rights, would they not fall into the same indifference and extravagance as their predecessors; and would not the result be that in the end there would be twice as many ships as would be wanted, and would not those that were built be both costly, and badly managed, and but poorly adapted to the wants of commerce, and the ships themselves turn out to be ruinous investments? We think there is no one that will not assent to the above proposition. If it be correct, is not legislation just as inappropriate in reference to the construction of railroads as it is in reference to the construction of ships?

In the United States we have little to complain of on the score of *legislation*. In this respect consequently the parallel between the two countries does not hold. If Englishmen suffer from this cause, our people do not. We believe in the inherent incapacity of legislatures to direct or conduct successfully, any *commercial* enterprise. The remedy for legislative abuses is not *more* legislation, but in none at all. It is *all* bad. The mistake consists in supposing that legislatures can be rendered *competent*. The thing is impossible. No legislative wisdom is a match for the instinct of self-interest on the part of the individual. The more our English brethren trust to *legislation*, the more involved in difficulties will they become. The remedy they seek has caused the disease, and will only aggravate the case.

As a result of our *non-legislative* policy, the railway interest of this country has, in the aggregate, suffered only slightly from *branch*, or *competing* roads, which have so reduced the value of railway property in Great Britain. There is another reason why we are without them, and this is, that most of the States have not reached that stage in the progress of railways in which the tendency to *branch*, or competing lines, manifests itself; they have not yet got through with their *trunk* lines. That a tendency to excess will manifest itself in railways, as it does in every pursuit, there is no doubt. But there is no reason for believing, with a healthy sentiment prevailing, that this tendency should be more strongly felt in the construction of railroads, than *ships*. In no department of industry can *supply* and *demand* be made to exactly harmonize. But occasional overproduction does not prove that the particular branch of industry in which such excess occurs is not in the main, profitable.

We think we have indicated the germ from which sprung many of the disasters which English railroads have suffered. We think that should a government attempt to control the construction of *ships*, the result would be what we have seen it to be in the case of railroads; and we do not believe that subjected to the same law by which other commercial enterprises are controlled, the construction of these works would be pushed to an extravagant and injurious excess. We cannot see why this should be the case. We do not see any necessity why men, wiser in other matters, should lose their capacity the moment they take up a railroad. The fault is not in the works themselves, but in erroneous principles which control their construction.

Although from a more correct system of legislation the railroads of this country are mainly free from many the abuses from which English railroads have suffered, this fact by no means proves that railroad property in this country is not in jeopardy from the operation of other causes common to the systems of both countries, the most important of which is the *inability of stock and bond holders to exercise a personal oversight of the expenditure of their money*.

We will illustrate this point.

We will take for this purpose a railroad in an agricultural district—the Syracuse and Binghamton—as a good case in point. This road of 80 miles was built at a cost, say, of \$1,600,000. One half of this sum was furnished by some 2,000 stockholders living on the line of the road. The work went forward under the daily inspection of nearly every stockholder—ninety-nine out of every hundred of whom had a pretty correct idea of the *cost* of the various items of construction.—As they furnished the means to build the road, every penny lost was so much out of their own pockets. Every stockholder, consequently, watched every movement of the directors as if they were men in his employ. Constituting a vigilance committee of two thousand, under their supervision, it was impossible that anything abuse like could be practised without being exposed. The fact that so large a body of men were interested, carries in favor of the road the whole sentiment of the community, so that no person would be tolerated in asking a greater sum for land, or material, than its *lowest* cash value. A whole people in this way be-

came co-laborers to the same end. The result was, the road stands the stockholders at its *actual* cost. Now let us suppose a party of capitalists from New York had undertaken to build the road. None but themselves would have felt any interest in the result. The object of their immediate employees would be to get the most money for the least service, and to prolong the work as much as possible, as a means of keeping in employ. As they would be far removed from the eye of the owners of the road, they would naturally and inevitably give way to the universal tendency to indolence, inattention and prodigality. And how would it be with the people on the line? Seeing that it was certain to be constructed, their sentiments in reference to it would undergo a complete change. Instead of doing everything in their power to aid it, they do everything to embarrass the operations of the company, provided by doing so they can make money out of them, by demanding exorbitant sums for what, under a different mode of construction, they would have cheerfully furnished gratuitously, or at low cost. The result would be that the road would cost \$40,000 instead \$20,000 per mile. It would be easy to refer to illustrations of our statements, to roads that have cost \$40,000, which might have been built for less than the Syracuse and Binghamton, but which excess is entirely due to the causes stated.

Here then is one explanation of the great waste of money in railroad construction, in this country, as in Great Britain. It is expended by parties who have no interest in the result, and beyond the inspection and observation of those who supply it. No corrective of extravagance, or imposition, in the shape of careful, intelligent and shrewd stockholders to watch the expenditure of every penny, and the habits and capacity of every person employed, who stand ready to expose and correct every abuse that is discovered. The parties in interest may be a thousand miles from the theatre of the operations of the company;—busy in their counting-rooms, and in their ordinary avocations; and the only time they direct a thought to their road, is when called upon for installments on their subscriptions.

No one will deny that we have correctly described the causes of the difference between the cost of a road built by parties living upon its line, whose position gives them an opportunity to oversee the expenditure, and roads built by parties living at a distance. In the one case the road is built at the lowest possible cost. In the other at perhaps *twice* its cost. We ask whether similar results do not follow similar premises in every department of industry? No business is ever profitable unless under the most careful supervision of the parties in interest. Such a relation is necessary to success in all cases. Suppose a manufacturer of Steam Engines, living in New York, to carry on his business at Chicago by means of *agents*, of whose capacity and honesty he knows nothing, and who gives no other attention to his establishment than to pay the calls of his agents for money. Would such a person succeed against the competition of parties who take the immediate supervision of their affairs?—the question does not require an answer. Now railroads are precisely like any other commercial and manufacturing enterprise. To ensure success the same training intelligence, capacity and attention is necessary, and

eminent success is never achieved in any department of industry, without the possession and exercise of all these qualities.

In the management of railroads people fall into an error in supposing that their affairs can be conducted in the same manner as those of other companies. As Banking and manufacturing establishments preceded railroads, the mode of operating of the former have been transferred to the latter, and as the former have been usually successful, it was supposed that the latter, under a similar administration, would be equally so. Here is a grand mistake from which railroads have suffered. The duties of most agents and employees in banking and manufacturing establishments are merely ministerial, involving only a slight exercise of skill or discretion. The only way an employee in a Bank can make way with the funds of the institution, is to steal them. He has certain duties to perform, which cannot be shirked, nor done only in the proper manner, without his being exposed. The same is the case in manufacturing establishments, with this difference, that in most of such, the pay of the employee, or operative, is in proportion to the labor he performs. But to perform in a proper manner the simplest duty on a railroad, requires training, skill, constant attention and watchfulness, and integrity. The track of the road must be maintained in perfect order, or an accident involving the destruction of life and property is inevitable. The engine driver should be thoroughly versed in *physics*, to understand the qualities and the capacity of *matter* for the service it is called upon to perform. He is constantly working the material, of which his engine, and the superstructure of the road is composed, very nearly up to the limit of its capacity for resistance. If he pass the *boundary*, he destroys both. The locomotive is a most complicated machine, which, with indifferent management may be destroyed in a few months, but in the hands of a competent person, will last as many years. There is hardly a person employed by any company in whose capacity and integrity the safety of a large amount of property is not involved. Even when there is a disposition on the part of the servants of a company to discharge their duties, the want of capacity may be fatal to success. When we ascend from the mere details of operating a railroad, the highest order of ability is necessary to conduct the relations that the road sustains to the *public*; to develop its business; to inspire and maintain the general confidence in the value of its securities. The success of a railroad may depend upon the popular estimation in which it is held; especially when it requires the popular support in the matter of its finances.

Qualities, therefore, fitted to conduct successfully a Banking or Manufacturing establishment, may be entirely inadequate to the superintendence of a Railroad. To be fitted for filling the place of President of a road, requires experience and ability in financial affairs; a thorough knowledge of the operations of Railroads, of the cost of transportation of the different classes of passengers and freight, and of the route and tendency of trade and commerce. He must be able to form an accurate judgment of all the employees on the road. He must possess great administrative talent, and command the obedience and respect of all his subordinates. The Superintendent should

have all the qualities last described, and an intimate and practical acquaintance with every branch of service on the road. All the subordinates should be men of integrity, industry and experience in their duties, and of more than ordinary capacity, as the humblest employee on a road fills a place when a defective judgment, or unfitness for his duties may cost the company fifty times his wages.

We have described the requisites to the proper management of a Railroad. We should like to be shown a company where they are possessed even in a tolerable degree. We should like to be shown a road where a majority of the persons employed were selected for the qualities they possessed. It too often happens that the leading officers on roads seek their places, not for the purpose of advancing the interests of the Company, but of promoting private ends. The subordinates are the *protéges* of rich stockholders, whose wishes the President or superintendant has not the firmness to resist, or whose good will it is desirable to secure against the *next election*. So little are the qualifications necessary to fit a man to be useful on a railroad understood, that large holders of the stock and securities of a company, will solicit places in it for friends or dependants, in cases, where the harm that such a person may do to the Company, will cost the very persons who secured to him his place more than it would to support him out of their own purse.

We are particular to enumerate the qualifications necessary to be possessed by the managers and employees of a well conducted railroad, for the purpose of showing that because a man has earned a good reputation as a lawyer, merchant, doctor, farmer, or banker, it is no evidence that he is fit to take charge of a Railroad. And here is one of the weak spots in the system. An eminent banker, for example, is placed at the head of a Railroad. The public are in an ecstasy of satisfaction that so distinguished a man has taken charge of their favorite enterprise. Everything will go on well hereafter. "Hon. Mr. So-and-So's previous honorable and successful career is full guarantee for the success of the road." Of course such a man is allowed full swing. Hon. Mr. So-and-so is a very upright man who has made a huge fortune by operating in stocks." But the operating a Railroad is as great a mystery to him as would be a table for the calculations of "embankments and excavations." If money is wanted he can supply it, which is all he is fitted to do. Having not the slightest practical experience in any grade of service on the road, he has neither the capacity of making proper selections of subordinates, nor of knowing whether he is well or poorly served. The more such a man assumes to act the worse very likely for the Company.—But the probability is that he will really do nothing. He cannot give up a pressing and lucrative business for something in which he has only a remote and contingent interest. However well disposed he may be, he cannot discharge his duties, simply because he does not understand them. The result is that but little is accomplished, and what is done is badly done; the public all the while, imagining that their affairs are going on swimmingly and being as much puzzled as their President, when they find how slight is the progress that has been made. Their money has gone, without any-

thing to show for it, and without any one being directly chargeable for the loss.

(To be Continued.)

(For the American Railroad Journal.)

Iron Bridges.

Any structure capable of supporting a weight over an unoccupied space may be considered a bridge in theory, as it may be made to support a road way as well as any other weight, and thus become a bridge in practical verity.

There are but two kinds of strain to which any substance used in the support of a weight is necessarily liable, namely compression and extension, and no weight can be supported under any circumstances, or in any position whatever without generating one or both of these strains upon its supports; and in all cases of a weight supported over a vacant space, both extension and compression are put in requisition. It is generally thought that an arch without a tie-rod and thrusting-upon its abutments, exerts no strain except compression, in supporting its load, but a moment's reflection will serve to convince an ordinary mind that the earth beneath an arch bridge acts the part of a tie-rod and consequently bears a strain of tension equal to the lateral thrust of the arch; while a bridge purely suspension in principle, exerts compression upon the earth equal to the tension on the centre of the supporting cables.

A truss bridge or any kind of a bearing girder or beam resting upon its ends, and supporting a weight between its points of support bears compression on its upper, and extension upon its lower side. This which is usually called a cross strain, is strictly a combination of the two, and if we break, tear asunder, or crush in any way any material substance whatever, it must yield to one or the other of these forces; so that in building a bridge we have only two kinds of strain to provide for, either of them very simple and perfectly well understood in the abstract. And it may be assumed as the dictates of common sense that that material and that form best calculated to resist these strains generally is the most responsible material and form to be introduced into the composition of a bridge. If cast iron is not the most effective and safe material known to resist compression, it is (taking into account the facility with which it can be given any desired form of section to prevent vibration or bending sidewise, a result always indicating the commencement of failure in a column of any kind under severe compression in the direction of its length) at least as good as any other. In proof of the practical safety of cast iron in bearing a heavy load we have only to refer to its employment as columns, supporting the fronts of nearly all the high heavy brick and stone stores in our cities. A tier of slender cast iron columns once erected the stories are piled on one after another, with the most perfect confidence, and impunity; and in the whole catalogue of accidents in practical architecture, nothing yet appears against cast iron as a column. Under compression wrought iron does not withstand this strain as well, neither can it be as easily wrought into the proper shape to resist vibration. A flat bar of wrought iron is a very bad agent where stiffness is required, and easily buckles under compression, notwithstanding which the top chord of many truss bridges is nothing but a broad thin bar of wrought iron.

In view of these facts it is fair to conclude that good cast iron is the most profitable agent to be employed in those parts of a bridge whose office it is to withstand compression, particularly if the design is, as it should be such that the strain on each part is never changed from extension to compression, or *vice versa*.

D. BLANCHARD,
Arch, Troy.

Watertown and Rome Railroad.

The late report of this company shows the following receipts for the year ending September 30, 1854:

Passengers.....	\$151,628
Freight.....	216,597
Mails.....	7,853
Miscellaneous.....	5,382

Total.....\$384,460
Current expenses.....219,758

\$164,702

The total cost of road and equipment at the above date was as follows:—

For Construction.....	\$1,357,766 08
For Passenger and Freight Stations.....	113,379 24
For Engine and Car Houses, and Machine Shops.....	42,635 86
For Land, Land Damages and Fences.....	170,913 45
For Locomotives, Fixtures and Snow Plows.....	122,136 65
For Passenger and Baggage Cars.....	30,042 63
For Freight and other Cars.....	160,617 68
For Engineering and Agencies.....	43,052 74

Total cost of Road and Equipment.....\$2,040,544 33

The receipts to capital have been as follows:—

From Capital Stock.....	\$1,372,400 00
Funded Debt.....	509,000 00
The Floating Debt.....	159,144 33
	\$2,040,544 33

The total floating debt is \$300,000, of which amount \$159,144 33 were expended on the road, the balance upon steamboats, and other property. The assets of the company, independent of the road, are:—

Stock in Wolf Island Canal, and Steam Ferry Boat, thereon.....	\$35,000 00
Undivided 6ths ownership in two first class Steam Boats on Lake Ontario.....	50,000 00
Advances made on four first class Propellers, secured by Mortgage and Policies.....	90,000 00
	175,000 00

Leaving on hand an *asset balance* of. \$34,144 33

The company omitted the usual October dividend, and have expended the net earnings of the last eight months of the year, amounting to \$104,181, (less \$29,000 for interest on indebtedness) toward the payment of the floating debt; preferring this course to a dividend, with a floating debt carried at a high rate of interest.

The road extends from Rome, on the Central railroad and Erie canal, to Cape Vincent, on Lake Ontario, a distance of 97 miles. It is well built and well equipped, and has uniformly, we believe, paid 10 per cent. dividends, till the present year; the one for October having been omitted for the reasons stated, which should be entirely satisfactory. It has a good route, is one of our

best built, best managed, and most productive roads, and will, we have no doubt, as soon as times let up, assume its accustomed dividend of 10 per cent.

United States Mint.

The following table will show the Coinage at the Mint of the United States, Philadelphia, for the ten months of 1854:

Double Eagles.....	\$13,644,900 00
Eagles.....	542,500 00
Half do.....	721,325 00
Quarter do.....	1,297,370 00
Three Dollars.....	347,634 00
Dollars.....	1,308,479 00

Total Gold.....	\$17,862,208 00
Dollars.....	33,140 00
Half dollars.....	1,193,000 00
Quarters.....	2,780,000 00
Dimes.....	270,000 00
Half Dimes.....	212,000 00
Three Cents.....	12,000 00

Total Silver.....	\$4,500,140 00
Copper.....	38,385 55

Gold, Sil'r & C' per.....	\$22,076,900.56
Gold Bars.....	15,600,937.58

Total.....	\$37,677,928.14
In 1853.....	45,329,250.05

Decrease, 1854.....	\$7,651,321.91
---------------------	----------------

The whole number of pieces coined in October, 1854, was 2,201,989, against 8,129,014 in October, 1853. Of the pieces coined in October of this year, 323,743 were gold, 1,392,000 silver, and 486,246 copper.

The gold bullion deposited in October was:

From California.....	\$550,000
From other sources.....	50,000

Total.....	\$600,000
Silver bullion deposited.....	200,000

Total.....	\$800,000
------------	-----------

The deposits of precious metals for the first ten months of the year were:

	1853.	1854.
	Gold. Silver.	Gold. Silver.
January.....	\$4,862,097 \$14,000	\$4,215,579 \$108,000
February.....	3,548,523 13,560	2,514,000 1,166,000
March.....	7,533,752 70,000	3,962,000 147,000
April.....	4,851,321 2550,000	8,398,000 129,000
May.....	4,365,688 1447,000	3,506,000 196,000
June.....	4,545,179 1447,000	4,000,000 100,000
July.....	3,505,331 611,000	3,940,000 310,000
August.....	4,512,000 860,000	2,940,000 332,000
Sept.....	3,027,805 320,000	2,660,000 177,000
October.....	4,452,000 620,000	600,000 200,000

Total.....	\$45,303,616 \$7,952,560
------------	--------------------------

Showing a decrease this year of \$13,667,067 in the amount of gold; and of \$5,084,560 in the amount of silver deposited, making a total of \$18,651,627, for the ten months of 1854.

The following is a summary of the coinage of the United States mint and branches from the 1st of January to the 30th of September, 1854.

Gold.....	\$35,990,205 12
Silver.....	7,051,140 00
(Copper) Cents.....	37,775 89

Total Coinage.....	\$43,079,121 10
--------------------	-----------------

The total amount of coinage at the Mint and Branch Mints of the United States, since the organization in 1793 to 30th September 1854

Total.....	\$424,876,420 02
Of this sum there was in Gold.....	328,234,597 06
Of this sum there was in silver.....	95,090,529 00
Of this sum there was in copper.....	1,551,293 09

Ohio and Indiana Railroad.

The recent opening of this road completes another important link in the Railroad system of this country, and is another of the great Western lines just closed up.

The road extends from *Crestline*, a common point on the Ohio and Pennsylvania, and the Cleveland and Columbus Railroads; and at the Western terminus of the former, and extends in a generally West course to Fort Wayne, on the Wabash and Erie Canal, the principal town in North-eastern Indiana. Its entire length, is 131 miles. The charter is perpetual, and not subject to alterations, and is unrestricted as to dividends.

The entire road was put under contract on the 28th day of January, 1852, and was formally opened for traffic for its entire length the past week.—It has a remarkably favorable line, 127½ miles of it being tangents with no grade exceeding 26 feet to the mile, and with 63 miles of level line.

The road traverses recently settled, but very productive portions of Ohio and Indiana, which will supply at least the ordinary amount of local traffic possessed by Western Roads. In addition to this, the road occupies very important relations to other roads in the West, which cannot fail to secure for it a very large traffic. It is the appropriate extension of the Ohio Pennsylvania Railroads in the direction of Chicago, as well as for the roads of the central and northern portions of Ohio. This connection is to be formed by the Fort Wayne and Chicago Railroads now in progress. Upon the completion of this road, a grand avenue will be opened as direct as the nature of the country will admit, from Philadelphia to Chicago, a distance of about 820 miles. All the roads that comprise this great line will have an identity of interests, as far as the through traffic is concerned. We hope to be able to chronicle the early opening of the Fort Wayne and Chicago link which will complete this great line.

Ohio Central Railroad.

The Ohio Central Railroad was chartered on the 8th day of February, 1847, with authority to construct and maintain a railroad from the city of Columbus to the city of Zanesville, and thence to the Ohio river, to such point as the Directors might select. The road contains the usual provisions of the charters granted to such companies in Ohio. In May, 1850, twenty four sections between Newark and Zanesville were put under contract, and in Nov. of the same year, the balance of the road from Zanesville to Columbus. On the 26th of January, 1852, the section of 25½ miles, between Zanesville and Newark was completed; and on the 18th of January, 1853, from Newark to Columbus, a distance of 33 miles. In May, 1852, the first lettings were made on the Eastern Division, from Zanesville to the Ohio river; and the road formally opened for business on the 15th of the present month. The entire length of the road is 138 miles, the Western Division being 58½ and the Eastern Division 79½ miles. The road strikes the Ohio 4 miles below Wheeling, (where a connection is formed with the Baltimore and Ohio Railroad,) and is continued up the river to a point opposite that city.

The road, as the name indicates, occupies a central position in Ohio, forming a very direct line from Columbus to Wheeling. At the latter city,

a connection is already formed with the Baltimore and Ohio Road. At the same point, a connection will soon be formed with the Pennsylvania Railroad, through the Hempfield Road, securing to the Ohio Central very favorable Eastern connections; between which and Central Ohio, this road must form the principal means of communication. At its Western terminus, Columbus, it forms equally favorable connections with roads reaching to nearly every portion of Ohio and Indiana.

The earnings of the Western Division from Zanesville to Columbus, from the date of its opening to July, 1853, were \$52,737 00; expenses for the same period \$20,760 00; net earnings \$31,978 00. The earnings from July, 1853 to August, 1854, for the Western and a portion of the Eastern Divisions, from an average mileage of 65 miles, for 13 months, were \$167,855 00 of which \$107,875 00 were from passengers, and \$59,980 from freight and mail. The expenses for the same period were \$95,823 00.

The equipment of the road consists of 18 Locomotives, 15 Passenger Cars, 4 Baggage do., and 30 Freight Cars. Large additions are being made to the Equipment, which will increase the Passenger and Baggage Cars to 67, and Freight Cars to 821. The Western Division of the road is in good running order.

Statement Showing the Financial Condition of the Road on the first day of August, 1854.

Dr.
Amount charged to Western Construction \$1,231,184 98
Sundry unsettled accounts chargeable to do 34,224 94
\$1,265,409 92

Amount charged to Eastern Construction \$385,789 95
Sundry accounts for payments to Contractors & others, for work and material for the road. 1,072,115 59

Balance of Interest account 1,907,905 54
Sundry accounts chargeable to general construction 253,605 56
For superstructure East since Jan'y 1st.—Sundry accounts chargeable to same 23,578 41
For Right of Way West since Jan'y 1st 281,663 82
For Right of Way East, total amt paid 3,629 18
For Depot, Ground and Buildings, Columbus, Newark and Zanesville 104,365 48
For Machine Shop Buildings, &c. West Zanesville 37,486 13
For Real Estate accounts 44,690 64
For Machinery, Locomotives, Cars, &c. 49,036 21
For Fuel account, fuel on hand and payments on the same 299,178 87
For Bills receivable 12,995 40
For Capital Stock deposited with Agents in New York 51,368 54
For Bonds deposited with Agents in New York and Baltimore 100,000 00
For Bonds deposited with parties in Ohio 508,000 00
For amount deposited with Ohio Life Insurance and Trust Company for payment of coupons 16,359 30
Miscellaneous 21,454 55
\$5,006,003 27

Cr.
By Capital Stock West \$512,064 33
Do. do. East \$1,008,863 33
Do. do. do. deposited with Ag'ts in New York 100,000 00
1,108,863 33

By first mortgage 7 per cent. convertible Bonds due Feb. 1, 1861 450,000 00
By first mortgage 7 per cent. convertible Bonds due May 1, 1894 400,000 00
By first mortgage 7 per cent. non convertible Bonds due May 1st, 1864 400,000 00
By Income Bonds, 1st Series, 7 per cent. convertible, due May 1st, 1857 100,000 00
By second mortgage 7 per cent. convertible Bonds due Sept. 1st, 1865 100,000 00
By second mortgage 7 per cent. non convertible Bonds due Sept. 1st, 1865 700,000 00
By Income Bonds second series as follows, viz:
200, 7 per cent. convertible, due Apr'l 1st, 1858 \$200,000 00
195, 7 per cent. do. due April 1, 1859. 195,000 00
1, 7 per cent. non convertible, due April 1st, 1859 ... 1,000 00
100, 7 per cent. convertible, due April 1, 1860 100,000 00
496,000 00
By amount to Agents in New York and Baltimore for advances 257,039 38
By amount of Interest and Dividend Scrip to Stockholders for Interest due Jan'y 1, 1854, payable Jan'y 1st, 1855 15,979 86
By amount of Interest Scrip to Stockholders, for interest due July 1st, 1854, payable July 1st, 1855 36,089 71
By amount to counties, interest on Stock 12,720 00
By amount for railroad iron, payable at 12 months 25,906 80
By Bills payable, for railroad iron, machinery, & Temporary Loans, &c 371,988 33
Miscellaneous 19,357 63
\$5,006,003 27

This above road sustains a very important relation to the railroad system of the whole country, particularly to the Baltimore, Ohio and Pennsylvania Railroad; and the roads of the Western States, must immediately come into possession of a very large traffic. Its total cost August 1st, 1854, was \$4,287,192 67, or, \$31,059 per mile.

Illinois Central Railroad.
That portion of this road from Freeport to Galena a distance of 62 miles has just been opened. South from Freeport there is a space of about 48 miles to a small town called Amboy, 10 miles south of Dixon, which is not yet completed. This part of the line will be finished early in January. From Amboy south to Vandalia, a distance of 196 miles, it is finished and in operation. From Vandalia to Sandoval, 25 miles, and also a small gap of about five miles, near Centralia, remain to be completed.

From Centralia south to Cairo, 112 miles, the road is completed and in operation, and as soon as the five miles near Centralia are completed, a railroad connection will be formed between Chicago and Cairo.

From Chicago, the Chicago Branch is completed to a point 40 miles south of Urbana, a distance of 166 miles from Chicago. From the point, 40 miles south of Urbana, about 80 miles of the Chicago Branch remain to be completed early in the spring.

Eastern Railroad.

The annual report of the Eastern Railroad Corporation, for the financial year ending 30th June, 1854, shows the following results, from which two dividends were paid, amounting to \$7 per share—\$3 in money and \$4 in stock—the dividends for a period of two years having been 8 per cent.

Gross earnings for the year \$613,141 73
Expenses in same time 292,272 79

Leaving for interests and dividends.. \$320,868 94
Add estimated net gain for the year ending 30th June, 1845. 45,000 00

Total \$365,868 94

Debts.

State loan \$500,000
English loan 750,000
Bonds sold 750,000
Bonds to be sold 750,000

Total \$2,750,000

Deduct assets as per page No. 8 of the report. 1,263,213

Balance of debt \$1,486,787
Deduct 6 per cent. interest on this amount. 89,207 22

Equal to a dividend of \$8 per share on 33,459 shares \$276,661 72

Surplus 267,672 00

Surplus \$8,989 72

New York and New Haven Railroad.

All the old directors of this company have resigned, with the exception of Mr. Boardman of New Haven; viz: Messrs. Ketchum, Werthen, Blackstone, Thayer, Sanford, Burrall and Sturges. The vacancies have been filled by the election of Moncure Robinson of Philadelphia; P. T. Homer of Boston; W. W. Billings of New London; N. A. Bacon and Dennis Kemberly of New Haven; G. W. Miller of New York, and W. L. Lyon of Greenwich, Ct.

New York and Erie R. R.

On and after Monday, Nov. 20th, and until further notice
PASSENGER TRAINS
will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a.m. for Buffalo.
DUNKIRK EXPRESS, at 7 a.m. for Dunkirk.
MAIL, at 8½ a.m. for Dunkirk and Buffalo, and intermediate stations.—Passengers by this train will remain over night at any Station between Binghamton and Corning, and proceed the next morning.

ROCKLAND PASSENGER, at 2½ p.m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAY PASSENGER, at 4 p.m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5 p.m. for Dunkirk and Buffalo.
EMIGRANT, at 5 p.m., for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 5 p.m.
These Express Trains connect at Elmira, with the Elmira & Niagara Falls Railroad, for Niagara Falls, at Buffalo and Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.
47 tf. D. C. McCALLUM, General Supt.

DINSMORE'S RAILWAY GUIDE,

EDITED principally by the Railroad Superintendents themselves; making it the most reliable and perfect work of the kind published, and the only one containing the time tables of all the railroads in the United States and Canada.

Its extensive sale makes it one of the best ADVERTISING MEDIUMS EXTANT.

Sold principally in the Cars to travellers when they have leisure to read, and is taken by them not only as a Railroad Guide, but as a Directory to the best Mercantile and Mechanical

DINSMORE & CO., Publishers,
No. 9 Spruce st., N. Y.

Notice to Contractors.

OFFICE OF THE ALA. & FLA. R. R. CO. OF ALABAMA.
Montgomery, Ala., Nov. 3d, 1854.

SEALED proposals for the Graduation, Masonry and Bridging of sixty (67) seven miles of the Ala. & Fla. Railroad of Alabama, extending from Montgomery to the junction of the Sepalgat and Persimon Creeks in Conecuh County will be received at the office of the Company until the first Monday in December next.

Plans, specifications and profiles will be ready for inspection on and after the 15th inst.

The work on the first 25 miles is light, and the time allowed for the completion of contracts on this portion of the line will be 12 months.

On the remainder of the line two years will be given.

The payments offered are $\frac{2}{3}$ in cash and $\frac{1}{3}$ in the capital stock of the Company.

The provision crop along the line has been abundant, the country is perfectly healthy and work of such inviting character both in profile and material is rarely offered.

46 3t. SAMUEL G. JONES, Chief Eng'r.

Iron Rolling Mill Property for Sale.

The particular attention of capitalists desiring to enter AT ONCE (WITHOUT THE DELAY of putting up new works,) into the manufacturing of Iron, is called to the following:

The mill is situated UPON TIDE WATER (and ACCESSIBLE at ALL SEASONS of the year for shipments) between New York and Philadelphia—Coal can be had at the very lowest rates—and in point of convenience and situation is perhaps SECOND to NONE in THE COUNTRY. In ADDITION to its PRESENT adaptation to the manufacture of MERCHANT AND BOILER IRON, it has machinery in operation for making WROUGHT IRON RAILROAD CHAINS AND SPIKES, and could readily be prepared for MAKING RAILS together WITH ALL THE advantages of a first-class establishment. It is well known that in the present prosperous condition of the business THE PROPERTY WILL PAY ITSELF IN ONE YEAR and the reason of the property being disposed of, is that the owner is engaged in a heavy business in the State of New York. A VERY LIBERAL SPECIAL charter may BE BOUGHT, under which the Mill can be worked, if wanted. It is needless to say more, as parties interested can obtain all information by applying to

J. WOOD & SON,
76 South 4th street, Philadelphia.

P. S.—A portion of the purchase money may remain on the property, or otherwise. 44. 4t.

THOS. M. CASH,

PHILADELPHIA RAILWAY AGENCY,
FOR THE PURCHASE OF ALL ARTICLES
required by

RAILROAD COMPANIES

ON COMMISSION.

Office No. 80 South Fourth Street, near Walnut,

PHILADELPHIA.**REFERENCES.**

RICHARD NORRIS & SON, Locomotive Builders, Philadelphia.
WM. D. LEWIS, Esq., Pres't Catwissa R.R. Co., "
CHARLES H. FISHER, Esq., "
JOHN CALDWELL, Esq., Pres't S. Carol'n R.R. Co., Charleston.
J. PINCKNEY HEUGER, Esq., Pres't N. East'n R.R. Co., "

SEYMOUR, MORTON & CO.,

GENERAL RAILROAD AGENCY,

Office, Metropolitan Bank Building, No. 110 Broadway.

HAVE to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities: LOUISVILLE CITY BONDS, at 30 years.
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.
MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.
LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of railroads in any part of the country, including furnishing corps of engineers and contractors, locomotive engines and cars, railroad bridges, McCallum's Patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Notice to Contractors.

EUROPEAN & NORTH AMERICAN R. R.

NEW BRUNSWICK.

Contract for Sleepers or Cross Ties.

WANTED 100,000 Haemetæ or Cedar Sleepers to be delivered in equal proportions at the Port of St. John and the Bend of the Petitcodiac River on or before 1st of August next.

The Ties to be sound and straight, nine feet long, ten inches by six inches, with a hewn surface top and bottom of not less than eight inches.

Parties desirous of tendering for the above or any portion of them are requested to send in their prices to the undersigned at his office, St. John, on or before the 25th December, 1854.

W. E. ROSE.

St. JOHN, Nov., 1854.

47 4t.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
or, BRIDGES & BRO.,
64 Courtland st., New York.

19 1t

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE
SOUTH AND WEST.

Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 a.m. 12 45, 3 and 11 p.m.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$15 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	16 00

An extra charge will be made for meals and state rooms on board the boats. S. L. SPAFFORD,
27 1t General Sup't.

Faggotted Car and Engine Axles

FORGED BY RANETLAD, DEARBORN & CO., BOSTON, Mass.

These Axles are drawn from the faggot entirely by the hammer, and are all warranted.

Boiler and Tank Rivets,

Nuts and Washers;

All Sizes of

Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

Welded Wrought Iron Tubes.

THE subscribers having lately added to their Cumberland Nail and Iron Works an establishment for making Wrought Iron Tubes, are now prepared to supply the trade with tubes two to twelve feet in length, furnished with screws and ferrules on their ends, of the following sizes—inside diameter,

$\frac{3}{4}$, $\frac{1}{2}$, $\frac{3}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$ and 2 inches. Warranted and fully proved, equal to the best Pipes manufactured.

All orders addressed to us will receive prompt attention, and liberal discounts from the list of prices will be allowed to the trade.

REEVES, BUCK & Co.,

No. 45 North Water Street, Philadelphia.

July 13, 1854.

28. 6m.

Railroad Iron.

THE Undersigned, having made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton Works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchants Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWETT

17 Burling Slip, New York.

February 16, 1850.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Columbus, Ga., Sept. 5th, 1854.

SEALED PROPOSALS, will be received by the Undersigned at this office until the 1st day of December, for the clearing, graduation, Track-Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 180 miles.—The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work $5\frac{1}{2}$ miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two rivers will be crossed with the common pile bridging, with Truss Pivot draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The country is healthy, with no swamps after leaving the Tensas River; from Mobile to the river (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third ($\frac{1}{3}$) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common stock of the Road, and relying upon the earnings of the same for dividends; the balance ($\frac{1}{3}$) to be paid in the (.08) per cent. Convertible Bonds of the Company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus, Ga., Mobile, Ala., or in N. Y., at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding ($\frac{1}{4}$) the amount of the contract, for the timely and faithful completion of the same.

22 $\frac{1}{2}$ miles of the Road from Girard west will be open for business the first of November, and 52 miles nine months thereafter. It is the intention to have the entire line of 245 miles open for business early in 1858.

8t.37.

GEO. S. RUNEY.

Railroad Iron.

500 TONS No. 1 Gleggarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

99 and 101 John st.

N. B.—The above Iron constantly imported 32 1t.

Ontario, Simcoe & Huron R.R.

CANADA.

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day.—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kakoolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,

Superintendent.

For Sale.

A STATIONARY Engine having cylinders 13 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New York.

Jul. 14 29 tf.]

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and PASSENGER LOCOMOTIVES of different classes, with the most modern improvements.

also MACHINISTS' TOOLS,

especially adapted to Railroad Repair Shops, and to the construction of machinery generally. These Tools are of the most approved construction and consist in part of Engine Lathes, Hand Lathes, Vertical Drilling Lathes, and Planers of various sizes and lengths, Compound Planers, Shaping Machines, Slotting Machines, Bolt and Nut Machines, Gear Cutting Engines, Chucks, Compound Slide Rests, Machines for boring Crank Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c. COTTON MACHINERY of all descriptions, BOILERS, SHAFTING and MILL WORK, CASTINGS, and all work usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Supt., Lowell, Mass.
J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

WANTED.—To take charge of the sale or introduction of certain valuable PATENTED MECHANICAL INVENTIONS, a person who can furnish satisfactory evidence of character and ability, for such business.—Address, stating views as to remuneration, &c., L. P. C., Post Office, New York. 44 3t.

NEW YORK AND ERIE RAILROAD LOAN.—The Committee appointed to report in regard to the financial affairs of the New York and Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed proposals, to be opened on the 10th of January next, for the purchase of \$4,000,000 7 per cent. Bonds, redeemable in twenty years, with interest, coupons payable 1st February and 1st August.

And that for the purpose of gradually reducing the debt of the Company, the New York and Erie Railroad Company pledge themselves in said Bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of Trustees, to be by them invested, as well as the accruing interest on the investments, in the Bonds of the New York and Erie Railroad Company of the new issue, as long as they can be purchased at or under par. And that whenever the said Bonds of the new issue cannot be purchased at or under par, then the said Trustees to invest the said monthly payments and the accruing interest in any Bonds of the New York and Erie Railroad Company which can be purchased at or under par.

And whenever it shall be impossible to purchase any of the Bonds of the New York and Erie Railroad Company at or under par, then the said Trustees shall invest the said monthly payments and all accruing interest in such Bonds of the New York and Erie Railroad Company as can be purchased at the lowest rate.

And all Bonds on being purchased by said Trustees shall be canceled by writing or printing on the face "Held by the Sinking Fund of the New York and Erie Railroad Company," but that the interest warrants on said cancelled Bonds shall be collected by said Trustees, as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest or the conversion of convertible Bonds into Stock of this Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in said Trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to the Company.

And the Committee would further recommend that the Board of Directors adopt the following resolutions:

Whereas, The period has arrived when it is expedient and necessary to close the construction account of this Company, to be reopened only when the imperative necessity of the increasing traffic on the road, and the state of the finances

of the Company will render it perfectly evident that it is proper and justifiable to reopen it, so as to increase the present capacity of the Road.—Therefore

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after reimbursing the Income Bonds due 1st February next, be charged to transportation expenses.

Resolved, That as often as the Bonds purchased by the Sinking Fund amount to 10 per cent. on the Capital Stock, this Company will, upon receiving due authority from the Legislature of this State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in the daily papers, so that the public have cognizance of the future policy of the Company.

(Signed.)

CHARLES MORAN.
SHEPHERD KNAPP.
WILLIAM E. DODGE.
NELSON ROBINSON,
GEORGE F. TALMAN.

Special
Finance
Committee.

New York, Oct. 21, 1854.

Sealed proposals will be received at the office of the NEW YORK AND ERIE RAILROAD COMPANY in the City of New York, until the 10th of January, 1855, for the purchase of \$4,000,000 of the bonds of the Company, bearing 7 per cent. interest payable semi-annually on the 1st day of February and August, redeemable in twenty years.

The NEW YORK AND ERIE RAILROAD COMPANY pledge themselves in said bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And whenever it shall be impossible to purchase any of the bonds of the NEW YORK AND ERIE RAILROAD COMPANY at or under par, then the said trustees shall invest the said monthly payments and the accruing interest, in such bonds of the NEW YORK AND ERIE RAILROAD COMPANY as can be purchased at the lowest rates. And all bonds when purchased by the said trustees shall be cancelled by writing or printing on their face: "Held by the Sinking Fund of the NEW YORK AND ERIE RAILROAD COMPANY;" but the coupons on such cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the NEW YORK AND ERIE RAILROAD COMPANY, and the accruing interests, or the conversion of convertible bonds into stock of the Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in such Trustees be closed, and all cancelled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay 10 per cent. in cash on the notice of the acceptance of their bids; 20 per cent. on the 20th of January; 30 per cent. 1st February; 20 per cent. 15th February, and the balance on the 1st of March.

The Income Bonds of the NEW YORK AND ERIE RAILROAD COMPANY will be received in part payment at par, and the accrued interest till day of surrender to the Company.

The Directors of the NEW YORK AND ERIE RAILROAD COMPANY, in offering the present loan to the public beg leave to state that it will be amply sufficient to pay the Income Bonds redeemable on the 1st February next, and the entire present floating debt of the Company, as well

as to complete all the unfinished work now under way.

By a resolution of the Board of Directors, all future outlays or every kind beyond the proceeds of the present loan, will be charged to expense account, and paid from the income of the Company, after payment of the interest on the funded debt, and the monthly payment to the Sinking Fund.

After the negotiation of the present loan and the redemption of the Income Bonds, the position of the Company will be—

Stock.....	\$10,024,000
Bonds of 1867, First Mortgage.....	3,000,000
Bonds of 1859, Second Mortgage.....	4,000,000
Bonds of 1883, Third Mortgage.....	6,000,000
Bonds of 1862, Convertible.....	3,500,000
Bonds of 1871, Convertible.....	4,351,000
Bonds of 1875, present loan.....	4,000,000

Total.....\$24,875,000

In the opinion of the Directors it is perfectly safe to estimate the gross earnings of the Road, for the coming year, at \$6,000,000, from which must be deducted:

Expenses 55 per cent.....	\$3,300,000
Seven per cent. on debt \$24,851,000.....	1,739,570
Sinking Fund.....	420,000
	\$5,459,570

Net revenue equal to over 5 per cent. on stock applicable to cash dividends and contingencies..... 540,430

The Directors of the Company are confident these estimates will be fully realized. The gross receipts since the Road has been in operation to Dunkirk, have been for passengers and freight alone—

1851 to 1852	\$3,047,748	INCREASE.
1852 to 1853	4,138,424	\$1,090,676, say 35½ per cent.
1853 to 1854	5,122,666	984,242, say 23½ per cent.

The business of the road depending mainly on the local traffic, must inevitably increase in the same ratio as the population of the Counties through which it passes. In the opinion of the Superintendent, Mr. McCollum, the road in its present position and with its present equipment, can earn \$8,000,000. If the future increase in the receipts be estimated at only 15 per cent. per annum, which is not much over one-half of the average increase of the past the above utmost capacity of the road will be tested in 1858.

As to the running expenses, as they were only 53½ per cent. in 1853 and 1854, there is every probability that with rigid economy and an increase in the traffic, they can be reduced to 50 per cent., but they have been estimated at 55 per cent., so as to leave ample margin for contingencies.

The effect of the monthly purchases by the Trustees, of the Bonds of the present issue on their market value, cannot fail to be immediate, and will insure to the original purchasers a certain profit within a moderate time; for whilst the amount outstanding will decrease each month, the absorption by the Sinking Fund will constantly increase by the accruing interest on the Bonds in the hands of the Trustees. In 8½ years the Sinking Fund will absorb \$4,768,053, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among our most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie-place.

HOMER RAMSDALL, President.

NATHANIEL MARSH, Secretary.

New York, Oct. 23, 1854.



Patent Wrought Iron Railroad Chair.

THE undersigned are now prepared to manufacture their Patent Wrought Iron Railroad Chair, at the rate of fifteen tons per day. They are made exclusively from best Trenton Iron, which received the prize medal for strength at the World's Fair at London.

The patent is for the CHAIR itself—which is formed by raising the lip out of the plate sufficiently high to receive the rail. It is obvious that while the strain upon the lip is so slight as to remove all danger of its breaking, it becomes less the more tightly the lip is made to clasp the rail. The cheapness and durability of the chairs, and the facility with which the track can be adjusted, commend them to public favor.

SIZES AND PRICES.

A Chair 8 by 7 1/2 inches, 3-8 inch thick, cost 28 1/2 cents.	
" " " 7-16 " " " 33 "	
" " " 1-2 " " " 37 1/2 "	
" " " 5-8 " " " 47 "	

Other sizes are made to order at equivalent rates. Sample Chairs will be forwarded, free of charge, on application to
COOPER & HEWITT,
17 Burling Slip, New York.

December 1, 1852.

SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER
OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

To Civil Engineers.

A GRADUATE of one of the best schools of Civil Engineering in Europe, lately returned to this country, wishes to connect himself with an Engineer of eminence and experience, as assistant. —References unexceptionable as to qualifications and character. —Address Engineer, Box 3285, P. O., New York. 2t 45

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per lineal yard. For sale by

THEODORE DEHON,
26 1/2 Broadway,
New York.

Contracts made as above for Rails delivered American ports at lowest rates.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.
E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

ENGINEERS.

Atkinson, T. C.,
Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,
Chief Eng. Pittsburg and Connelville R.R. Co., Pittsburg, Pa.

Edward Boyle,
Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
Office 123 Chambers st.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,
Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M. O.,
Civil and Mining Engineer, Cumberland, Md.

C. Floyd-Jones.,
Division Engineer 3d and 12th Divisions,
ILLINOIS CENTRAL RAILROAD,
Vandalia, Ill.

Gay, Edward F.,
Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
Syracuse and Binghamton Railroad, Syracuse, N. Y.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,
New Orleans and Nashville R.R., Aberdeen, Miss.

Holcomb, F. P.
Chief Eng. Augusta and Waynesboro, and Savannah and P. & W. & A. Railroads, Marietta, Ga.

S. W. Hill,
Mining Engineer and Surveyor, Eagle River,
Lake Superior.

Huger, T. P.,
Northeastern Railroad, Charleston, S. C.

D. Mitchell, Jr.,
Chief Engineer Pittsburg and Steubenville, and Chartiers Valley Railroads, Pittsburg, Pa.

Samuel McElroy,
Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,
Sackets Harbor and Saratoga R. R., 24 William St., N. Y.

Miller, J. F.,
Buffalo and Conhocton Valley Railroad, Avon, N. Y.

Morris, Ellwood,
Engineer and Agent DAUPHIN & SUSQUEHANNA CO.,
Cold Spring, Lebanon Co., Pennsylvania.

Septimus Norris,
Civil and Mechanical Engineer, Philadelphia.

Saml. & G. H. Nott,
Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,
Civil Engineer, Office 73 South 4th st., Philadelphia.

Prichard, M. B.,
East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
Chief Engineer Alleghany Valley Railroad, Pittsburg, Pa.

Shanly, Walter,
Chief Engineer Bytown and Prescott Railway,
Prescott, Canada.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Schlatter, Charles L.,
Civil Engineer, Ogdensburg, N. Y.

Straughan, J. R.,
Ohio and Indiana Railroad, Bucyrus, Ohio.

Steele, J. Dutton,
Pottstown, Pa.

Charles B. Stuart,
Civil Engineer, New York.

Edward W. Serrell,
Civil Engineer, 157 Broadway, New York.

P. J. Tournadre,
Chief Engineer Vicksburg, Shreveport and Texas R.R.,
Vicksburg, Miss.

Trautwine, John C.,
Civil Engineer and Architect, Philadelphia.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,
Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

Whipple, S.,
Civil Engineer and Bridge Builder, Albany, N. Y.

Wm. J. Young
HAS removed his Engineering and Surveying Instrument Manufactory to No. 33, North Seventh Street, Philadelphia.

BUSINESS CARDS.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES AND LEVELS on a new principle, with Fraunhofer's Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by
E. & G. W. BLUNT,
New York, Dec. 1, 1851. No. 179 Water street.

James Herron, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.,

PATENTEE OF THE
HERRON RAILWAY TRACK
Models of this Track, on the most improved plan may be seen at the Engineer's office of the New York & Erie Railroad.

W. G. ATKINSON,
MINING ENGINEER, SURVEYOR AND DRAFTSMAN
CUMBERLAND, MARYLAND,

Will attend to business in his Profession in the Coal Region and vicinity.

REFERENCES:

Jerry Cones, Esq., New York.
Col. Wm. Young, do.
Jas. W. McCulloch, Esq., late U. S. Treas., Washington.
June 25, 1853.

To Engineers, Architects and Draftsmen.

THE undersigned begs respectfully to inform Gentlemen in the above professions, that he has constantly on hand a great variety of instruments for Field and Office use.

JAS. PRENTICE,
Feb. 9, 1853. 1 Chamber street, New York.

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings Private Dwellings, Stores and Factories, manufactured by the subscriber in great variety. Orders by Mail, or left at the Factory on Causeway street, will be promptly attended to.
HENRY N. HOOPER & CO.
Boston, March 23, 1850. 6m13

H. SAWYER

(of the late firm of SAWYER & HOBBY,
Manufacturer of Transits and Levels,

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

Sewall & Crehore

CIVIL ENGINEERS,
ST. PAUL MINNESOTA.

JOSEPH S. SEWALL.

CHAS. FARD. CREHORE.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and Warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.
December 18, 1852. **WM. S. SAMPSON, Agent.**

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 48.]

SATURDAY, DECEMBER 2, 1854.

[WHOLE No. 972, VOL. XXVII.]

Mr. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorized European Agent for the Journal.

PRINCIPAL CONTENTS.

Railway Policy and Railway Morals.....	761, 764
Journal of R. B. Law.....	767
Convention of Railroads in New York.....	768
Coal Burning Engines.....	769
Dauphin and Susquehanna R. R.....	769
Internal Improvement Convention in Virginia.....	769
Stock and Money Market.....	760
Connecticut and Passumpsic R. R.....	763
Saratoga and Sackett Harbor.....	763
Funded Debt of Savannah.....	764
Enlargement of the N. Y. Canals.....	764
Railroads in Alabama.....	764
Low Price of Stocks.....	764
Monetary Affairs in the West.....	765

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, December 2, 1854.

Railway Morals and Railway Policy.

(From the October Number of the Edinburgh Review.)

[Continued from Page 742.]

Need we any longer wonder, then, at the persistence of Railway Companies in seemingly reckless competition and ruinous extensions? Is not this obstinate continuance of a policy that has year after year proved disastrous, sufficiently explicable on contemplating the many illegitimate influences at work? Is it not manifest that the small organised party always out-manœuvres the large unorganised one? Consider their respective characters and circumstances. Here are the shareholders diffused throughout the whole kingdom, in towns and country houses, knowing nothing of each other, and too remote to co-operate were they acquainted. Very few of them see a railway journal; not many a daily one; and scarcely any know much of railway politics. Necessarily a fluctuating body, only a small number are familiar with the company's history—its acts, engagement, policy and management. A great proportion are incompetent to judge of the questions that come before them, and lack decision to act out such judgments as they may form—executors who do not like to take steps involving much responsibility; trustees fearful of interfering with the property under their care, least possible loss should entail a lawsuit; widows who have never in their lives acted for themselves in any affair of moment; maiden ladies, alike nervous and innocent of all business knowledge; clergymen whose

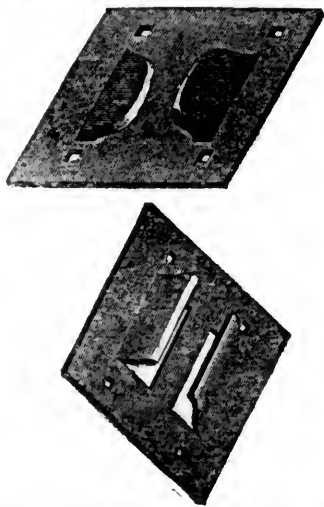
daily discipline has been little calculated to make them acute men of the world; retired tradesmen whose retail transactions have given them small ability for grasping large considerations; servants possessed of accumulated savings and cramped notions; with sundry others of like helpless character—all of them rendered more or less conservative by ignorance or timidity, and proportionately inclined to support those in authority. To these should be added the class of temporary shareholders, who, having bought stock on speculation, and knowing that a revolution in the company is likely to depress prices for a time, have an interest in supporting the board irrespective of the goodness of its policy. Turn now to those whose efforts are directed to railway expansion. Consider the constant pressure of local interests—of small towns, of rural districts, of land owners—all of them eager for branch accommodation; all of them with great and definite advantages in view; few of them conscious of the loss those advantages may entail on others. Remember the influence of legislators, prompted, some by their constituents, some by personal aims, and encouraged, most of them, by the belief that additional railway facilities are, in every case, nationally beneficial; and then calculate the extent to which, as stated to Mr. Cardwell's committee, Parliament has "excited and urged forward" companies into rivalry. Observe the temptations under which lawyers are placed—the vast profits accruing to them from every railway contest, whether ending in success or failure: and then imagine the magnitude and subtlety of their extension manœuvring. Conceive the urgency of the engineering profession, to the richer of whom more railway-making means more wealth; to the mass of whom more railway-making means daily bread. Estimate the capitalist power of contractors, unemployed plant brings heavy loss: whose plant when employed brings gain. Then recollect that to these last—lawyers, engineers and contractors,—the getting up and executing of new undertakings is a business—a business to which every energy is directed; in which long years of practice have given great skill; and to the facilitation of which all means tolerated by men of the world are thought justifiable. Finally, consider that the classes interested in carrying out new schemes are in constant communication, and have every facility for combined action. A great part of them live in London, and most of these have offices at Westminster—in Great George Street, in Parliament Street, clustering round the Legislature. Not only are they thus concentrated, not only are they, throughout the year, in frequent business intercourse; but during the session they are daily together, in Palace Yard hotels, in the lobbies, in the committee-rooms, in the House of Commons itself. Is it any wonder then that the wide

spread, ill-informed, unorganised body of shareholders standing severally alone, and each pre-occupied with his daily affairs, should be continually out-generalled by the comparatively small but active, skillful, combined body, opposed to them, whose very occupation is at stake in gaining the victory?

"But how about the directors?" It will perhaps be asked. "How can they be parties to these obviously unwise undertakings? They are themselves shareholders; they gain by what benefits the proprietary at large; they lose by what injures it. And if, without their consent, or rather their agency, no new scheme can be adopted by the company, the classes interested in fostering railway enterprise are powerless to do harm."

This belief in the identity of directorial and proprietary interests is the fatal error commonly made by the shareholders. It is this which, in spite of many bitter experiences, leads them to be so careless and so trustful. "Their profit is our profit; their loss is our loss; they know more than we do; therefore let us leave the matter to them." Such is the argument which more or less definitely passes through the shareholding mind—an argument of which the premises are vicious, and the inference disastrous. Let us consider in it detail.

Not to dwell upon the many disclosures that have in years past been made respecting the share-trading of bonds, and the large profits realised by it—disclosures which alone suffice to disprove the assumed identity between the interests of directors and proprietary—and taking for granted that little, if any, of this now takes place, let us go on to notice the still prevailing influences which render the apparent unity of purpose deceptive.—The immediate interest which directors have in the prosperity of the company, is often much less than is supposed. Occasionally they possess only the bare qualification of 1000*l.* worth of stock. In some instances even this is partly nominal. Admitting, however, as we do frankly, that in the great majority of cases the full qualification, and much more than the qualification is held, yet it must be borne in mind that the indirect advantages which a wealthy member of a board may gain from the prosecution of a new undertaking, will often far outweigh the direct injury it will inflict on him by the depreciation of his shares. A board usually consists, to a considerable extent, of gentlemen residing at different points throughout the tract of country traversed by the railway they control; some of them landowners; some merchants or manufacturers; some owners of mines or shipping. Almost always these are advantaged more or less by a new branch or feeder. Those in close proximity to it often gain great benefits either by enhanced value of land, or by increased facilities of transit for their commodities.



Patent Wrought Iron Railroad Chair.

THE undersigned are now prepared to manufacture their Patent Wrought Iron Railroad Chair, at the rate of fifteen tons per day. They are made exclusively from best Trenton Iron, which received the prize medal for strength at the World's Fair at London.

The patent is for the CHAIR itself—which is formed by raising the lip out of the plate sufficiently high to receive the rail. It is obvious that while the strain upon the lip is so slight as to remove all danger of its breaking, it becomes less the more tightly the lip is made to clasp the rail. The cheapness and durability of the chairs, and the facility with which the track can be adjusted, commend them to public favor.

SIZES AND PRICES.

A Chair 8 by 7 1/2 inches, 3-8 inch thick, cost 28 1/2 cents.	
" " " 7-10 " " " 33 "	
" " " 1-2 " " " 37 1/2 "	
" " " 5-8 " " " 47 "	

Other sizes are made to order at equivalent rates. Sample Chairs will be forwarded, free of charge, on application to COOPER & HEWITT, 17 Burling Slip, New York.

December 1, 1852.

SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

To Civil Engineers.

A GRADUATE of one of the best schools of Civil Engineering in Europe, lately returned to this country, wishes to connect himself with an Engineer of eminence and experience as assistant. --References unexceptionable as to qualifications and character. --Address Engineer, Box 3285, P. O., New York.

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per lineal yard. For sale by

THEODORE DEHON,
26 1/2 Broadway,
New York.

Contracts made as above for Rails delivered American ports at lowest rates.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.
E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

ENGINEERS.

Atkinson, T. C.,
Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,
Chief Eng. Pittsburg and Connellsville R.R. Co., Pittsburg, Pa.

Edward Boyle,
Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
Office 123 Chambers st.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,
Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M. O.,
Civil and Mining Engineer, Cumberland, Md.

C. Floyd-Jones,
Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD,
Vandalia, Ill.

Gay, Edward F.,
Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
Syracuse and Binghamton Railroad, Syracuse, N. Y.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,
New Orleans and Nashville R.R., Aberdeen, Miss.

Holcomb, F. P.
Chief Eng. Augusta and Waynesboro, and Savannah and P. Ma-
cola Railroads, Martha'sville, Macon Co., Ga.

S. W. Hill,
Mining Engineer and Surveyor, Eagle River,
Lake Superior.

Huger, T. P.,
Northeastern Railroad, Charleston, S. C.

D. Mitchell, Jr.,
Chief Engineer Pittsburg and Steubenville, and Chartiers Valley
Railroads, Pittsburg, Pa.

Samuel McElroy,
Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,
Sackets Harbor and Saratoga R. R., 24 William St., N. Y.

Miller, J. E.,
Buffalo and Conhocton Valley Railroad, Avon, N. Y.

Morris, Eliwood,
Engineer and Agent DAUPHIN & SESQUEHANNA CO.,
Cold Spring, Lebanon Co., Pennsylvania.

Septimus Norris,
Civil and Mechanical Engineer, Philadelphia.

Saml. & G. H. Nott,
Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,
Civil Engineer, Office 73 South 4th st., Philadelphia.

Prichard, M. B.,
East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
Chief Engineer Alleghany Valley Railroad, Pittsburgh, Pa.

Shanly, Walter,
Chief Engineer Bytown and Prescott Railway,
Prescott, Canada.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Schlatter, Charles L.,
Civil Engineer, Ogdensburg, N. Y.

Straughan, J. R.,
Ohio and Indiana Railroad, Bucyrus, Ohio.

Steele, J. Dutton,
Pottstown, Pa.

Charles B. Stuart,
Civil Engineer, New York.

Edward W. Serrell,
Civil Engineer, 157 Broadway, New York.

P. J. Tournadre,
Chief Engineer Vicksburg, Shreveport and Texas R.R.,
Vicksburg, Miss.

Trautwine, John C.,
Civil Engineer and Architect, Philadelphia.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,
Chief Engineer, Susquehanna Railroad, Harrisbu Pa.

Whipple, S.,
Civil Engineer and Bridge Builder, Albany, N. Y.

Wm. J. Young
HAS removed his Engineering and Surveying Instrument Man-
ufactory to No. 38, North Seventh Street, Philadelphia.

BUSINESS CARDS.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES AND LEVELS on a new principle, with Fraunhofer's Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by
E. & G. W. BLUNT,
New York, Dec. 1, 1851. No. 179 Water street.

James Herron, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.,

PATENTEE OF THE
HERRON RAILWAY TRACK
Models of this Track, on the most improved plan may be seen at the Engineer's office of the New York & Erie Railroad.

W. G. ATKINSON,
MINING ENGINEER, SURVEYOR AND DRAFTSMAN
CUMBERLAND, MARYLAND.

Will attend to business in his Profession in the Coal Region and vicinity.

REFERENCES:

Jerry Conles, Esq., New York.
Col. Wm. Young, do.
Jas. W. McCulloch, Esq., late U. S. Treas., Washington.
June 25, 1853.

To Engineers, Architects and Draughtsmen.

THE undersigned begs respectfully to inform Gentlemen in the above professions, that he has constantly on hand a great variety of instruments for Field and Office use.

JAS. PRENTICE,
Feb. 9, 1853. 1 Chamber street, New York.

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings Private Dwellings, Stores and Factories, manufactured by the subscriber in great variety. Orders by Mail, or left at the Factory on Causeway street, will be promptly attended to.
HENRY N. HOOPER & CO.
Boston, March 23, 1850. Gn13

H. SAWYER

(of the late firm of SAWYER & HOBBS),
Manufacturer of Transits and Levels.

HAS removed to Union Place near Warburton Av., Yonkers.
N. Y.

Sewall & Crehore

CIVIL ENGINEERS,
ST. PAUL MINESOTA.
JOSEPH S. SEWALL. CHAS FRED. CREHORE.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and Warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.
December 18, 1852. WM. S. SAMPSON, Agent.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 48.]

SATURDAY, DECEMBER 2, 1854.

[WHOLE No. 972, VOL. XXVII.]

Mr. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

Railway Policy and Railway Morals	761, 754
Journal of R. R. Law	757
Convention of Railroads in New York	758
Coal Burning Engines	759
Dauphin and Susquehanna R. R.	759
Internal Improvement Convention in Virginia ..	759
Stock and Money Market	760
Connecticut and Passumpsic R. R.	763
Saratoga and Sackets Harbor	763
Funded Debt of Savannah	764
Enlargement of the N. Y. Canals	764
Railroads in Alabama	764
Low Price of Stocks	764
Monetary Affairs in the West	765

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, December 2, 1854.

Railway Morals and Railway Policy.

(From the October Number of the Edinburgh Review.)

[Continued from Page 742.]

Need we any longer wonder, then, at the persistence of Railway Companies in seemingly reckless competition and ruinous extensions? Is not this obstinate continuance of a policy that has year after year proved disastrous, sufficiently explicable on contemplating the many illegitimate influences at work? Is it not manifest that the small organised party always out-manœuvres the large unorganised one? Consider their respective characters and circumstances. Here are the shareholders diffused throughout the whole kingdom, in towns and country houses, knowing nothing of each other, and too remote to co-operate were they acquainted. Very few of them see a railway journal; not many a daily one; and scarcely any know much of railway politics. Necessarily a fluctuating body, only a small number are familiar with the company's history—its acts, engagement, policy and management. A great proportion are incompetent to judge of the questions that come before them, and lack decision to act out such judgments as they may form—executors who do not like to take steps involving much responsibility; trustees fearful of interfering with the property under their care, lest possible loss should entail a lawsuit; widows who have never in their lives acted for themselves in any affair of moment; maiden ladies, alike nervous and innocent of all business knowledge; clergymen whose

daily discipline has been little calculated to make them acute men of the world; retired tradesmen whose retail transactions have given them small ability for grasping large considerations; servants possessed of accumulated savings and cramped notions; with sundry others of like helpless character—all of them rendered more or less conservative by ignorance or timidity, and proportionately inclined to support those in authority. To these should be added the class of temporary shareholders, who, having bought stock on speculation, and knowing that a revolution in the company is likely to depress prices for a time, have an interest in supporting the board irrespective of the goodness of its policy. Turn now to those whose efforts are directed to railway expansion. Consider the constant pressure of local interests—of small towns, of rural districts, of land owners—all of them eager for branch accommodation; all of them with great and definite advantages in view; few of them conscious of the loss those advantages may entail on others. Remember the influence of legislators, prompted, some by their constituents, some by personal aims, and encouraged, most of them, by the belief that additional railway facilities are, in every case, nationally beneficial; and then calculate the extent to which, as stated to Mr. Cardwell's committee, Parliament has "excited and urged forward" companies into rivalry. Observe the temptations under which lawyers are placed—the vast profits accruing to them from every railway contest, whether ending in success or failure: and then imagine the magnitude and subtlety of their extension manœuvring. Conceive the urgency of the engineering profession, to the richer of whom more railway-making means more wealth; to the mass of whom more railway-making means daily bread. Estimate the capitalist power of contractors, unemployed plant brings heavy loss: whose plant when employed brings gain. Then recollect that to these last—lawyers, engineers and contractors,—the getting up and executing of new undertakings is a business—a business to which every energy is directed; in which long years of practice have given great skill; and to the facilitation of which all means tolerated by men of the world are thought justifiable. Finally, consider that the classes interested in carrying out new schemes are in constant communication, and have every facility for combined action. A great part of them live in London, and most of these have offices at Westminster—in Great George Street, in Parliament Street, clustering round the Legislature. Not only are they thus concentrated, not only are they, throughout the year, in frequent business intercourse; but during the session they are daily together, in Palace Yard hotels, in the lobbies, in the committee-rooms, in the House of Commons itself. Is it any wonder then that the wide

spread, ill-informed, unorganised body of shareholders standing severally alone, and each pre-occupied with his daily affairs, should be continually out-generalled by the comparatively small but active, skillful, combined body, opposed to them—whose very occupation is at stake in gaining the victory?

"But how about the directors?" it will perhaps be asked. "How can they be parties to these obviously unwise undertakings? They are themselves shareholders; they gain by what benefits the proprietary at large; they lose by what injures it. And if, without their consent, or rather their agency, no new scheme can be adopted by the company, the classes interested in fostering railway enterprise are powerless to do harm."

This belief in the identity of directorial and proprietary interests is the fatal error commonly made by the shareholders. It is this which, in spite of many bitter experiences, leads them to be so careless and so trustful. "Their profit is our profit; their loss is our loss; they know more than we do; therefore let us leave the matter to them." Such is the argument which more or less definitely passes through the shareholding mind—an argument of which the premises are vicious, and the inference disastrous. Let us consider in it detail.

Not to dwell upon the many disclosures that have in years past been made respecting the share-trading of bonds, and the large profits realised by it—disclosures which alone suffice to disprove the assumed identity between the interests of directors and proprietary—and taking for granted that little, if any, of this now takes place, let us go on to notice the still prevailing influences which render the apparent unity of purpose deceptive.—The immediate interest which directors have in the prosperity of the company, is often much less than is supposed. Occasionally they possess only the bare qualification of 1000*l.* worth of stock. In some instances even this is partly nominal. Admitting, however, as we do frankly, that in the great majority of cases the full qualification, and much more than the qualification is held, yet it must be borne in mind that the indirect advantages which a wealthy member of a board may gain from the prosecution of a new undertaking, will often far outweigh the direct injury it will inflict on him by the depreciation of his shares. A board usually consists, to a considerable extent, of gentlemen residing at different points throughout the tract of country traversed by the railway they control; some of them landowners; some merchants or manufacturers; some owners of mines or shipping. Almost always these are advantaged more or less by a new branch or feeder. Those in close proximity to it often gain great benefits either by enhanced value of land, or by increased facilities of transit for their commodities,

Those at more remote parts of the main line, though less directly interested, are still frequently interested in some degree; and if it is one effecting a junction with some other system of railways the greater mercantile conveniences afforded to directors thus circumstanced become important. Obviously, therefore, the indirect profits accruing to such from the prosecution of one of these new undertakings, may more than counterbalance the direct loss upon their railway investments; and though there are, doubtless, men far too honorable to let such considerations sway them, yet the generality can scarcely fail to be affected by temptations so strong. Then we have further to bear in mind, the influences brought to bear upon directors having seats in Parliament. Already these have been noticed; and we recur to them only for the purpose of pointing out that here, too, the immediate evil of an increased discount on his 1000*l.* worth of stock may be to a director of much less consequence than the favors, patronage, influence, connections, position which his aid in the carrying of a new scheme will bring him—a consideration which, without saying how far it applies, suffices to show that in this respect, also, the supposed identity of interests between directors and shareholders does not hold.

But greatly as this supposed identity is weakened by the influences assigned, the disunion of interests they produce is further increased by the system of preference stock. Were there no other cause in action, this practice of raising capital for supplementary undertakings by the issue of shares bearing a guaranteed interest of 5, 6 and 7 per cent., would alone suffice to destroy that community of motives which is supposed to exist between a railway proprietary and its executive. Little as the fact is at present recognised, it is yet readily demonstrated that by raising one of these mortgages, a company is forthwith divided into two classes; consisting the one of the richer shareholders, inclusive of the directors, and the other of the poorer shareholders; of which classes the richer one can protect itself from the losses which the poorer one has to bear—nay, can even profit by the losses of the poorer one. This assertion, startling as it will be to many, we will proceed to prove.

When the capital required for the execution of a branch or extension is raised by means of guaranteed shares, it is the custom to offer to each proprietor the privilege of taking up a number of such shares proportionate to the number of his original shares. It is manifest that by availing himself of this offer, he more or less effectually projects himself against any possible loss which the new undertaking may entail. Should this, not fulfilling the promises of its advocates, diminish in some degree the general dividend, yet a high dividend on the due proportion of preference stock may nearly or quite compensate for this. Hence it becomes the policy of all who can do so, to take up as many guaranteed shares as they can get.—But what happens when the circular announcing this appointment of guaranteed shares is sent round to the proprietary? Those who possess much stock, being generally capitalists, forthwith apply for as many as they are entitled to. On the other hand, the smaller holders, constituting, as they do, the bulk of the company, having no available funds with which to pay the calls on new shares, are obliged to decline them. What results? When this additional line has been opened, and it turns out, as usual, that its revenue is insufficient to meet the guaranteed dividend on its shares—when the general income of the company is laid under contribution to make up this guaranteed dividend—when, as a consequence, the dividend on the original stock is diminished—then the poorer shareholders who possess original stock only find themselves losers; whilst the richer ones, possessing guaranteed shares in addition, find that their gain on preference dividends nearly or quite counterbalances their loss on general dividends. Indeed, as above hinted, the case is even worse. For as there is nothing requiring the large shareholder who has obtained his proportion of

guaranteed stock, to retain his original stock,—as, if he doubts the paying character of the new undertaking, there is no reason why he should not gradually dispose of such part of his investment as will suffer from it; it is obvious that he may, if he pleases, become the possessor of preference shares only; and may so obtain a handsome return for his money at the expense of the company at large and the small shareholders in particular. To what extent this policy is pursued we do not pretend to say. All which it here concerns us to notice is, that directors being almost always men of large means, and being therefore, able to avail themselves of this guaranteed stock by which, at least, much loss may be warded off, if not profit made, are liable to be swayed by motives different from those of the general proprietary. And that they often are so swayed there cannot be a doubt. Without assuming that any of them will be guilty of so flagitious an intention as that of benefitting themselves at the cost of their co-proprietors; and believing, as we do, that few of them duly realise the fact that the protection they will have, is a protection not available to the mass of the shareholders; we think it is a rational induction from common experience that this prospect of compensation will often turn the scale in the minds of those who are hesitating, and diminish the opposition on the part of those who disapprove.

Thus the belief which leads the majority of railway shareholders to place implicit faith in their directors, is an erroneous one. It is not true that there is an identity of interest between the proprietary and its executive. It is not true that the board forms an efficient guard against the intrigues of lawyers, engineers, contractors, and others who profit by railway-making. On the contrary, it is true that its members are not only liable to be drawn from their line of duty by various indirect motives, but that by the system of guaranteed shares they are placed under a positive temptation to betray their constituents.

And now what is the proximate origin of all these corruptions? And what is the remedy for them? What general error in railway legislation is it that has made possible such complicated chicaneries? How happens it that the representative system as applied to railway government is practically inoperative? Whence arises this facility with which interested persons continually thrust companies into unwise enterprises? We believe there is a very simple answer to these questions. It is an answer, however, which will, at first sight, be thought quite irrelevant; and we doubt not that the corollary we propose drawing from it will be forthwith condemned by practical men as incapable of being acted on. Nevertheless, if such will give us a little time to explain, we are not without hopes of showing both that the evils labored under would be excluded were this principle recognised, and that the recognition of it is not only feasible, but would even open the way out of some of the perplexities in which railway legislation is at present involved.

We conceive, then, that the fundamental vice of our system, as hitherto carried out, lies in the misinterpretation of the proprietary contract—the contract tacitly entered into between each shareholder and the body of shareholders with whom he unites; and that the remedy desired lies simply in the enforcement of an equitable interpretation of this contract. In reality it is a strictly limited one; in practice it is treated as altogether unlimited; and the thing needed is, that it should be clearly defined and abided by.

Our popular form of government has so habituated us to seeing public questions decided by the voice of the majority, and the system is so manifestly equitable in the cases daily before us, that there has been produced in the general mind an unhesitating belief that the majority's power is unbounded. Under whatever circumstances, or for whatever ends, a number of men co-operate, it is held that whatever difference of opinion arises among them, justice requires that the will of the greater number shall be executed rather than that of the smaller number; and this rule is supposed

to be uniformly applicable, be the question at issue what it may. Confirmed is the conviction, and so little have the ethics of the matter been considered, that to most this mere suggestion of a doubt will cause some astonishment. Yet it needs but a brief analysis to show that the opinion is little better than superstition. Instances may readily be selected, serving at once to prove by *reductio ad absurdum*, that the right of a majority is a purely conditional right, valid only within specific limits. Let us take a few. Suppose that at the general meeting of some philanthropic association, it was resolved that in addition to relieving distress the association should employ home-missionaries to preach down popery. Might the subscriptions of Catholics who had joined the body with charitable views be rightfully used for this end?—Suppose that of the members of a book-club, the greater number, thinking that under existing circumstances, rifle practice was more important than reading, should decide to change the purpose of their union, and to apply the funds in hand for the purchase of powder, ball and targets. Would the rest be bound to abide by this decision? Suppose that under the excitement of news from Australia, the majority of a Freehold Land Society should determine, not simply to start in a body for the gold diggings, but to use their accumulated capital to provide outfits. Would this appropriation of property be just to the minority? And must these join the expedition? Scarcely any one would venture an affirmative answer even to the first of these questions; much less to the others. And why? Because all must more or less clearly perceive that by uniting himself with others, no man can be equitably betrayed into acts utterly foreign to the purpose for which he joined them. Each of these supposed minorities would properly reply to those seeking to coerce them:—"We combined with you for a defined object; we gave money and time for the furtherance of that object; on all questions thence arising we tacitly agreed to conform to the will of the greater number; but we did not agree to conform on any other questions. If you induce us to join you by professing a certain end, and then undertake some other end of which we were not apprised, you obtain our support under false pretences; you exceed the expressed or understood compact to which we committed ourselves; and we are no longer bound by your decisions. Clearly this is the only rational interpretation of the matter. The general principle underlying the right government of every incorporated body, is, that its members contract with each other severally to submit to the will of the majority in all matters concerning the fulfilment of the object for which they were incorporated; but in no others. To this extent only can they contract. For as it is implied in the very nature of a contract that those entering into it must know what they contract to do; and as those who unite with others for a specified object cannot contemplate all the unspecified objects which it is hypothetically possible for the union to undertake; it follows that the contract entered into cannot extend to such unspecified objects; and if there exists no expressed or understood contract between the union and its members respecting unspecified objects, then, for the majority to coerce the minority into undertaking them, is nothing less than gross tyranny.

Now this almost self-evident principle is wholly ignored alike in our legislation and the proceedings of our companies. Definite as is the purpose with which the promoters of a public enterprise combine, endless other purposes not dreamed of at the outset are commonly added to it; and this, apparently without any suspicion that such a course is altogether unwarrantable, unless taken with the unanimous consent of the proprietors.—The unsuspecting shareholder who signed the subscription contract for a line from Greatborough to Grandport, did so under the belief that it would not only be a public benefit but a good investment. He was familiar with the country; he had been at some trouble to estimate the traffic; and fully believing that he knew what he was embarking in,

he put down his name for a large amount. The line has been made: a few years of prosperity have justified his foresight: when, at some fatal special meeting, a project is put before him for a branch from Littlehomestead to Stonyfield. The will of the board and the intrigues of the interested overbear all opposition; and in spite of the protests of so many who, like him, see its impolicy he presently finds himself in an undertaking which when he joined the promoters of the original line, he had not the remotest conception would ever be proposed. From year to year this proceeding is repeated; his dividends dwindle and his shares go down; and eventually the congeries of enterprises to which he is committed, grows so vast, that the first enterprise of the series becomes but a small fraction of the whole. Yet it is in virtue of his consent to this first of the series that all the rest are thrust upon him. He feels that there is an injustice somewhere; but believing in the unlimited right of a majority, fails to detect it. He does not see that when the first of these extensions was proposed he should have denied the power of his brother shareholders to implicate him in an undertaking not contemplated in their deed of incorporation. He should have told the advocates of such undertaking that they were perfectly free to form a separate company for the execution of it; but that they could not rightfully compel dissentients to join in a new project, any more than they could rightfully compelled the dissentients so join in the original project. Had such a shareholder united with others for the specified general purpose of *making railways*, he would have no ground for protest. But he united with others for the specified purpose of *making a particular railway*. Yet such is the confusion of ideas on the subject, that there is absolutely no difference recognized between these cases!

It will doubtless be alleged in defence of all this, that these secondary enterprises are in reality supplementary to the original one; are in some sense undertaken for the furtherance of it; professedly minister to its prosperity; cannot, therefore, be regarded as altogether separate enterprises. And it is true that they have this for their excuse. But if it is a sufficient excuse for accessories of this nature it may be made a sufficient excuse for any accessories whatever. Already companies have carried the practice beyond the making of branches and extensions. Already under the plea of bringing more traffic to their lines, they have constructed docks; bought lines of steam-packets; built vast hotels; deepened river channels. Already they have created small towns for their workmen; erected churches and schools; salaried clergymen and teachers. Are these warranted on the ground of advancing the Company's interests? Then thousands of other undertakings are similarly warranted. If a view to the development of traffic justifies the making of a branch to some neighboring coal mines, then, should the coal mines be inefficiently worked, the same view would justify the purchase of them—would justify the Company in becoming coal-miners and coal-sellers. If anticipated increase of goods and passengers is a sufficient reason for carrying a feeder into an agricultural district, then is it a sufficient reason for organizing a system of coaches and wagons to run in connexion with this feeder; for making the requisite horse-breeding establishment; for hiring the needful farms; for buying estates; for becoming agriculturists. If it be allowable to purchase steamers plying in conjunction with it; it must be allowable to set up a yard for building such vessels; it must be allowable to erect depots at foreign ports for the receipt of goods; it must be allowable to employ commission agents for the collection of such goods; it must be allowable to extend a mercantile organization all over the world. From making its own engines and carriages, a Company may readily progress to manufacturing its own iron and growing its own timber. From giving its employees secular and religious instruction, and providing houses for them, it may go on to supply them with food, clothing, medical attendance, and all the needs of life. From being a

simply a corporation to make and work a railway, between A. and B., it may become a miner, manufacturer, merchant, ship-owner, canal proprietor, hotel-keeper, land-owner, house-builder, farmer, retail dealer, priest, teacher—an organization of indefinite extent and complication. There is no logical alternative between permitting this, and strictly limiting the corporation to the object first agreed upon. A man joining with others for a specific purpose, must be held to commit himself to that purpose only; or else to all purposes whatever that they may choose to undertake.

But proprietors dissenting from one of these supplementary projects are told that they have the option of selling out. So might the dissentients from a new State-enforced creed be told, that if they did not like it they might leave the country. The one reply is little more satisfactory than the other would be. The opposing shareholder sees himself in possession of a good investment—one, perhaps, which, as an original subscriber, he ran some risk in obtaining; this investment is now about to be endangered by an act named in the deed of incorporation; and his protests are met by saying, that if he fears the danger he may part with his investment. Surely this choice between two evils scarcely meets his claims. Moreover, he has not even this in any fair sense. The very rumor of one of these extensions frequently causes a depreciation of stock. And if many of the minority throw their shares on the market this depreciation is greatly increased; a fact which further hinders them from selling. Thus the choice is in reality between parting with a good investment at much less than its value; and running the risk of having its value greatly diminished.

The injustice inflicted upon minorities in the prosecution of this extension policy is, indeed, already recognized in a certain vague way. The recently established Standing Order of the House of Lords, that before a company can carry out any new undertaking, three-fourths of the votes of the proprietors shall be recorded in its favor, clearly implies a perception that the usual rule of the majority does not apply. And again, in the case of the Great Western Railway Company *versus* Rushout, the decision that the funds of the Company could not be used for purposes not originally authorized, without a special legislative permit, involves the doctrine that the will of the greater number is not of unlimited validity. In both these cases, however, it is taken for granted that a State-warrant can justify what without it would be unjustifiable. We must take leave to question this. If it be held that an Act of Parliament can make murder proper, or can give rectitude to robbery, it may be consistently held that it can sanctify a breach of contract; but not otherwise. We are not about to enter upon the vexed question of the standard of right and wrong; and to inquire whether it is the function of a Government to make rules of conduct, or, simply to enforce rules deducible from the laws of social life. We are content for the occasion, to adopt the expediency-hypothesis; and adopting it, must yet contend that, rightly interpreted, it gives no countenance to this supposed power of a Government to alter the limits of an equitable contract against the wishes of some of the contracting parties. For as understood by its teachers and their chief disciples, the doctrine of expediency is not a doctrine implying that each particular act is to be determined by the particular consequences that may be expected to flow from it; but that the general consequences of entire classes of acts having been ascertained by induction from experience, rules shall be framed for the regulation of such classes of acts, and each rule shall be uniformly applied to every act coming under it. Our whole administration of justice proceeds on this principle of invariably enforcing an ordained course, regardless of special results. Were immediate consequences to be considered, the verdict gained by the rich creditor against the poor debtor would generally be reversed: for the starvation of the last is a much greater evil than the inconvenience of the first. Most thefts arising from distress would go

unpunished; a great proportion of men's wills would be cancelled; many of the wealthy would be dispossessed of their fortunes. But it is clearly seen, that were judges thus guided by proximate evils and benefits, the ultimate result would be social confusion; that what was immediately expedient would be ultimately inexpedient; and hence the aim at rigorous uniformity, spite of incidental hardships. Now, the binding nature of agreements is one of the commonest and most important principles of civil law. A large part of the causes daily held in our courts involve the question, whether in virtue of some expressed or understood contract, those concerned are, or are not bound to certain acts or certain payments. And when it has been decided what the contract implies, the matter is settled. The contract itself is held sacred. And this sacredness of a contract, being, according to the expediency-hypothesis, justified by the experience of all nations in all times that it is generally beneficial, it is not competent for a Legislature to declare that contracts are violable. Assuming always that the contracts are themselves equitable, there is no rational system of ethics which warrants the alteration or dissolving of them save by the consent of all concerned. If then it be shown, as we think it has been shown, that the contract tacitly entered into by railway shareholders with each other has definite limits, it is the function of the Government to *enforce*, and not to *abolish*, those limits. It cannot decline to enforce them without running counter, not only to all theories of moral obligation, but to its own judicial system. It cannot abolish them without glaring self-stultification.

Returning, for a moment, to the manifold evils, of which the misinterpretation of the proprietary contract was assigned as the cause, it only remains to point out that were the just construction of this contract insisted upon, such evils would, in great part, be impossible. The various illicit influences by which Companies are daily betrayed into disastrous extensions would necessarily be inoperative when such extension could not be undertaken by them. When such extension had to be undertaken by independent bodies of shareholders with no one to guarantee them good dividends, the local and class interests would find it a less easy matter than at present to aggrandize themselves at the expense of others.

And now as to the policy of thus modifying railway legislation—the commercial policy we mean. Leaving out of sight the more general social interests, let us glance at the effect on mercantile interests—the proximate in the train of the ultimate effects. The implication contained in the last paragraph, that the making of branches and supplementary lines would no longer be so facile, will be thought to prove the disadvantage of any such limit as the one advocated. Many will argue that to restrict Companies to their original undertakings would fatally cripple railway enterprise. Many others will remark that, however detrimental to shareholders this extension system may have been, it has manifestly proved beneficial to the public. Both these positions seem to us more than questionable. We will first look at the last of them.

Even were travelling accommodation the sole thing to be considered, it would not be true that prodigality in new lines has been advantageous. The districts supplied have, in many cases, themselves been injured by it. It is shown by the evidence given before the Select Committee on Railway and Canal Bills, that in Lancashire the existence of competing lines, has, in some cases, both diminished the facilities of communication and increased the cost. It is further shown by this evidence that a town obtaining branches from two antagonist Companies, by-and-by, in consequence of a working arrangement between these Companies, comes to be worse off than if it had but one branch—and Hastings is quoted as an example. It is again shown that a district may be wholly deprived of railway accommodation by the granting of the superfluity of lines; as in the case of Wilts and Dorset. In 1844-5, the Great West-

ern and South Western Companies projected rival systems of lines supplying these and parts of the adjacent counties. The Board of Trade "asserting that there was not sufficient traffic to remunerate an outlay for two independent railways," reported in favor of the Great Western schemes, and bills were granted for them; a certain agreement, suggested by the Board of Trade, being at the same time made with the South Western, which, in return for reciprocal advantages, conceded this district to its rival. Notwithstanding this agreement the South Western, in 1847, projected an extension calculated to take most of the traffic from the Great Western extensions; and in 1848, Parliament, though it had virtually suggested this agreement, and the Great Western Company had already spent a million and a half in the part execution of the new lines, authorized the South Western project. The result was, that the Great Western Company suspended their works; the South Western Company were unable, from financial difficulties, to proceed with theirs; the district has remained for years unaccommodated; and only since the powers granted to the South Western have expired from delay, has the Great Western re-commenced its long suspended undertakings.

And if this excessive multiplication of supplementary lines has often directly decreased the facilities of communication, still more has it done this indirectly, by maintaining the cost of travelling on the main lines. Little as the public in general are conscious of the fact, it is nevertheless true that they pay for the accommodation of unremunerative districts by high fares in remunerative districts. Before this reckless branch-making commenced, 8 and 9 per cent. were the dividends returned by our chief railways; and these dividends were rapidly increasing. The maximum dividend allowed by their Acts is 10 per cent. Had there not been unprofitable extensions this maximum would have been reached many years since; and in the absence of the power to undertake new works, the fact that it had been reached could not have been hidden. Lower rates for goods and passengers would necessarily have followed. These would have caused a large increment of traffic; and with the aid of the natural increase otherwise going on, the maximum would shortly again have been reached. There can scarcely be a doubt that repetitions of this process would, before now, have reduced the fares and freights on our main lines to at least one-third less than the present ones. This reduction, be it remembered, would have affected those railways which subserve commercial and social intercourse in the greatest degree,—would, therefore, have applied to the most important part of the traffic throughout the kingdom. As it is, however, the greater proportion of the traffic has been heavily taxed for the benefit of the smaller proportion.—That the tens who travel on branches might have railway communication, the hundreds who travel along main lines have been charged 30, perhaps 40 per cent. extra. Nay, worse; that these tens might be accommodated, the hundreds who would have been brought on to the main lines by lower fares have gone unaccommodated. Is it then so clear that undertakings which may have been disastrous to shareholders have yet been beneficial to the public?

But it is not only in greater cost of transit that the evil has been felt; it has been felt also in diminished safety. The multiplication of railway accidents which has of late years drawn so much attention, has been, in no inconsiderable degree, caused by the extension policy. The relation is not obvious: and we had ourselves no conception that such a relation existed until the facts illustrative of it were furnished to us by a director who had witnessed the whole process of causation. When preference share dividends and guarantees began to make large draughts upon half-yearly revenues—when original stock was greatly depreciated, and the dividends upon it fell from 9 and 8 per cent. to 4½ and 4 and 2½, great dissatisfaction necessarily arose amongst shareholders.—

There were stormy meetings, motions of censure, and committees of investigation. Retrenchment was the general cry; and retrenchment was carried to a most imprudent extent. Directors with an indignant proprietary to face, and under the fear that their next dividend would be no greater, perhaps less, than the last, dared not to lay out money for the needful repairs. Permanent way, reported to them as requiring to be replaced, was made to serve awhile longer. Old rolling stock was not superseded by new to the proper extent; nor increased in proportion to the demand. Committees, appointed to examine where the expenditure could be cut down, went round discharging a porter here, dispensing with a clerk there, and diminishing the salaries of the officials in general.—To such a length was this policy carried, that in one case, to effect a saving of £1,200 per annum, the working staff was so crippled as to cause, in the course of a few years, a loss of probably £100,000,—such, at least, is the opinion of the gentleman on whose authority we make this statement, who was himself one of the retrenchment committee. What, now, was the result of all this? With the line out of condition; with engines and carriages neither sufficient in number nor in the best working order; with drivers, guards, porters, clerks and the rest decreased to the smallest number with which it was possible to work; with inexperienced managers in place of the experienced ones driven away by reduced salaries; what was likely to occur? Was it not certain that an apparatus of means just competent to deal with the ordinary traffic, would be incompetent to deal with extraordinary traffic? that a decimated body of officials under inferior regulation would fail in the emergencies sure from time to time to occur? that with way and works and rolling stock all below par, there would occasionally be a concurrence of small defects, permitting something to go wrong? Was not a multiplication of accidents inevitable? No one can doubt it. And if we trace back this result step by step to its original cause—the reckless expenditure in new lines—we shall see further reason to doubt whether such expenditure has been as advantageous to the public as is supposed. We shall hesitate to indorse the opinion of the Select Committee on Railway and Canal Bills, that it is desirable "to increase the facility for obtaining lines of local convenience."

Still more doubtful becomes that alleged benefit accruing to the public from extensions that cause loss to shareholders, when, from considering the question as one of traffic, we turn to consider it as a general commercial question—a question of political economy. Were there no facts showing that the travelling facilities lost, we should still contend that the making of branches that do not return fair dividends, is a national evil, and not a national good. The prevalent error committed in studying matters of this nature consists in looking at them separately, rather than in connection with other social wants and social benefits. Not only does one of these undertakings, when executed, affect society in various ways, but the effort put forth in the execution of it affects society in various ways; and to form a true estimate, the two sets of results must be compared. The axiom that "action and reaction are equal, and in opposite directions," is true, not only in mechanics,—it is true everywhere. No power can be put forth by a nation to achieve a given end, without producing for the time being a corresponding inability to achieve some other end. No amount of capital can be abstracted for one purpose without involving an equivalent lack of capital for another purpose. Every advantage wrought out by labour is purchased by the relinquishment of some alternative advantage which that labour might else have wrought out. In judging, therefore, of the benefits flowing from any public undertaking, it is requisite to consider them not by themselves, but as contrasted with benefits which the invested capital would otherwise have secured. But how can these relative benefits be measured? it may be asked. Very simply. The rate of interest which the capital

will bring as thus respectively applied, is the measure. Money which, if used for a specific end, gives a smaller return than it would give if otherwise used, is used disadvantageously, not only to its possessors, but to the community. This is a corollary from the commonest principles of political economy—a corollary so simple that we can scarcely understand how, after the free-trade controversy, a committee, numbering among its members Mr. Bright and Mr. Cardwell, should have overlooked it. Have we not been long ago taught that in the mercantile world capital goes where it is most wanted—that the business which is at any time attracting capital by unusually high returns, is a business proved, by that very fact, to be unusually active—that its unusual activity shows society to be making great demands upon it; giving it high profits; wanting its commodities or services more than other commodities or services? Do not comparisons among our railways demonstrate that those paying large dividends are those subserving the public needs in a greater degree than those paying smaller dividends? and is it not obvious that the efforts of capitalists to get these large dividends led them to supply the greater needs before the lesser needs? Surely, the same law which holds in ordinary commerce, and also holds between one railway investment and another, holds likewise between railway investments and other investments. If the money expended in making branches and feeders is yielding an average return of from 1 to 2 per cent., whilst if employed in land-draining or shipbuilding, it would return 4 or 5 per cent. or more, it is a conclusive proof that money is more wanted for land-draining and shipbuilding than for branch-making. And the general conclusions to be drawn are, that that large proportion of railway capital which does not pay the current rate of interest, is capital ill laid out; that if the returns on such proportion were capitalized at the current rate of interest, the resulting sum would represent its real value; and that the difference between this sum and the amount expended would indicate the national loss—a loss which, on the lowest estimate, would exceed 100,000,000. And however true it may be that the sum invested in unprofitable lines will go on increasing in productiveness, yet as, if more wisely invested, it would similarly have gone on increasing in productiveness, perhaps even at a greater rate, this vast loss must be regarded as a permanent and not as a temporary one.

Again, then, we ask, is it so obvious that undertakings which have been disastrous to shareholders have yet been advantageous to the public? Is it not obvious, rather, that in this respect, as in others, the interests of shareholders and the public are in the end identical? And does it not seem, that instead of recommending "increased facilities for obtaining lines of local convenience," the Select Committee might properly have reported, that the existing facilities are abnormally great, and should be decreased?

There remains still to be considered the other of the two objections above adverted to as liable to be raised against the proposed interpretation of the proprietary contract—the objection, namely, that it would be a serious hindrance to railway enterprise. After what has already been said, it is scarcely needful to reply, that the hindrance would be no greater than is natural and healthful—no greater than is requisite to hold in check the private interests at variance with public ones.—This motion that railway enterprise will not be carried on with due activity without artificial incentives—that bills for local extensions—"rather need encouragement," as the committee say, is nothing but a remnant of protectionism. The motive which has hitherto led to the formation of all independent railway companies—the search of capitalists for good investments,—may safely be left to form others as fast as local requirements become good enough to promise fair returns; as fast, that is, as local requirements should be satisfied. This would be manifest enough without illustration; but there are facts proving it.

Already we have incidentally referred to the circumstance, that it has of late become common for landowners, merchants, and others locally interested, to get up railways for their own accommodation, which they do not expect to pay satisfactory dividends; and in which they are yet content to invest considerable sums, under the belief that the indirect profits accruing to them from increased facilities of traffic, will out-balance the direct loss. To so great an extent is this policy being carried, that, as stated to the Select Committee, "in Yorkshire and Northumberland, where branch lines are being made through mere agricultural districts, the landowners are giving their land for the purpose, and taking shares." With such examples before us it cannot rationally be doubted that there will always be capital forthcoming for the making of local lines as soon as the sum of the calculated benefits, direct and indirect, justifies its expenditure.

"But," it will be urged, "a branch that would be unremunerative, as independent property is often remunerative to the company that has made it in virtue of the traffic it brings to the trunk line. Though yielding meagre returns on its own capital, yet, by increasing the returns on the capital of the trunk line, it compensates, or more than compensates. Were the existing company, however, forbidden to extend its undertaking, such a branch would not be made; and injury would result." This is all true, with the exception of the last assertion, that such a branch would not be made. Though in its corporate capacity the company owning the trunk line would be unable to join in a work of this nature, there would be nothing to prevent individual shareholders in the trunk line from doing so to any extent they thought fit; and were the prospects as favourable as is assumed, this course, being manifestly advantageous to individual shareholders, would be pursued by many of them. If, acting in concert with others similarly circumstanced, the owner of £10,000 worth of stock in the trunk line, could aid the carrying out of a proposed feeder promising to return only two per cent. on its cost, by taking shares to the extent of £1000, it would answer his purpose to do this, providing the extra traffic it brought would raise the trunk line dividend by one fourth per cent. Thus, under a limited proprietary contract, companies would still, as now, foster extensions where they were wanted; the only difference being that in the absence of guaranteed dividends some caution would be shown; and the poorer shareholders would not, as at present, be sacrificed to the richer.

In brief, our position is that whenever, by the efforts of all parties to be advantaged—local landowners, manufacturers, merchants, trunk-line shareholders, &c.—the capital for an extension can be raised—whenever it becomes clear to all such that their indirect profits plus their direct profits will make the investment a paying one, the fact is proof that the line is wanted. On the contrary, whenever the prospective gains to those interested, are sufficient to induce them to undertake it, the fact is proof that the line is not wanted so much as other things are wanted; and therefore ought not to be made. Instead then of the principle we advocate being objectionable as a check to railway enterprise, one of its merits is, that by destroying the artificial incentives to such enterprise, it would confine it within moral limits.

A perusal of the evidence given before the Select Committee will show that it has sundry other merits, which we have space only to indicate.

It is estimated by Mr. Lang—and Mr. Stephenson, whilst declining to commit himself to the estimate, "does not believe he has overestimated it,"—that out of the 280,000,000*l.* already raised for the construction of our railways, 70,000,000*l.* has been needlessly spent in contests, in duplicate lines, in "the multiplication of an immense number of schemes prosecuted at an almost reckless expense; and Mr. Stephenson believes that this sum is a very inadequate representative of the

actual loss in point of convenience, economy, and other circumstances connected with traffic, which the public has sustained by reason of parliamentary carelessness in legislating for railways." Under an equitable interpretation of the proprietary contract, the greater part of this would have been avoided.

The competition between rival companies in extension and branch making, which has already done vast injury, and the effects of which, if not stopped, will, in the opinion of Mr. Stephenson, be such that "property now paying 5½ per cent. will in ten years be worth only 3 per cent., and that on twenty-one millions of money,"—this competition could never have existed in its intense and deleterious form under the limiting principle we advocate.

Prompted by jealousy and antagonism, our companies have obtained powers for 2000 miles of railway which they have never made. The millions thus squandered in surveys and parliamentary contests—"food for lawyers and engineers"—would nearly all have been saved, had each supplementary line been obtainable only by an independent body of proprietors with no one to shield them from the penalties of reckless scheming.

It is admitted that the branches and feeders constructed from competitive motives have not been laid out in the best directions for the public. To defeat, or retaliate upon, opponents, having been one of the ends—often the chief end—in making them, routes have been chosen specially calculated to effect this end; and the local traffic has in consequence been ill provided for. Had these branches and feeders, however, been left to the enterprise of their respective districts, aided by such other enterprise as they could attract, the reverse would have been the fact; seeing that on the average, in these smaller cases as in the greater ones, the routes which most accommodate the public must be the routes most profitable to projectors.

Were the illegitimate competition in extension-making done away, there would remain between companies just that normal competition which is advantageous to all. It is not true, as is alleged, that there cannot exist between railways a competition analogous to that which exists between traders. The evidence of Mr. Saunders, the secretary of the Great Western Company, proves the contrary. He shows that where the Great Western and the North Western railways communicate with the same towns, as at Birmingham and Oxford, each has tacitly adopted the fare which the other was charging; and that whilst there is thus no competition in fares, there is competition in speed and accommodation. The results are, that each takes that portion of the traffic, which in virtue of its position and local circumstances, naturally falls to its share; that each stimulates the other to give the greatest advantages it can afford; and that each keeps the other in order by threatening to take away its natural share of the traffic, if, by ill-behaviour or inefficiency, it counter-balances the special advantages it offers. Now, this is just the form which competition eventually assumes between traders. After it has been ascertained by underselling what is the lowest remunerative price at which any commodity can be sold, the general results are, that that becomes the established price; that each trader is content to supply those only who, from proximity or other causes, naturally come to him; and that only when he treats his customers badly, need he fear that they will inconvenience themselves by going elsewhere for their goods.

Is there not then, pressing need for an amendment of the laws affecting the proprietary contract,—an amendment which shall transform it from an unlimited into a limited contract? or rather,—not transform it into such, but recognise it as such? If there be truth in our argument, the absence of any limitation has been the chief cause of the manifold evils of our railway administration. The share-trickery of directors; the complicated intrigues of lawyers, engineers, contractors, and

others; the betrayal of proprietaries,—all the complicated corruptions which we have detailed, have primarily arisen from it, have been made possible by it. It has rendered travelling more costly and less safe than it would have been; and whilst apparently facilitating traffic, has indirectly hindered it. By fostering antagonism, it has led to the ill laying out of supplementary lines; to the wasting of enormous sums in useless parliamentary contests; to the loss of an almost incredible amount of national capital in the making of railways for which there is no due requirement. Regarded in the mass, the investments of shareholders have been reduced by it to less than half the average productiveness which such investments should possess; and, as all authorities admit, railway property is, even now, kept below its real value by the fear of future depreciations consequent on future extensions. Considering then the vastness of the interests at stake,—considering that the total capital of our companies will soon reach 300,000,000*l.*,—considering on the one hand, the immense number of persons owning this capital (many of them with no incomes but what are derived from it,) and, on the other hand, the greater extent to which the community is concerned, both directly as to its commercial facilities, and indirectly as to the economy of its resources,—considering all this, it becomes extremely important, that railway property should be placed on a secure footing, and railway enterprise confined within normal bounds. The change is demanded alike for the welfare of shareholders and the public; and it is one which equity manifestly dictates. No charge of over-legislation can be brought against it. It is simply an extension to joint-stock contracts of the principle applied to all other contracts; it is merely a fulfilment of the State's judicial function in cases hitherto neglected; it is nothing but a better administration of justice.

Journal of Railroad Law.

LIABILITY OF RAILROAD COMPANIES FOR ACCIDENTAL DESTRUCTION OF PROPERTY.

We copy from the "State of Maine" the following important decision of the Supreme Court of Maine in reference to the liability of Railroad Companies for the accidental destruction of property, not in charge, or possession of the Company.

Chapman vs. Atlantic & St. Lawrence Railroad Co.

This was an action of the case, commenced under a statute of this State, in 1852, in which the plaintiff claimed damage for the loss of about nine hundred cedar posts, deposited on his own land, on the line of the defendants' railroad track, in the town of Bethel, which were consumed by fire from a locomotive engine, communicated by a passenger train from Portland to Montreal, in October, 1852.

The defendants' counsel raised several legal points in the defence:—

1. That in order to entitle the plaintiff to recover, he must prove negligence or unskillfulness on the part of the corporation, or want of ordinary care in the management of their engine, at the time of the accident.

2. That the statute upon which the action is founded, was not intended to refer to any property except permanent erections, or property deposited with a knowledge of the company's agents for a specified length of time, to enable them to insure against loss by fire.

3. That the company cannot be held liable for the loss of personal property, temporarily placed in a hazardous position by the owner, without their knowledge, and liable to be removed by him *ad libitum*.

4. That if the jury find that the property in question was voluntarily placed in dangerous proximity to the track of the railroad by the plaintiff, it manifested a want of ordinary care on his part, and he is not entitled to any remedy for his loss.

The Judge over ruled these, and several other points of defence, considering the defendants liable at all events, provided the plaintiff's loss was occasioned in the manner alleged in the writ.—The jury found a general verdict for the plaintiff whereupon the defendants' counsel excepted to rulings of the court, reserving the points above stated.

At the law term held in Portland last May, the case was argued, and the following opinion, fully sustaining the defendants' positions, was delivered last week, by Rice, J.

This action is founded upon the fifth section of Chapter Nine, of the Laws of 1842, which is as follows:

"When any injury is done to a building, or other property, of any person or corporation, by fire communicated from a locomotive engine of any railroad corporation, the said corporation shall be held responsible in damages to the person or corporation so injured; and any railroad corporation shall have an insurable interest in the property for which it may be so held responsible in damages along its route, and may procure insurance thereon in its own behalf."

The language in the first part of this section is very broad and general in its terms, and if applied without qualification or restriction, will include injuries to every species of property by fire communicated by a railroad locomotive engine.

No case has heretofore been presented for adjudication in this State under this section of the statute. In Massachusetts, under a statute of which the section above quoted is an exact transcript, it has been held that a railroad corporation is liable for injuries occasioned to buildings situated along the route of its road, by fire communicated directly or indirectly by its locomotive.

Stewart and vs. Western Railroad Company, 18 Met 99. It is contended by the defendants in this case that the liability imposed by the statute extends only to personal property or erections made on the land, but does not apply to wood or moveable property.

In determining the true construction of a statute, all its provisions should be taken into consideration in order to ascertain the true object and intention of the Legislature.

For this purpose the latter clause of the section referred to is of much importance, as it may serve to explain and to some extent qualify the first clause of the same section.

By the principles of the common law, persons in the legitimate pursuit of a lawful business, or in the performance of acts authorized by law, are only liable for such injuries resulting therefrom to others, as are occasioned by negligence, misconduct or carelessness. Independent of special statute provisions, such only would be the liability of railroad corporations. By the terms of their charter they are authorized to use locomotives propelled by steam. If it be said that owners of property along the route of such roads are subjected to greater hazard from the use of locomotives than from other agents used for propelling vehicles for transportation of passengers and merchandise, it may be answered that an equivalent compensation is supposed to have been rendered in the form of damages where the road was originally located.—That in estimating such damages the purpose for which the land taken was to be used, and the manner of its use were as well to be considered as the amount of land actually taken.

The statute does, however, impose additional liabilities upon corporations using this kind of motive power. But while it thus, probably for the purpose of insuring extraordinary care, imposes these additional liabilities upon railroad corporations, it also authorizes them to protect themselves from loss by insuring that property along their route from injury to which by fire they are made responsible, their right to insure is coextensive with their liability, in case of loss. To make this right to insure property of any practical value to the corporation, the property must be of such a character and so situated as to render insurance practicable by the use of reasonable diligence. The locomotive is confined to the track of the road, and

cannot be diverted from its course to avoid combustible materials which may be deposited along its route. To hold that the liability extends to those articles of moveable property, which has no established location, but may be deposited and removed with such facility as to render insurance impracticable and unavailing, would be unreasonable, as it would extend the liabilities of those corporations far beyond the means afforded for their protection. This manifestly is not the intention of the statute.

In the case already cited from the 13 Metcalf, the Court, in speaking of this clause of the statute, say: Those latter words we think describe buildings being near and adjacent to the route of the railroad, so as to be exposed to the danger of fire from engines, but without limiting or defining their distance. Again, in the same case, the Court remark: The effect of the statute is to diminish the specific risk to which buildings may be exposed, &c. These citations are not made on direct authority in this case, because the point now under consideration was not then distinctly before the Court; but as tending to elucidate the construction we now give the statute.

In view of these considerations, the conclusion to which we have arrived is that the liability of railroad corporations, under this statute, extends only to property permanently existing along their routes, and capable of being insured; and that as to moveable property, having no permanent location, the liability of such corporation is to be determined by the principles of the common law.—The second requested instruction should therefore have been given. It is not deemed necessary to discuss the other points raised in the case.

Exceptions sustained, verdict set aside, and a new trial granted.

Convention of Railroad Companies.

A General Railroad Convention was held at the Astor House, on the 23d, inst. There were present Stephen Whitney, J. Phillips Phoenix, John B. Jackson and H. J. Southways, of the New Jersey Railroad and Transportation Company; Wm. E. Worthen, Geo. N. Miller, Peter T. Homer, Wm. W. Boardman, of the New York and New Haven Company; Wm. D. Bishop, of the Naugatuck Company; Charles Hunt, of the Housatonic Company; Gordon L. Ford, of the New London, Willimantic and Palmer Company; L. L. Sturges, of Cayuga and Susquehanna Company; John B. Jervis, of Michigan Southern and Northern Indiana Company; Joel W. White, of Norwich and Worcester Company; W. E. Warren, of Delaware and Lackawanna and Western Company; Samuel Brown, D. C. McCollum, of New York and Erie Company; John T. Johnston, of New Jersey Central Company; E. D. Morgan, of Hudson River Company; Geo. W. Bentley, of Worcester and Nashua Company.

John P. Jackson, of New Jersey Railroad Company, President of the Convention, took the Chair; Gordon L. Ford, of New London and Palmer Company, Secretary.

The President read the following abstract of subjects requiring action:

First: The best system of securing efficiency and exception from accidents on railroads.

Second: Discipline, economy, proper division of labor and duty, and minute and constant superintendence of every department of railroad business.

Third: Adequate remuneration for railroad service, by just compensation for transportation of passengers and freight.

Fourth: The annihilation of all perquisites received by employees; of free tickets, and all other abuses which deprive companies of their rightful earnings and much abate their revenues.

Fifth: Economy in fuel by the introduction of coal and coke, and the construction of machines capable of being used for the purpose; and the diminution of oil, which has become a large item of expenses.

Sixth: A general retrenchment and reform, that our railroads may be regarded as permanent in-

stitutions, supported by the primary interests of society, and forming an important agency in carrying forward the destiny of our race and in promoting the comforts and permanent welfare of mankind.

Seventh: The railroads of our country may be justly regarded as a great *National system* for developing the productive industry of the country—agricultural, mineral, manufacturing and commercial. Their comprehensive relations and their social and moral bearing demand for their management the highest intelligence, energy and integrity. The financial departments, especially, should be protected by all the scrutiny, supervision and safeguards, which prudence can devise. Undoubted competency and character should be possessed by those who are intrusted with the fiscal affairs, and the evidence of property and debt, especially that which represents the capital of the company, should be so authenticated and restrained as to leave no opportunity for falsification of the assets, the certificates of stock, or the bonds, without being subject to a prompt and certain exposure; so that, disregarding such details and multiplications of checks, the omission of which would insure a ready detection, the stupendous frauds, which have lately produced such deep distrust, will be prevented, and the great railroad system of this country become not only a conservator of the capital, but an example to society, in the wisdom, virtue, energy and enterprise of its managers.

Mr. Ford offered a resolution relative to the charge for the transportation of passengers, upon which considerable debate occurred.

The resolution, after several amendments, was passed unanimously. It is as follows:

Resolved, That, in the opinion of this Convention, the minimum charge for the transportation of passengers on railroads, under ordinary circumstances, should not be less than three cents per mile.

The following resolution offered by the President, was adopted:

Resolved, That the proper speed for running express trains, and the general effect of high speed upon railroads, be referred to a Special Committee, to report on the same at a future meeting.

On motion the Chair appointed as said Committee, Messrs. Jervis, White and Morgan.

The following resolutions and motions, offered by different members of the meeting, were, after some discussion, unanimously adopted:

Resolved, That it may be recommended to Railroad Companies to make a charge for baggage, separate from that for the passengers, when the baggage exceeds fifty pounds in weight, with the view of discriminating in the charge for a passenger without or with extra baggage.

A motion was made and carried, that when this Convention adjourn, it adjourn to meet on the 12th of December next, in the same place.

A resolution was offered that a Committee be appointed to form a system of uniform restrictions on the question of free tickets, and to report the same to this Committee. After some debate upon the subject, the resolution was withdrawn.

Resolved, That a Committee of Three be appointed to devise some plan whereby the time and talents of the inventors of this country may be particularly directed to the cheapening of fuel for railroads; and that said Committee draw up a plan and present the same to the consideration of the various railroad companies, to devote their attention to this subject and afford the Committee all the assistance they can in the prosecution of this object, and that said Committee report the result of their investigation at the next Convention.

Messrs. Bishop, White and Hunt were appointed said Committee.

Resolved, That the propriety of recommending the Legislatures of different States to adopt some wholesome laws fixing the highest rate of speed upon railroads, be referred to the Committee already appointed on speed. (A previous resolution.)

Resolved, That the propriety of asking for Legislative enactments in support of the rules adopted by Railroad Companies for the regulation of their operatives in protecting persons and property transported on railroad trains, be referred to a committee consisting of Messrs. Johnston, McCallum and Sturgis, and who shall report at the next meetings.

The Convention then adjourned.

Coal Burning Engines.

We copy the following from the New Bedford Mercury, in reference to Coal Burning Engines;

We have for some time noticed a fine locomotive, called the "Anthracite," which has been successfully running upon the New Bedford and Taunton, and the Taunton Branch Railroad, which burned anthracite coal only. As we are informed however, that it was merely an experiment, we have refrained from noticing it, until the present time, when its success seems to be beyond question. This locomotive was built for Wm. A. Crocker, President of the Taunton Branch Company, and for S. M. Felton, Esq., President of the Philadelphia and Baltimore railroad. Both these gentlemen have been Superintendents of Railroads, and are practically and fully acquainted with their wants and operation. They determined to build a first class locomotive, upon the patent plan of F. P. Dimphel, Esq. This plan has never before been thoroughly tested, although three locomotives of this construction have been running on the little Schuylkill Road for some years.

The "Anthracite" was built by the Taunton Locomotive Manufacturing Company, in the most thorough manner. Its appearance is that of an ordinary wood locomotive, with the exception that it has the small smoke-stack of the English engine. It weighs twenty-tons, and is as compact as the old machine, the position of the engineer and fireman being the same as in wood engines.—The Anthracite was put upon the road two months ago, and has been running since without losing a minute, on a road distinguished for its speed and punctuality of trains. After a full trial upon this road it was taken to the Worcester and Western Railroads for further experiment. On the first trial on the Worcester road, towards the conclusion of the trip, owing to the want of skill in the fireman, the engine was behind time at Worcester, but then rallied, and went over the Western road to Springfield losing only nine minutes. The engine then ran for several days between Springfield and Worcester, taking the usual heavy freight trains. On the 13th of October, it ran from Springfield to Worcester, taking the accommodation train, and arrived in good time, making an average of 28 6 miles per hour. On the same day, returning it took the Albany express train to Springfield in one hour and 18 1/4 minutes, averaging forty-two miles per hour. Subsequently in order to retrieve the character lost upon her first trial, it took the Albany express train from Boston to Worcester. This was an unusually heavy train, having a party of Kansas emigrants upon it, with extra baggage cars. Upon this occasion the Anthracite ran from Boston to Worcester and back again on time. As a specimen of its performances, we may mention that the new locomotive ran over a heavy continuous grade of eleven miles on the Western Railroad taking it in 17 minutes, and having 100 lbs. of steam upon the summit.

The peculiarity of this locomotive consists in the construction of the boiler. To state this plainly we may say that the water comes to the fire, instead of the fire coming to the water. This passes through the tubes, instead of the fire, as in locomotives of the old construction, and is continually circulating about the fire box. In this way, a moderate combustion generates the necessary amount of steam, and the fire box not being subjected to that violent heat which has been the real difficulty with other engines for burning anthracite, is preserved, while it has been burned out in all other engines in a few weeks.

The economy of anthracite engines is now in

process of proof by parties interested, and the result will doubtless be given to the public. Mr. Cummings, the engineer of the Anthracite, informs us that for its day's works, of eighty-four miles it requires 3,500 lbs. of coal, being kept standing upon its fire about two hours and a half in New Bedford.

Besides economy, there are several other considerations which should recommend the coal engines. Smoke, dust and cinders are all avoided. This not only adds greatly to the comfort of the passengers, but wood standing upon land adjacent to the road is not in danger of fire, which in dry weather is often communicated by sparks from the ordinary engine.

The trial of this locomotive has thus far been perfectly successful, and we hope the experiments of the enterprising projectors will hereafter be equally satisfactory. The question which they have undertaken to solve is a highly important one.

Fraudulent Issues of Stock.

The Vermont Legislature at its recent session passed the following law in reference to over-issues of stock.

SEC. 1. Every President, Cashier, Treasurer, Secretary, or other officer, and every agent of any bank, railroad, manufacturing, or other corporation, who shall wilfully and designedly sign, with intent to issue, sell or pledge, or will cause to be issued, sold or pledged, or shall wilfully and designedly issue, sell or pledge, or cause to be issued, sold or pledged, any false, fraudulent, or simulated certificate or other evidence of the ownership or transfer of any share or shares of the capital stock of such corporation, or any certificate or other evidence of the ownership or transfer of any share or shares in such corporation, or any instrument purporting to be a certificate or other evidence of such ownership or transfer the signing, issuing, selling or pledging of which, by such President, Cashier, Treasurer, or other officer or agent, shall not be authorized by the charter and by-laws of such corporation, or by some amendment thereof, shall be adjudged guilty of felony, and shall be punished by a fine not exceeding one thousand dollars, and imprisonment in the State prison not less than one year nor more than ten years, in the discretion of the Court.

SEC. 2. This act shall take effect from its passage.

Approved November 1st, 1854.

Dauphin and Susquehanna Railroad.

Among the improvements leading to the Coal Region, and destined in the future to contribute largely to its prosperity, the most recently opened is the Dauphin and Susquehanna road.

The road begins upon the Pennsylvania Railroad at Rockville Switch, five miles above Harrisburg, and passing through Dauphin and Pinegrove, connects at Auburn with the Pottsville, Reading and Phila. Railway, ten miles below Pottsville. It is fifty four miles long from Rockville Switch to Auburn, and forms a continuous railroad line from Pottsville to Harrisburg of 59 miles. The grades and curvatures of this line are easy, and though opened only on the first of February last, it has already, in the conveyance of Passengers, of produce, and lumber, to the Coal Region, been of great benefit. A regular communication, daily, is now maintained through this line between Pottsville and the seat of the State Government, in less than four hours.

At Dauphin, this road connects with the Susquehanna Railroad, and at Pinegrove with the Union and Swatara Railroads; from the latter it receives considerable coal, and the whole coal business of the line in this first year, will amount to nearly 100,000 tons.

Through this line for the first time, large number of private cars from Cumberland Valley, laden with the produce of that fertile region, have appeared in Pottsville, and contributed essentially to the supply of this great consuming market of the Coal Region. Private coal cars from York, Carl-

isle, Chambersburg, and Lancaster, are constantly running to the Dauphin Mines and those above Pinegrove, and bearing thence into the interior of the country, the coal of this county, going those places for the first time, since the opening of this road.

This line also furnishes a new but circuitous route, between Harrisburg and Philadelphia, and carries a number of passengers and considerable freight between those points. People travelling to the West from all the North-eastern portion of Pennsylvania, now usually take this route, which is the shortest, cheapest, and most pleasant.

The company is now under the Presidency of Capt. Daniel Tyler of Norwich, Conn.; and has been since its opening under the direction of Ellwood Morris, Esq., Engineer and Superintendent, and N. F. Jones, Assistant Superintendent—both citizens of the State, and well known in their profession and to the company for whom they act, as thoroughly competent and efficient men.

As we previously remarked, the business prospects of this road are encouraging. And if the company will abandon all idea of embarking in actual mining operations themselves, and permit individuals, under favorable leases, to develop the resources of their lands, it will prove a master stroke of policy.—Pottsville Journal.

Virginia Internal Improvement Convention.

A Convention of Delegates from the counties and cities of Virginia assembled in Norfolk on Wednesday for the purpose of acting upon matters relating to the internal improvements of the State. A series of resolutions were reported, which set forth in substance the advantage of a connection between the waters of the Chesapeake and Ohio, and that concert of action and unity of purpose is necessary to effect this connection; that the Covington and Ohio Railroad being the main stem of this communication, should be constructed by the State with as little delay as possible; that the James River and Kanawha Canal being an equally important work ought to be extended to the Eastern terminus of the Covington and Ohio Railroad; that the Kanawha River should be improved to the highest practicable point for steamboat navigation; that the lines of railway on the North and South side of James River are equally entitled to the fostering care of the State, and 7th, that "in order to harmonize and unite conflicting interests which defeat and still jeopardize further appropriations for the prosecution of these great State lines, this Convention recommend that the gauge of the Covington and Ohio Railroad shall be fixed by law at five feet; and that if the Central Railroad Company shall deem it expedient to change the gauge of their road to a corresponding width, the Legislature ought to provide for a direct subscription to the stock of that Company to an amount necessary to pay them the cost of such change of gauge.

The last resolution gave rise to considerable and exciting discussion, a number of the delegates being strongly opposed to the adoption of a gauge of five feet, and contending that this matter should be deferred for subsequent action. The vote being finally taken, the original resolution was adopted, whereupon the delegates from Richmond city, Alleghany and Bath, Augusta and Albemarle, withdrew from the Convention, declaring their protest to its action. The Convention then adjourned *sine die*.

Alabama and Tennessee Railroad.

The laying of the track on the Alabama and Tennessee River railroad, beyond Montevallo commenced Monday last, and will be pushed forward, we understand, as long as the present supply of iron holds out, which will carry the road to Columbia. We hope the stockholders of the road, who will meet at Shelby Springs, on the 18th inst., will make such arrangements, as will carry the road, not only to the Coosa River, but to the 100 mile station. There it will begin to pay, and will prove advantageous to this place,

the stockholders, and all those interested in its success. *Selma Reporter.*

American Railroad Journal.

Saturday, December 2, 1854.

Share and Money Market.

The continued depression of the stock market is the source not only of great inconvenience, but a cause for serious regret, as it seems to have little to do with actual values. Confidence in many securities has undoubtedly been severely tried, but those against which there is not a whisper of distrust have fallen off nearly as much as those possessing an equivocal character, a fact showing, we think, that confidence has been less shaken than has been supposed.

The grand cause for the extreme depression is the over-supply. With the numerous calls for money, railroad have taken more than their share. The first tendency of these works is to create a demand for capital instead of increasing the supply. A railroad that has cost \$2,000,000 creates a demand for twice that sum to develop the resources which the road renders available. The capital of the country is unequal to those objects. As fast as the want is supplied, railroad securities will move upward.

The demand for money is not much greater than it was a year ago. The earnings of railroads, notwithstanding the general stagnation of trade, are greatly in excess of the past year. No new discoveries have been made impugning the received ideas as to the ratio of expenses to earnings. There is no one who does not admit that efficient and healthy reforms are going on in the management of roads. There has been a general advance in charges for transportation, which meets, we believe, with almost universal approbation. We have always regarded the depression which has prevailed as calculated to promote the best advantage of our roads. In our estimation, railway property is worth at least ten per cent. more than it was a year ago. Such, we think, is the common belief, yet in face of all these favorable circumstances, the market remains at its lowest ebb, without any apparent signs of rallying. The degree of this depression and its unreasonableness is well shown by the following table, of the earnings and market values of certain stocks a year since, and at the present time.

	Earnings for Oct. 1854.	Value of shares.	Earnings for Oct. 1853.	Value of shares.
New York Central...	555,945	113	628,768	80
New York and Erie...	538,074	79	541,429	34
Baltimore and Ohio...	290,163	58	360,122	42
Pennsylvania Central...	245,028	94	333,216	81
Harlem...	90,008	56	105,465	28
Hudson River...	153,258	65	160,462	30
Michigan Southern...	220,804	120	284,377	83
Michigan Central...	200,183	110	267,629	80
Cleveland & Pittsburgh...	44,324	93	54,149	50
Galena and Chicago...	99,397	130	183,000	92
Cin., Ham. & Dayton...	38,158	102	43,616	75
Cleveland & Columbus...	117,332	122	120,000	91
Cleveland and Toledo...	57,253	95	85,079	55

We believe the column showing the earnings of the roads to be a much better criterion of their value, than that showing the market prices of their stocks. The contrast is a remarkable one.

Many of the roads which show the largest increase of earnings have suffered most. Their values, of course, is thought to be less than it was, though we can discover no good ground for such opinion. We commend the above table to the consideration of those who see nothing but calamity ahead.

The gross receipts of the Wilmington and Raleigh Railroad Company for the fiscal year ending Sept. 30 have been \$482,880 62, and the expenditures \$291,220 73, leaving for profits \$191,559 89, from which deduct interest and exchange, and there is left as net profits to stockholders \$127,962 77. The liabilities of the company on the 1st of October, were \$1,052,070 47.

Below, we have compared the earnings of the following Railroads for October, 1852, '3, and '54.

	1852.	1853.	1854.
New York Central...	\$416,531	\$555,945	\$628,768
Baltimore and Ohio...	198,000	290,163	360,122
New York & Erie...	376,838	538,074	541,429
Penn. Central...	244,094	245,028	333,216
Hudson River...	104,309	153,258	160,462
Harlem...	70,463	90,008	105,465
Southern Michigan...	134,747	220,804	286,377
Central Michigan...	164,183	200,183	257,629
Ohio & Pennsylvania...	41,741	84,039	142,453
Mad river...			
Cin., Ham't'n, & Da't'n	30,100	38,058	43,616
Cleveland & Pittsburg	37,313	44,324	54,149
Galena and Chicago			
Union...	58,712	99,397	150,000
Macon and Western...	31,777	27,347	23,206
Virginia & Tenn...			
Norwich & Worc'r...	24,836	31,867	29,325
New Haven...			
Hartford & N. Haven			
Milwaukee & Miss...	15,072	45,330	76,674
Detroit & Pontiac...	8,273	10,476	11,261
Chicago & R. I...		67,697	176,321
Sixth Avenue, N. Y.	12,101	22,703	10,300
Eighth Avenue N. Y.	15,530	28,495	28,337
Greenville and Miami			
Cleveland and Toledo		57,253	85,079
Cleve. Colum. & Cin.	105,126	117,332	122,000
Stonington...	19,995	32,275	29,772
Ohio Central...		12,879	43,616
Iron Railroad...			
Indianapolis & Cin...			33,944
Androscoggin & Ken.		15,316	18,919

Pennsylvania R. R.

Receipts of road for month ending	
Oct. 31, 1854	\$333,236 68
Same month last year	245,058 80
Increase	\$88,178 38
Receipts from Jan. 1, to Oct. 31st,	
1854	\$3,058,729 97
Same period last year	2,349,964 83
Increase	\$708,765 14

Erie R. R.

The fiscal year of the Erie Railroad Company closed on the 30th September last. The following is an exhibit of the receipts, expenses, and net earnings for each month of the past year.

	Earnings.	Expenses.	Net Earnings.
October	\$539,675	\$340,253	\$199,421
November	461,266	338,492	122,773
December	381,203	359,290	21,913
January	337,232	347,453	10,220
February	357,629	347,115	10,513
March	466,786	406,443	60,343
April	521,987	398,879	123,097
May	500,651	419,090	81,561
June	386,866	384,824	2,042
July	407,269	393,163	14,106
August	481,826	423,143	58,683
September	517,563	387,855	129,708
	\$5,359,958	\$4,546,015	\$813,942

Expenses includes interest on the company's debt.

According to a circular issued by the Erie Railroad Company, the Stock of the Company is	\$10,024,000
And Bonds issued or proposed to be issued	24,851,000
The interest annually on the last sum will be	1,739,570
Sinking Fund 8 per cent. of \$4,000,000	320,000
	\$2,059,570

Add running expenses, 53 per cent. of \$6,000,000	3,800,000
while the aggregate receipts for the current fiscal year are estimated at	6,000,000
Against receipts of 1853-1854	5,122,000
Do. do. 1852-1853	4,188,000
Do. do. 1851-1852	3,047,000

The following are the details of Transportation Expenses for the year ending Sept. 30th, 1854.

OFFICE AND STATION EXPENSES.	
Office expenses and stationery	\$45,346 84
Agents and clerks	115,355 19
Labor, loading and unloading	126,903 61

COST OF RUNNING.	
Porters, watchmen and switchmen	50,412 25
Wood and water station attendance	5,819 33
Fuel, first cost and labor	499,598 98
Passenger conductors, baggage and brakemen	76,814 08
Freight conductors and brakemen	131,226 99
Passenger enginemen and firemen	93,157 41
Freight enginemen and firemen	130,340 12
Oil and waste for passenger engine and tenders	22,345 25
Oil and waste for freight engine and tenders	31,713 51
Oil and waste for passenger and baggage cars	13,268 37
Oil and waste for freight cars	20,217 60

GENERAL EXPENSES.	
Loss and damage of goods and baggage	32,791 52
Damages for injuries to persons	15,991 66
Damages to property	505 38
General superintendence	58,411 03
Contingencies	92,960 90

REPAIRS OF ENGINES AND CARS.	
Engines and tenders, passenger	131,357 10
Engines and tenders, freight	182,570 12
Passenger and baggage cars	79,612 66
Freight cars	122,500 96
Tools and machinery in shops	23,262 54
Incidental expenses about shops	21,278 76

REPAIRS OF TRACK AND ROADWAY.	
Road-bed	51,369 81
Track	441,318 19
Fences, gates, &c.	5,962 86

REPAIRS OF STRUCTURES.	
Truss bridges	29,167 18
Passenger wood and water stations	16,274 29
Engine and car houses, machine and workshops	3,730 17
Rents (Dwellings)	556 48
Telegraph	382 80

INCIDENTAL.	
Superintendence and office expenses	2,878 49
Contingencies	7,452 96

MISCELLANEOUS.	
Ferry	127,054 93
Expenses of operating telegraph	30,649 35

Total	\$2,742,615 57
Interest on company's debt	1,803,490 26

Total	\$4,546,105 83
-------	----------------

Cincinnati, Hamilton and Dayton R. R.

The Cincinnati, Hamilton and Dayton Railroad earnings for 1854, are as follows:

Year ending Nov. 1, 1854	\$479,837 54
Year ending Nov. 1, 1853	410,238 69

Increase, nearly 17 per cent. \$69,598 85

Railway Morals and Railway Policy.

We give this week the balance of the article upon Railway Morals and Railway Policy from the Edinburgh Review; and continue our own upon the same subject.

We showed last week, we think, that our railroads, from the absence of legislative interference, have escaped a part of the disasters and losses which British Railroads have suffered. In this country the construction of railroads is, by law in many of the States, and practically in all, open to general competition as much as are any other commercial enterprises. Railroad companies neither look to government for favors, nor are they subject to any burdens not common to all kinds of property. Those engaged in their construction act under the influence of no artificial stimulus supplied by the State; and as far as legislation is concerned, are in no greater danger of pushing to excess the construction of railroads, than of ships, or any of the various branches of manufacturing.

Our works therefore rest upon the solid foundation of individual interests and individual instincts, and our people are influenced in their construction by precisely the same motives by which they are actuated in any similar pursuit. We speak now of governmental interference. We attach great importance to their exemption from it. Theoretically, we think it easy to show that any interference in their construction or management, except to promote their own advantage, and to guard the rights and safety of the public, is mischievous. We have only to refer to the experience of English railways in full proof of our positions.

We showed too, we think, satisfactorily, that the waste and misconduct in the construction of railroads is owing to the fact that those who furnish the means do not oversee its expenditure. We have only to refer to numerous illustrations in confirmation of our views. Now as the construction of most of our roads has been supervised by the parties most interested, their first cost has not been exorbitant. Such of them as have not been cramped for money, have come from the hands of the constructor at what must be considered a fair cost. We speak now of the aggregate. There is no reason why this should not be so. Competition among contractors brings down prices to the lowest remunerating point; and training and experience enable them to do work at one-half the cost to a company. The construction of a railroad is a simple affair, compared with the working of it; and no matter what difficulties are involved in the former, experts are always found equal to any emergency. There are no reasons therefore but gross dishonesty, or incompetency on the part of the engineer, why a penny should be wasted in construction.

We also stated in the preceding article, that our people had not reached that stage in the progress of railroads in which the tendency to branch or competing lines manifests itself to any great extent. Our people have been too busily occupied with legitimate, to waste much money on illegitimate projects. This is a very important fact in estimating the value of railroad property in this country. The great majority of our railroads in progress, or construction, was called for. Our people have been properly employed and the con-

viction that they were so, contributed not a little to success. It operated as a talisman to shield them from harm. Give to a man, or body of men, a conviction that they are pursuing the proper path to a laudable end, and this conviction becomes a higher principle of action, raises them above the influence of selfish aims, or gratification, and renders them cheerful, industrious and vigilant co-workers to a common result. The end gives character to, and renders efficient the means. But where no useful end can be seen, men at once become demoralized, and the first care is to serve themselves. Imagine employees on a railroad to believe that the work will prove an entire failure, that all the money expended in its construction will be lost, will they not feel that it would be much better if a part of the money could go into their own pocket, than to lie in an useless embankment? Would they not become indolent when they saw that their labor produced nothing useful, and cease to feel pride or interest in a work with which they foresaw their names would appear in disgraceful association? All these things are equally true of persons employed in a railroad, as in any other business or calling. Most of our roads fortunately have been projects that have called into exercise the better sentiment, which many of the English roads have failed to do. Hence the low cost and better management of our own compared with the high cost and management of the former. We speak now of our present success. Our people thus far, fortunately, have been engaged upon legitimate objects which have been pursued by legitimate means. But our danger is a mere matter of time. We are fast approaching the period in the progress of railroads in which our works will be subject to the same influences that have overwhelmed English roads. These roads commenced with bright promises. They were successful till the appropriate theater for their construction was exhausted. The evil day came when the object in the construction of a railroad ceased to be that of a cheap, well managed and useful work, but the money that could be made out of the process of construction.

The low cost of American roads is proof that most of them have been constructed under favorable conditions. It is a great mistake to suppose the greater cost of English roads is owing to the greater amount of work involved in their construction. We have in this country a much better standard of engineering than in England. The great aim of American engineers is to secure the greatest returns on the investments. The construction of many of our more important lines is due to the skill of the engineer, among which may be named the Atlantic and St. Lawrence and the Baltimore and Ohio, the routes of both of which presented great difficulties, which have been surmounted by consummate skill. With ordinary engineering neither road could have been built. Only so much money could be raised for each. The fact that the means of our people are so disproportioned to works, for the construction of which there is felt to be an imperative necessity, compels them to practice economy, and to supply as far as possible, by expedients, the lack of capital. There is no doubt that an American engineer will accomplish vastly more with an equal amount of money than an English engineer. The

latter cannot be made to feel the necessity for economy that is felt in this country. He knows that in Great Britain there is money enough for any work that may be undertaken, and acts upon this idea. One of our best engineers just returned from England informed us that he made a critical examination of several roads of that country for the purpose of comparing their nominal cost, and the amount of work involved, with our own. Among others was the London and Bristol, which is exactly the length of the Western Railroad of Massachusetts, 157 miles. He states that the apparent cost of the Western is vastly greater, while its capital account is not one-half that of the English road. In other words, had the Western been an English work, it would have cost \$150,000 per mile, instead of \$63,000. It should be remembered too, that labor and iron in this country are at least 60 per cent. higher than in Great Britain. The graduation of our roads is done almost entirely by labor imported from that country.

The proper test of successful engineering is the result. An engineer who builds a road that pays 8 per cent. upon its cost, with structures, which though cheap and unpretending, protect and preserve property and supply the necessary accommodation to the traveller, is much better entitled to be called successful, than one who sacrifices the earnings of a road to magnificent erections, or to ornament without use. The first object to be gained is to make the road useful and profitable. After these conditions are satisfied, ornament may follow. In this country we consult the practical. Another reason why we expend less upon our roads is, because the general standard of architecture is lower. The style of the structures on a railroad is regulated by the best illustrations, or ideas, which prevail in the community where such railroad is located. But ornament is so much capital sunk, and should always be proportioned to the earnings of a road. In the United States, from the equality which prevails, the structures of our roads correspond to the average for the country. The expenditure ceases when this point is reached. Our stations, consequently, are not imitations of Baronial castles, nor are the accommodations furnished above what the average of the community enjoy. There may be an aesthetic value in the castle, as a beautiful illustration of art. But it is not the province of railroad companies to become instructors in architecture. Their only object should be money-making.

Our roads cost much less than English railroads, because we make our expenditures in reference to a different standard. Ours is a practical; theirs, an ideal one. In this country those who earn the money, the laboring classes, fix the standard. In England, those who spend it. Here lies the difference. A grand castle is a grand affair, but it is poor property. In England many of the railroads are grand affairs, but equally poor property. Ours are less pretending; but most of them have the merit of paying well on their cost.

We are aware that this will be thought by some to be a far-fetched argument, but it appears to us to be sound, nevertheless. Certain it is that we attempt nothing on the grand scale that we see in England. A good illustration of the different ideas which prevail in the two countries, is the

Victoria Bridge now in progress over the St. Lawrence River, at Montreal, for the accommodation of the Grand Trunk Railroad. An American engineer would have recommended a *wooden* superstructure, making the whole cost of the bridge about \$1,000,000. In fact, responsible contractors have offered to build such a bridge for \$800,000. A further sum of \$500,000, put out at interest, would maintain the bridge for ever, making a total cost of, say, \$1,500,000. But the construction of the Grand Trunk is an illustration of English ideas transferred to this country. A wooden bridge for such a great work was too frail a structure. One must be built upon the model of the *Britannia* of iron, at an estimated cost of \$7,500,000, to go probably to \$10,000,000! Now a wooden bridge would serve every *useful* end of an iron one. Here then are \$6,000,000 to be sacrificed to carry out the English way of doing things, which amount might as well have been thrown into the sea. We do not hesitate to say that no engineer of reputation in the United States would recommend the bridge that the Grand Trunk Co. are constructing. He would feel certain, if he did, it would be the last time his opinion would be called for. If the bridge become a part of the Grand Trunk scheme it will very nearly ruin it. The whole travel to pass over it would hardly justify the expenditure of the sum first named.

We have dwelt upon this branch of the subject for the purpose giving as distinct a notion as possible of the *rationale* of the American mode of constructing railroads and explaining their low cost, compared with those of most countries, particularly of Great Britain, with which we usually contrast our roads.

We believe that, on the whole, the money expended on the railroads in this country has been *well* expended. It has produced the results predicated both in their income, and in the development of the resources of the country. Their earnings are justifying public expectation and the representations of the companies. In cases where the income to be derived from them was a secondary consideration, they have realized all the expected results. That there has been much misdirected effort, and a great deal of money wasted, there is no doubt, but could we compromise past errors by purchasing exemption for the future we should pronounce our success *complete*.

Having pointed out the causes that have led us successfully thus far, we now return to the danger to which the railroad interest and the public are exposed, and proceed to indicate as far as possible, the tests which distinguish *legitimate* from *illegitimate* projects, and to point out the reforms, and that system of management necessary to secure success after our roads come into use.

To distinguish a legitimate from an illegitimate project, we must look in the first place to the parties who are engaged in their construction. A road is built with one of two objects; the income to be derived from it, with its *incidental* advantages, or the money that is to be made out of the *process* of construction. Those who are to derive the *incidental* advantages, are the parties living upon its line. It is their interest to have it built as cheaply as possible; as the less it cost, the less will commerce and travel be taxed. If they sup-

ply the means, they will take good care that they are not wasted, and their position gives them the opportunity to oversee its proper expenditure. Now, however much our people desire railroads, they are very careful not to put their money into one that does not promise to *pay well*. Where the people on the line of a railroad furnish the means for its construction, this fact is good indication:

1st, that there being sufficient strength on the line of a road to furnish a considerable portion of the means for its construction; there is a sufficient development of the country to support it.

2nd, that the parties supplying the money, having an opportunity to superintend its expenditure, the road will be economically built; and as long as it remains in *first* hand, will be well managed.

Where on the other hand a road is taken up by parties living *off* its line the inference is—

1st, that such parties not being incidentally benefitted by such road, their object is to make money out of the *process* of construction: the road in such case instead of being built economically, is built as expensively as possible, (as represented by the amount of stock and securities issued,) the object being to impose such securities upon the public; or,

2nd, that such parties not having any oversight of the expenditure of the money, the road will of necessity be built at high cost and badly managed.

Where parties living *off* the line of a railroad, engage in its construction; and where the object is to make money in its construction, of course, they are exceedingly desirous that the road should *pay* well on its cost, as a means of carrying up the price of the securities which are their *profits*.

Now, if all purchasers of securities would buy only such as are sanctioned by the tests given above, we should have few or no useless roads. As before stated our people will not put their own money to any considerable amount into roads that do not promise to *pay*; especially will they not do this, when they are not in position to derive any *incidental* advantage arising from them.

Where a project is taken by parties living at a distance, the inference is almost irresistible that either there is no money in it, or that its stock and debts will represent a much larger sum than its cost. Such a view of the case is sanctioned not only by common sense, but is fully supported by *facts*. Where, therefore, the securities of a railroad are offered for sale, the first thing to be asked for is the list of stockholders. If they live upon its line, and have taken stock in the road because they need it, and if such subscription represent the collective strength of the community, and be sufficient to furnish one-half of the cost of the road, they show that there is a population adequate to its support, and that the means will be properly expended. The purchaser of the bonds issued under such circumstances, possesses all possible guarantees of safety, as a large interest must be sacrificed, before he can be injured. Where, on the other hand, a railroad is built to *make* money, the amount actually expended may have been only a small proportion to its capital account. The purchasers may get two dollars *bogus*, to one dollar in money, and will soon find

the whole concern on their hands, at twice its cost, provided the getters up of the scheme are sufficiently adroit to *float* it upon the public. But the mischief does not end here. The parties who come into possession of the road, retired capitalists, Banking or Insurance companies, widows, orphans &c., &c., live, perhaps, a thousand miles from the road, and have neither the capacity nor opportunity to look after its management, which has to be done by proxy; and the road, whatever its merits may be, as we have shown, prove unproductive from the causes stated.

The ability of a people to build a railroad is the test of their ability to furnish a business sufficient to its support. Where they have not yet reached such a degree of strength, it is much more for the interest of such community to postpone the construction of such work, than to allow it to go into the hands of speculators, which will result in a road at *double* cost, imposing a perpetual tax upon them, in the shape of double charges for transportation.

An adherence to the above tests will not only prevent the construction of roads that will not *pay*, but would limit construction to the ability of the country to build and sustain them. It would produce a healthy state of affairs. It would keep within reasonable limits a *credit* system, the tendency of which, in a country like our own, is constantly to excess. It would render uniform a progress which is now desultory. It would enable us to achieve as great results as we now witness, and avoid the drawbacks that mar our success. It would be the means of checking a vast amount of commercial distress, which is always attended by a certain amount of moral delinquency.

By confining the construction of railroads within proper limits, a double good would be accomplished. We should only have *paying* roads, and escape the greater part of the dangers to which they are subject. The parties fitted to build them economically are the very persons to manage them in the same manner. In such an event the management of railroads would remain in the hands of those, who from their interest, position, means, of observation and integrity are just the parties to conduct them.

The railroad system of this country is not without striking illustrations of the correctness of our last position. Among the more notorious of these are the Vermont Central, the Rutland, and the Ogdensburgh. These works were projected, and the means for their construction furnished by the merchants and capitalists of Boston. Their aim was to enlarge the area of the trade of that city, *not* to make money in building them, which renders them all the better proofs of the points assumed.

In all of the above cases a *double* fault was committed. The roads were built upon the *idea* that they could be made the outlet to tide water of the products of the interior. In building any road, it is hardly ever safe to make an *hypothesis* the basis of an expenditure. Nothing should be taken into consideration but a traffic which can be proved to exist on the line of the road, especially when the *hypothetical* business has been accustomed to take *other* channels. It is now plain to see why the *through* business of the above roads is not remunerative. It should have been equally evident to their projectors. To attract *new* busi-

ness, it has to be carried without profit, if not at an actual loss, for the reason that there are cheaper routes between the same termini. In anticipation of a business which is done without profit, an enormous expenditure was incurred which the local traffic by no means justified. In addition, the cost of the roads for the reasons already enumerated has exceeded all reasonable limit. All these causes combined have rendered them the most striking failures of the kind in the United States. Had their projectors reckoned only upon local traffic, the result would have been very different; the roads would either have not been built, or their objects and means would have been carefully adapted to the business of their routes.

If roads, where the aim throughout has been economy in construction, have proved disastrous failures, from the reasons enumerated, how much greater will be the disaster, where the chief object in construction is to make money, which can only be done by creating a nominal capital much greater than the cost of the road.

(To be continued.)

Connecticut & Passumpsic Rivers Railroad Co., Vt.

President: Henry Keyes, Newbury, Vt.

Superintendent: Robert Hale, St. Johnsbury, Vt.

Secretary: Elizabeth Cleveland, Coventry, Vt.

Treasurer: N. P. Lovering, Office No. 7, Merchant's Exchange, Boston.

Principal and Transfer Office, Boston.

Annual meeting, in the month of July.

Income account is made up semi-annually—April 1st and October 1st.

Length of main track, 60 $\frac{2}{3}$ miles.

CHARTER.

This Company was incorporated by the Legislature of Vermont in 1835, and was originally empowered to construct a railroad with a single, double, or treble track, from the southern boundary of the State, up the valleys of the Connecticut and Passumpsic Rivers to the North line of the State in the town of Newport or Derby, as the corporation should judge expedient. An additional act was passed in 1845, by which the company was divided into two companies, and White River, at or near its mouth, was made the point of division of the line of route. The Northern Company retained the name, and all the subscriptions that had been made to the capital stock. By the original charter, the capital was fixed at \$2,000,000, to be increased to such an amount, not exceeding \$5,000,000 in all, as should be found necessary to complete and equip the road. The stock was divided into shares of \$100 each. It was further provided that the Supreme Court, at a stated session in either of the counties through which the road passed might alter and establish the rates of transportation, in such a manner that the corporation should not divide more than 12 per cent. per annum for the first fifty years, and not more than six per cent. thereafter. The right was reserved to the Legislature to purchase the railroad with all the rights, franchises, and property of the corporation, at any time after the expiration of fifty years from the opening of the road, by paying the amount expended in building and repairing the road, and all other expenses relating thereto. The

charter requires the office of the clerk of the corporation to be kept within the State.

CONSTRUCTION.

As it was the design, under the amended charter that the road should connect, at the mouth of White River, with the Northern (N. H.) Railroad, no strenuous efforts for construction were made, till there appeared a reasonable probability that the latter road would be extended to the point of junction. In the summer of 1847, that part of the line lying between the mouth of White River and the village of Wells River, a distance of 40 miles, was put under contract. The road was opened for use as far as Bradford, 29 miles, on the 10th day of October, 1848, and to Wells River, Nov. 6th, 1848. In the winter of 1849-50, another division, extending from Wells River to St. Johnsbury, 20 $\frac{2}{3}$ miles, was put under contract, and the road was completed and opened to the last named place, in the fall of 1850. Within the last year, very vigorous efforts have been made to secure the extension of the road to Derby Line, the originally proposed terminus; but the stringency in the money market, has compelled the abandonment of the enterprise for the present. Should the extension fail, a connection will probably be made with the Atlantic and St. Lawrence Railroad, by a branch road to be built by the last named Company from Island Pond to St. Johnsbury.

PHYSICAL FEATURES.

The Connecticut and Passumpsic Rivers Railroad extends from White River Junction, to St. Johnsbury, up the valleys of the rivers whose names it bears. It follows the left bank of the Connecticut, but crosses the Passumpsic repeatedly. The length of the road is 60 2-3d miles; the maximum grade 26 4-10th feet per mile, for less than three miles. The curves are easy and, for practical purposes, little inferior to a straight line. The line is amply accommodated with Station, Freight, and Engine Houses, and the track and rolling stock are in first rate condition. Within the last year, more than 40,000 new sleepers have been laid on the first division of the road, at an expense of \$16,000.

INCREASE OF BUSINESS.

The business of the road, in the transportation both of freight and passengers, has steadily increased from year to year. The increased transportation of lumber is particularly noticeable, having more than doubled within three years. The connecting roads are the White Mountains Railroad, and the Boston, Concord and Montreal Railroad, which connect with it at White River Junction. When extended to Derby Line, it will connect with the Stanslead, Shefford, and Chambly Railroad, now under construction, and in connection with that road, will form a route from the Connecticut Valley to Montreal and Quebec.

FINANCES.

The capital stock actually paid in, before the creation of any preferred stock, was \$984,600, not including partial payments on 47 delinquent shares. In December 1849, first mortgage bonds to the amount of \$550,000, were created by a vote of the Directors, in pursuance of authority given by the stockholders. A subscription for the whole of these at par was secured, and the proceeds applied to constructing the road from Wells River to St. Johnsbury. These bonds fall due as follows:

\$75,000, Dec. 1st, 1855; \$75,000, Dec. 1st, 1856; \$100,000, Dec. 1st, 1857; \$125,000, Dec. 1st, 1858; and \$175,000, Dec. 1st, 1859. For the purpose of closing the construction account, and funding the floating debt of the Company, second mortgage Bonds, to the amount of \$250,000, convertible into capital stock at par, were authorized in Jan'y, 1852, and were issued to the amount of \$234,000. The larger part of these bonds was taken by stockholders. They mature Dec. 1st, 1859. It is worthy of record, in this connection, that this is the only railroad in Vermont, which has ever paid a dividend to its stockholders. For some years it made regular semi annual dividends, but owing to extraordinary expenses for repairs, the net earnings have only been sufficient, for the last ten years, to pay the interest on the funded debt, and add eight or ten thousand dollars yearly to the contingent fund, which now amounts to \$26,483 61.

SYNOPSIS OF THE LAST (9th) ANNUAL REPORT.

The earnings of the road for the year ending May 31st, 1854, were \$162,687 65, which was derived from the following sources, viz: from passengers, \$68,218 95; freight, \$87,228 79; express, \$1,200; mails \$5,158 86; rents, \$881 25. The expenses were: for maintenance of road, (including 40,000 new sleepers, new bridge abutment, &c.) \$26,058 56; motive power, \$29,112 20; fuel, \$12,766 76; oil and waste, \$3,871 49; passenger department, \$11,425 36; freight department, \$15,002 65; damages, \$822 31; miscellaneous, \$8,005 25; making a total expenditure of \$107,114 58, and leaving a balance of net earnings, \$55,573 07. Of this balance, \$46,620, was supplied to the payment of interest on bonds, and \$8,953 07 was carried to contingent fund. The expenditures on construction account were \$23,657 93, making that account \$1,780,062 13.

BUSINESS OF THE ROAD.

The whole number of passengers carried over any portion of the road during the year, was 13,916; number of passengers carried one mile, 1,841,973, equal to 30,362 passengers carried over the whole road.

The total tonnage of the road, (not including local freights) was 35,805 tons. The number of miles run by passenger trains was 57,144; by freight trains, 41,655; by other trains, 6,752 miles.

St. Johnsbury, Vt., Nov. 22.

P. H. W.

Saratoga and Sackett's Harbor Railway.

The following is an extract from the report of the Chief Engineer, A. F. Edwards, Esq., and taken from the second Annual Report of the company. It shows the progress already made upon the work.

The road from its Eastern terminus to the Black River Canal, and the railroads with which it is to be constructed at Carthage, is under contract to be completed Nov. 10th, 1856. Since the commencement of the work the contractors have gradually extended their forces and the field of their operations, until the former is equal to 3,000 men and horses, and the latter embraces the line through Saratoga, Warren, Essex, and Lewis Counties.

The whole expenditure for graduation, masonry, bridging, land damages, fencing, engineering, &c., toward the construction of the road to November 1, is.....\$160,766 06 Besides there has been paid on account of iron.....313,852 06

Total expenditure for construction...\$774,618 12

The quantity of work done on Nov. 1 was, in—
 Graduation, cubic yards.....1,925,271
 Masonry, cubic yards.....5,478
 Grubbing, square rods.....4,076
 Clearing, square rods.....10,407
 Bridge timber and plank for foundation
 of masonry and highway in wilderness,
 M. ft. B. M.....312,750
 About one-eighth of the graduation and masonry is already done, and the whole road, at the rate the contractors have gone on for the last two months, will be finished, and the cars can be running through the entire length, by December, 1856. That portion of the road from the eastern terminus to the Adirondack Junction, will be finished by December, 1855.

Savannah, Ga.

Statement of the Resources of the City of Savannah on 31st Oct., 1854.

Stocks at par value:	
Central Railroad and Banking Co.	\$285,000 00
South-Western Railroad Co.	250,000 00
Augusta and Waynesboro' Railroad Co.	251,700 00
Ogeechee Plank Road.	5,000 00
Bank of the State of Georgia.	1,800 00
Savannah and Albany R. R. Co.	100,000 00
Bonds of John J. Kelley for the purchase of lot letter E. Heath-coate ward, payable 1, 2, 3, 4 and 5 years.	6,500 00
	\$899,500 00

City Domain.....737,627 09

Stock and domain.....\$1,637,127 09

Statement of the Funded Debt of the City of Savannah, including all Bonds issued and outstanding 31st Oct., 1854:

Internal improvement bonds for '39	\$221,000 00
Bonds for South-Western Railroad stock.	150,000 00
Do. Muscogee Branch R. R. stock.	100,000 00
Do. Springfield plantation.	27,840 00
Do. Purchase of site for water works.	22,000 00
Do. Ogeechee Plank Road stock.	5,000 00
Do. Savannah Gas Co.	5,000 00
Do. Savannah Water Works.	185,000 00
Do. Augusta and Waynesboro' R. R. stock.	200,000 00
Do. Improvement of Savannah River.	19,500 00
Do. Savannah and Albany R. R.	85,500 00
City scrip outstanding and probably destroyed.	1,327 00
Corporation Notes do.	1,968 50

Total.....\$1,024,135 50

Northern Cross Railroad.

W. H. Sidell, Esq., Chief Engineer of the Northern Cross Railroad has furnished the following table of heights of various points on the line of that road between Quincy and Galesburgh, referred to the lowest water of the Mississippi at the foot of Broadway, at Quincy;

	feet.
Lowest water.....	0
Ordinary water.....	5
Highest water.....	21
Top of grade ascending from river to prairie (distance 6½ miles).....	267-7
At Coates', highest ground between Quincy and Camp Point, (distance 16½ miles).....	302-7
At Camp Point, (distance 22 miles).....	280-4
At Augusta, " 36½ ".....	214-4
On bridge crossing Crooked Creek, (distance 44 miles).....	68-8
Surface of water of Crooked Creek.....	35
Bottom of Crooked Creek.....	28-4
At Macomb, (distance 60 miles).....	247-2
At Woodstock, or Ayon (distance 80 miles).....	180-8
Grade on bridge crossing Cedar Creek (distance 82 miles).....	116
Bottom of Cedar Creek.....	87-6
At Abingdon, (distance 90 miles).....	286-6
At Galesburgh, (distance 100 miles).....	322

Enlargement and Completion of the Canals. Probable Cost.

Lettings under the new law for the enlargement and completion of the canals, have now been made to the extent of more than one-half the entire work. Of course, it is an easy matter to approximate very nearly the actual cost of this stupendous enterprise. Thus far the work has been let at prices far below the estimates of the engineers. Jobs estimated, in the aggregate, at nearly six millions, have been taken at about four millions and a half—averaging about 21 per cent. less than the estimated cost. We are indebted to an official source for an abstract of these gratifying results, which we lay before our readers:

EASTERN DIVISION.

Bids.	Estimates.	Difference.
Erie.....\$728,997 25	\$965,128 24	\$236,130 99
Champl'n 67,294 10	86,452 19	13,158 09
Black Riv. 131,910 60	144,030 00	12,119 40

Total...\$928,201 95 \$1,189,610 43 \$261,408 48
 Average per centage below the estimates, 21,974.

MIDDLE DIVISION.

Bids.	Estimates.	Difference.
Erie.....\$762,383 96	\$917,429 69	\$155,046 00
Oswego . 440,197 25	503,608 25	63,411 00
Cayuga & Seneca 235,311 45	290,305 07	54,993 62

Total...\$1,437,892 39 \$1,716,343 01 \$278,450 62
 Average per centage below the estimates, 16,228.

WESTERN DIVISION.

Bids.	Estimates.	Difference.
Erie...\$2,068,572 50	\$2,749,227 02	\$680,654 52
Genesee Valley 104,075 00	123,350 00	19,275 00

Total...\$2,172,647 50 \$2,872,577 02 \$699,929 52
 Average per centage below the estimates, 24,366.

Total 3 Divisions. 4,588,741 84 5,778,530 46 1,238,788 62
 Average per centage below the estimates, 21,455.

Total of Erie Canal. 5,559,953 44 4,681,784 95 1,071,831 51
 Average per centage below the estimates, 23,141.

It is all but certain, in view of these lettings, thus largely below the estimates, that ten millions and a half—the amount contemplated by the amended constitution and the law—will be amply sufficient, not only to cover the cost of completion and enlargement, but the expenses of engineering and land damages, which were not included in the estimates. It is not at all probable that the work to be let will not be taken on terms equally advantageous to the State.—*Albany Argus.*

Railroads in Alabama.

Notwithstanding the tightness of the money market, the high prices of provisions, the railroads that have been projected in Alabama are progressing well. The Mobile and Girard Railroad is now completed, and the cars are running to Silver Run, a distance of seventeen miles from Columbus.—The Opelika road, it is said, will be finally completed by the 1st of January or before. The grading is about finished, the superstructure nearly completed, and the gentleman who contracted to lay down the iron is rapidly proceeding with that part of the work. The council of Columbus have passed resolutions sanctioning the proposition to subscribe \$60,000 for the purpose of aiding to build a bridge for this road across the Chatahochee river above Girard, and further to subscribe \$150,000 to aid in the completion of the Mobile and Girard road from Gilbert to Union Springs.

The Mobile and Ohio road is getting on well.—The Alabama and Mississippi road is progressing finely, and already we have seen several evidences of its utility and great importance. The Alabama and Tennessee road is moving along, and we earnestly hope that it will soon cross the Coosa River.

When looked at properly, we are satisfied every friend of the State's prosperity will feel gratified at the favorable prospects.—*State Sentinel.*

Low Price of State Stock.

The extreme low prices of many of our State stocks excites much surprise, and can only be accounted for by the greater depression of railroad securities. When people can buy what they believe to be an unquestioned seven per cent. railroad bond, for 75 or 80, they will not give par for a State six per cent. Missouri sixes have been at 77—securities which only a few months since commanded a premium. The State contains nearly a million of people, has only a trifling debt created on account of railroads, for every penny of which she holds ample security having a first mortgage on all the railroads assisted. Virginia sixes are at 90, though they have been selling as high as 115. This State has an excellent financial system by the operation of which a sinking fund is created, capable of paying off every debt within 34 years after its contraction. By the terms of her constitution, no debt can be contracted unless at the time provision be made to liquidate within the period specified, either by direct taxation, or otherwise. The affairs of the State have been well conducted, and its credit without a stain. Similar remarks may be made of North Carolina, a State which, with a population of nearly a million, has a debt of only about \$2,800,000; yet her bonds are selling at about 90. First class city securities are equally depressed. The cause, as already stated, is not that all the securities named are not perfectly safe. This fact is not questioned; but there are plenty of what are believed to be equally good, selling at a still lower price.

The above fact we think shows the confidence which prevails in railroads. Were confidence generally shaken in them, purchasers would turn their attention to those whose safety no one presumes to doubt: and the money that is constantly seeking investment would immediately carry them to a high figure. In seasons of panic, what is sound is all the more sought after in the distrust which prevails, and such would be the fact now, had confidence been thoroughly shaken, which we contend has not been the case.

How Railroads Help to Spend Money as well as to Earn it.

Suppose the railroads of the United States to earn \$100,000,000 per year and that one-half of this amount is received from passengers. There are \$50,000,000 paid out annually, which, in whatever light it is viewed, is so much of a tax upon the industry of the country. A portion of this travel is required in the operations of business, and so far the amount paid on its account is as properly expended as for any kind of labor or service. All beyond is so much paid for luxuries, and as far as reproduction is concerned, lost. We have never seen any estimates of the ratio of business, to pleasure travel; but there is no doubt that the latter pays more than four-fifths of the whole receipts, or \$35,500,000 annually.

The loss of a sum equal to the above amount, is no small item in the domestic economy of our country. It is nearly two dollars to every white inhabitant. Now although railroads add vastly to the productive capacity of a people, they absorb for a long time more than they yield. If the draughts they make exceed for some years their returns, then it is easy to see that the further subtraction of all the way from \$35 to 40,000,000 for luxuries is one of the elements to be considered

in endeavoring to account for the scarcity of capital.

That railroads in the end produce vastly more than they consume there can be no doubt; but we can readily believe that under certain conditions, one of which we have named, they should prove a tax upon a community. Railroad travelling is a favorite mode of spending money. The degree to which families and circles of relatives are broken up in this country, renders our people the greatest itinerants in the world. A few years ago, when a family left the East for the West, it was like bidding adieu for ever to the friends they left behind. To return a thousand miles, over wretched roads, involving a journey of nearly two months, going and returning, and at an expenditure of perhaps hundreds of dollars was hardly to be thought of, except by the rich. The railroads form a new era in the relations of our people. A person living at Chicago, 1000 miles from New York, may leave that place in the morning and reach this city the next day evening at a cost of about \$20; or \$50 for the round trip. The railroad, consequently, has set the whole world in motion. There is hardly a family in the country, no matter how widely separated, who have not frequent re-unions, which, but for the railroad, would have been impossible.

To travel is a very proper and agreeable way of spending money. But money spent in this manner is just as much wasted, as far as reproduction is concerned, as if spent upon fine equipages. It is no answer to say that it is all in other hands. To get it, they have expended an equal amount of money, or labor, which directed to other pursuits, might have been productive of values. That our people spend so much in travelling as to render them a little "short," which is felt, though perhaps slightly, by the whole community, there is no doubt.

State of Affairs in the West.

In estimating the financial condition of the West and the probable duration of the stringency that prevails, we must take into consideration the annual drain for interest on the loans to its railroads. There are in the States of Ohio, Indiana and Illinois, about 6,000 miles of Railroad. Estimating the cost of these roads at only \$25,000 per mile, the aggregate would be \$150,000,000.—We suppose that at least \$125,000,000 are held in the Eastern States and in Europe. To be added to this, there are nearly \$50,000,000 in State Stocks. Estimating the whole amount held East at \$160,000,000, the interest on this would be \$11,200,000, a sum nearly equal to \$1,000,000 per month to be sent to New York from three States for interest alone.

Now we admit this to be a small sum compared with the resources of these great States; but with a deficiency in their crops, and a general embarrassment occasioned by over-trading and over-investment, in such a year as the present, it is a very large sum, and will keep exchange strongly in favor of New York for some time. We do not expect to see money easy in the West, till after another crop; that in the present year being a decided failure, compared with past abundance.

Next to Railroads, the Banking interest in the West is the first to feel the effects of the drain of which we have spoken. This must be paid in

specie or its equivalent. So long as the balance is aught in favor of New York, it will be impossible for Western banks to keep out their circulation. Their bills will be constantly returned to them to obtain specie for remittances, so that no factitious addition can be made to the capital of the country, which in easy times supplies the lack of the constituent.

We do not then expect to see the financial troubles of the West dissipated in a day; nor until, as we before remarked, after another harvest. There will be a partial improvement; because the great interest of the interior, the agricultural, is sound. In time, the equilibrium will not only be restored, but the balance may very likely incline in the opposite direction.

Railroad Couches.

It has become a necessity to unite as far as possible the time of sleep and travel; and to provide suitable sleeping accommodations in railroad cars has long been considered an important desideratum. Last week we had the pleasure of a comfortable nap in a luxurious easy chair on the Philadelphia, Wilmington and Baltimore Railroad. The pliancy with which this ingenious travelling bed adapts itself to the wishes and motions of the occupant is admirable. The back can be inclined to almost any angle of recumbency and is furnished at the top with a pillow that slides up and down to suit the longitude of the slumberer's body. The seat is as elastic as an air cushion and the supports for the legs and feet are provided with joints and springs to afford ease and relaxation to those members. The Philadelphia and Baltimore Company are entitled to the thanks of the travelling community for their enterprise in adopting this ingenious and very perfect chair in their night cars; and from actual experience of their couches we feel warranted in regarding them as the perfection of railroad sleeping arrangements.

Sinking Funds—Mason County Railroad Bonds.

The county of Mason, in the State of Kentucky, having issued to the Maysville and Lexington Railroad Company \$200,000 of their six per cent. bonds, redeemable in thirty years, has recently, by virtue of a special law of the State, made a levy of five cents on the hundred dollars, to be applied exclusively as a sinking fund for the liquidation of these bonds, a levy having been originally authorized and made, and collected, for the interest thereof. This tax for the sinking fund will yield from six to eight thousand dollars per annum, and be ample to cancel the entire debt. In the West much attention has of late been given to the creation of similar sinking funds, to meet at maturity the debts of cities, counties and railroads.

We are glad to see the above article in the American Railroad Journal of New York, the most prominent periodical of its class in the country.

We observe two errors in the above, which we take occasion to correct. The amount of our county liability for the Maysville and Lexington Railroad Company is \$150,000 instead of \$200,000 as stated above. The product of our sinking-fund tax is incorrectly stated; it will be something less than \$5,000 per annum to be devoted to retiring the bonds, besides the \$9,000 for the semi-annual interest. At this rate, the whole debt will be paid off a number of years before it is due—and that with the very small annual tax of five cents to the \$100, or one-twentieth of one per cent. per annum. —Maysville Eagle.

Grand Trunk Railroad.

The Quebec Branch of the Grand Trunk Railroad was opened for travel, throughout, on the 27th ult. The length of this branch is 100 miles, and the whole distance between Quebec and Montreal by railroad about 160. Quebec, hitherto, has been almost completely isolated from "the rest of mankind" during the winter season, a period of nearly six months. To her, the road must prove of very great value, and must, we think, add largely to the profits of the other features of the Grand Trunk Line.

Northern Indiana Air Line.

Thirty-seven miles of the air line road from Toledo to Goshen, Indiana, is completed and a daily passenger train are running upon it. The distance to the Indiana State Line is 62 miles.

CIVIL ENGINEERING.

COURSE OF INSTRUCTION

in UNION COLLEGE, Schenectady,

under the direction of Prof. W. M. GILLESPIE.

THIS department will re-open on January 5th, 1855. It comprises thorough instruction and practice in all the branches necessary to fit students for prosecuting advantageously this important Profession. Among its subjects are Drafting (Mechanical, Isometrical, &c.); Surveying (Land, Maritime, Mining) with Compass, Transit, Theodolite and Sextant; Location of Railroad Curves; Levelling; Roadmaking; Mensuration and Calculation of Earthwork, Masonry, &c.; the Strength of Materials and Stability of Structures; Principles of Construction of Masonry and Carpentry; Bridges; Canals; Waterworks; Practical Astronomy, &c.—The above subjects are pursued in connection with such of the regular college studies of Mathematics, Natural Philosophy, Modern Languages, &c., as are desirable. The Fees for both, including room-rent, &c., are the same as to the ordinary college course, \$19 per term, and \$7 entrance fee. Students may pursue any of the above branches for which their previous acquirements fit them. A thorough and ready knowledge of Arithmetic, Geometry (Plane and Solid) and Algebra (through equations of second degree) is necessary for those commencing the course. If further information is desired, address the Register of the College. 48 2t.

New York and Erie R. R.

On and after Monday, Nov. 20th, and until further notice

PASSENGER TRAINS
will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a.m. for Buffalo.
DUNKIRK EXPRESS, at 7 a.m. for Dunkirk.
MAIL, at 8½ a.m. for Dunkirk and Buffalo, and intermediate stations.—Passengers by this train will remain over night at any Station between Binghamton and Corning, and proceed the next morning.

ROCKLAND PASSENGER, at 2½ p.m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.
WAY PASSENGER, at 4 p.m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5 p.m. for Dunkirk and Buffalo.
EMIGRANT, at 6 p.m., for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 5 p.m.
These Express Trains connect at Elmira, with the Elmira & Niagara Falls Railroad, for Niagara Falls, at Buffalo and Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.
47 tr. D. C. McCALLUM, General Supt.

DINSMORE'S RAILWAY GUIDE,

EDITED principally by the Railroad Superintendents themselves; making it the most reliable and perfect work of the kind published, and the only one containing the time tables of all the railroads in the United States and Canada.

Its extensive sale makes it one of the best ADVERTISING MEDIUMS extant.

Sold principally in the Cars to travellers when they have leisure to read, and is taken by them not only as a Railroad Guide, but as a Directory to the best Mercantile and Mechanical

DINSMORE & CO., Publishers,
No. 9 Spruce st., N. Y.

Notice to Contractors.

OFFICE OF THE ALA. & FLA. R. R. CO. OF ALABAMA.
Montgomery, Ala., Nov. 3d, 1854.

SEALED proposals for the Graduation, Masonry and Bridging of sixty (67) seven miles of the Ala. & Fla. Railroad of Alabama, extending from Montgomery to the junction of the Sepalgat and Persimon Creeks in Conecuh County will be received at the office of the Company until the first Monday in December next.

Plans, specifications and profiles will be ready for inspection on and after the 15th inst.

The work on the first 25 miles is light, and the time allowed for the completion of contracts on this portion of the line will be 12 months.

On the remainder of the line two years will be given.

The payments offered are $\frac{2}{3}$ in cash and $\frac{1}{3}$ in the capital stock of the Company.

The provision crop along the line has been abundant, the country is perfectly healthy and work of such inviting character both in profile and material is rarely offered.

46 3d. SAMUEL G. JONES, Chief Eng'r.

Iron Rolling Mill Property for Sale.

The particular attention of capitalists desiring to enter AT ONCE (WITHOUT THE DELAY of putting up new works,) into the manufacturing of Iron, is called to the following:

The mill is situated UPON TIDE WATER (and ACCESSIBLE at ALL SEASONS of the year for shipments) between New York and Philadelphia—Coal can be had at the very lowest rates—and in point of convenience and situation is perhaps SECOND to NONE in THE COUNTRY. In ADDITION to its PRESENT adaptation to the manufacture of MERCHANT AND BOILER IRON, it has machinery in operation for making WROUGHT IRON RAILROAD CHAINS AND SPIKES, and could readily be prepared for MAKING RAILS together WITH ALL THE advantages of a first-class establishment. It is well known that in the present prosperous condition of the business THE PROPERTY WILL PAY ITSELF IN ONE YEAR and the reason of the property being disposed of, is that the owner is engaged in a heavy business in the State of New York. A VERY LIBERAL SPECIAL charter may BE BOUGHT, under which the Mill can be worked, if wanted. It is needless to say more, as parties interested can obtain all information by applying to

J. WOOD & SON,

76 South 4th street, Philadelphia.

P. S.—A portion of the purchase money may remain on the property, or otherwise. 44. 4t.

THOS. M. CASH,

PHILADELPHIA RAILWAY AGENCY,
FOR THE PURCHASE OF ALL ARTICLES
required by

RAILROAD COMPANIES

ON COMMISSION.

Office No. 80 South Fourth Street, near Walnut,

PHILADELPHIA.**REFERENCES.**

RICHARD NORRIS & SON, Locomotive Builders, Philadelphia.
WM. D. LEWIS, Esq., Pres't Catawissa R. R. Co., "
CHARLES H. FISHER, Esq., "
JOHN CALDWELL, Esq., Pres't S. Carolina R. R. Co., Charleston.
J. PINCKNEY HECKER, Esq., Pres't N. East'n R. R. Co., "

SEYMOUR, MORTON & CO.,

GENERAL RAILROAD AGENCY,

Office, Metropolitan Bank Building, No. 110 Broadway.

HAVE to dispose of at private sale, in amounts to suit per-

sons desiring to invest, the following valuable Securities:
LOUISVILLE CITY BONDS, at 30 years.
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.
MAYSVILLE AND LEXINGTON MORTGAGE BONDS,
at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. FIRST
MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of railroads in any part of the country, including furnishing corps of engineers and contractors, locomotive engines and cars, railroad bridges, McCallum's Patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Notice to Contractors.

EUROPEAN & NORTH AMERICAN R. R.

NEW BRUNSWICK.

Contract for Sleepers or Cross Ties.

WANTED 100,000 Ilacmetae or Cedar Sleepers to be delivered in equal proportions at the Port of St. John and the Bend of the Petiscodiac River on or before 1st of August next.

The Ties to be sound and straight, nine feet long, ten inches by six inches, with a hewn surface top and bottom of not less than eight inches.

Parties desirous of tendering for the above or any portion of them are requested to send in their prices to the undersigned at his office, St. John, on or before the 25th December, 1854.

W. E. ROSE.

St. JOHN, Nov., 1854.

47 4t.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
or, BRIDGES & BRO.,
64 Courtland st., New York.

19 1t

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE
SOUTH AND WEST.

Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$15 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	10 00
An extra charge will be made for meals and state rooms on board the boats.	
27 1t	S. L. SPAFFORD, General Supt.

Faggotted Car and Engine Axles

FORGED BY RANSTEAD, DEARBORN & CO., BOSTON, Mass.

These Axles are drawn from the faggot entirely by the hammer, and are all warranted.

Boiler and Tank Rivets, Nuts and Washers;

All Sizes of

Bolts and Bolt Ends

for Sale by

BRIDGES & BROTHER,
64 Courtland st., N. Y.

Welded Wrought Iron Tubes.

THE subscribers having lately added to their Cumberland Nail and Iron Works an establishment for making Wrought Iron Tubes, are now prepared to supply the trade with tubes two to twelve feet in length, furnished with screws and ferrules on their ends, of the following sizes—inside diameter,

$\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$ and 2 inches.

Warranted and fully proved, equal to the best Pipes manufactured.

All orders addressed to us will receive prompt attention, and liberal discounts from the list of prices will be allowed to the trade.

REEVES, BUCK & Co.,
No. 45 North Water Street, Philadelphia.

July 13, 1854.

28.6m.

Railroad Iron.

THE Undersigned, having made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton Works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braisers and Wire Rods; Rivets and Merchants Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWETT

February 15, 1850.

17, Burling Slip, New York.

Notice to Contractors.

CHIEF ENGINEER'S OFFICE,
Columbus, Ga., Sept. 5th, 1854.

SEALED PROPOSALS, will be received by the undersigned at this office until the 1st day of December, for the clearing, graduation, Track-Laying, together with the building of all Bridges and Culverts of the Western Division of the Mobile and Girard Railroad, extending from Mobile to Greenville, covering a distance of 130 miles.—The work will generally be divided into one mile sections, and bids may be made for one or more of these sections. Separate proposals are desired for the Track Laying, building of Bridges and Culverts, likewise for the building of the Trestle work $5\frac{1}{2}$ miles in length, across the Tensas and Mobile Rivers, with the intervening swamps; the Trestle will be 12 feet high, built upon Black Cypress Piles, found in abundance and adjacent to the line, the two rivers will be crossed with the common pile bridging, with Truss Pivot draw in the centre of each.

Specifications with the form of the Contract and Proposals, may be had of the undersigned upon application.

Plans, Profiles, and estimates of that portion of the line, are now ready for examination, and parties proposing will please designate it as such upon the envelope.

The country is healthy, with no swamps after leaving the Tensas River; from Mobile to the river (18.5 miles) the grading is light, and country very healthy at all seasons of the year; after the line leaves the Tensas River, it passes through and on the ridge that divides the Alabama and Conecuh waters, easy of access by the Alabama River, and through a section of country well stocked on either side with provision.

Payments will be made one third ($\frac{1}{3}$) in current funds, one third in the Capital Stock of the Company bearing (.08) per cent. interest payable in Stock, until the Road is completed, then to cease and become common stock of the Road, and relying upon the earnings of the same for dividends; the balance ($\frac{1}{3}$) to be paid in the (.08) per cent. Convertible Bonds of the Company, maturing in 2 or more years at the option of the Contractors, Coupons payable semi-annually, either in Columbus, Ga., Mobile, Ala., or in N. Y., at the option of the holder.

To bidders personally unknown to the undersigned, Bond and approved security will be required, to an amount not exceeding ($\frac{1}{4}$) the amount of the contract, for the timely and faithful completion of the same.

22 $\frac{1}{2}$ miles of the Road from Girard west will be open for business the first of November, and 52 miles nine months thereafter. It is the intention to have the entire line of 245 miles open for business early in 1858.

St. 37.

GEO. S. RUNEY.

Railroad Iron.

500 TONS No. 1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

99 and 101 John st.

N. B.—The above Iron constantly imported 32 1t

Ontario, Simcoe & Huron R.R.

CANADA.

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloohah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL, *asst.*
Superintendent.

For Sale.

A STATIONARY Engine having cylinders 18 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New-York.

Jul. 14 29 tf.]

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and PASSENGER LOCOMOTIVES of different classes, with the most modern improvements,—

also MACHINISTS' TOOLS, especially adapted to Railroad Repair Shops, and to the construction of machinery generally. These Tools are of the most approved construction and consist in part of Engine Lathes, Hand Lathes, Vertical Drilling Lathes, and Planers of various sizes and lengths, Compound Planers, Shaping Machines, Slotting Machines, Bolt and Nut Machines, Gear Cutting Engines, Chucks, Compound Slide Rests, Machines for boring Crank Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c.

COTTON MACHINERY of all descriptions, BOILERS, SHAFTING and MILL WORK, CASTINGS, and all work usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Sup't, Lowell, Mass.
J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

WANTED.—To take charge of the sale or introduction of certain valuable PATENTED MECHANICAL INVENTIONS, a person who can furnish satisfactory evidence of character and ability, for such business.—Address, stating views as to remuneration, &c., L. P. C., Post Office, New York. 44 St.

NEW YORK AND ERIE RAILROAD LOAN.—The Committee appointed to report in regard to the financial affairs of the New York and Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed proposals, to be opened on the 10th of January next, for the purchase of \$4,000,000 7 per cent. Bonds, redeemable in twenty years, with interest, coupons payable 1st, February and 1st August.

And that for the purpose of gradually reducing the debt of the Company, the New York and Erie Railroad Company pledge themselves in said Bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of Trustees, to be by them invested, as well as the accruing interest on the investments, in the Bonds of the New York and Erie Railroad Company of the new issue, as long as they can be purchased at or under par. And that whenever the said Bonds of the new issue cannot be purchased at or under par, then the said Trustees to invest the said monthly payments and the accruing interest in any Bonds of the New York and Erie Railroad Company which can be purchased at or under par.

And whenever it shall be impossible to purchase any of the Bonds of the New York and Erie Railroad Company at or under par, then the said Trustees shall invest the said monthly payments and all accruing interest in such Bonds of the New York and Erie Railroad Company as can be purchased at the lowest rate.

And all Bonds on being purchased by said Trustees shall be canceled by writing or printing on the face "Held by the Sinking Fund of the New York and Erie Railroad Company," but that the interest warrants on said cancelled Bonds shall be collected by said Trustees, as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest or the conversion of convertible Bonds into Stock of this Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in said Trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to the Company.

And the Committee would further recommend that the Board of Directors adopt the following resolutions:

Whereas, The period has arrived when it is expedient and necessary to close the construction account of this Company, to be reopened only when the imperative necessity of the increasing traffic on the road, and the state of the finances

of the Company will render it perfectly evident that it is proper and justifiable to reopen it, so as to increase the present capacity of the Road.—Therefore

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after reimbursing the Income Bonds due 1st February next, be charged to transportation expenses.

Resolved, That as often as the Bonds purchased by the Sinking Fund amount to 10 per cent. on the Capital Stock, this Company will, upon receiving due authority from the Legislature of this State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in the daily papers, so that the public have cognizance of the future policy of the Company.

(Signed.)

CHARLES MORAN.
SHEPHERD KNAPP.
WILLIAM E. DODGE.
NELSON ROBINSON,
GEORGE F. TALMAN.

Special
Finance
Committee.

New York, Oct., 21, 1854.

Sealed proposals will be received at the office of the NEW YORK AND ERIE RAILROAD COMPANY in the City of New York, until the 10th of January, 1855, for the purchase of \$4,000,000 of the bonds of the Company, bearing 7 per cent. interest payable semi-annually on the 1st day of February and August, redeemable in twenty years.

The NEW YORK AND ERIE RAILROAD COMPANY pledge themselves in said bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And whenever it shall be impossible to purchase any of the bonds of the NEW YORK AND ERIE RAILROAD COMPANY at or under par, par, then the said trustees shall invest the said monthly payments and the accruing interest, in such bonds of the NEW YORK AND ERIE RAILROAD COMPANY as can be purchased at the lowest rates. And all bonds when purchased by the said trustees shall be cancelled by writing or printing on their face: "Held by the Sinking Fund of the NEW YORK AND ERIE RAILROAD COMPANY;" but the coupons on such cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the NEW YORK AND ERIE RAILROAD COMPANY, and the accruing interests, or the conversion of convertible bonds into stock of the Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in such Trustees be closed, and all cancelled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay 10 per cent. in cash on the notice of the acceptance of their bids; 20 per cent. on the 20th of January; 30 per cent. 1st February; 20 per cent. 15th February, and the balance on the 1st of March.

The Income Bonds of the NEW YORK AND ERIE RAILROAD COMPANY will be received in part payment at par, and the accrued interest till day of surrender to the Company.

The Directors of the NEW YORK AND ERIE RAILROAD COMPANY, in offering the present loan to the public beg leave to state that it will be amply sufficient to pay the Income Bonds redeemable on the 1st February next, and the entire present floating debt of the Company, as well

as to complete all the unfinished work now under way.

By a resolution of the Board of Directors, all future outlays of every kind beyond the proceeds of the present loan, will be charged to expense account, and paid from the income of the Company, after payment of the interest on the funded debt, and the monthly payment to the Sinking Fund.

After the negotiation of the present loan and the redemption of the Income Bonds, the position of the Company will be—

Stock	\$10,024,000
Bonds of 1867, First Mortgage	3,000,000
Bonds of 1859, Second Mortgage	4,000,000
Bonds of 1883, Third Mortgage	6,000,000
Bonds of 1862, Convertible	3,500,000
Bonds of 1871, Convertible	4,351,000
Bonds of 1875, present loan	4,000,000

Total

In the opinion of the Directors it is perfectly safe to estimate the gross earnings of the Road, for the coming year, at \$6,000,000, from which must be deducted:

Expenses 55 per cent.	\$3,300,000
Seven per cent. on debt \$24,-	
851,000	1,739,570
Sinking Fund	420,000
	\$5,459,570

Net revenue equal to over 5 per cent. on stock applicable to cash dividends and contingencies

The Directors of the Company are confident these estimates will be fully realized. The gross receipts since the Road has been in operation to Dunkirk, have been for passengers and freight alone—

1851 to 1852 \$3,047,748	INCREASE.
1852 to 1853 4,138,424	\$1,690,676, say 35½ per ct.
1853 to 1854 5,122,666	934,242, say 23¼ per ct.

The business of the road depending mainly on the local traffic, must inevitably increase in the same ratio as the population of the Counties through which it passes. In the opinion of the Superintendent, Mr. McCollum, the road in its present position and with its present equipment, can earn \$8,000,000. If the future increase in the receipts be estimated at only 15 per cent. per annum, which is not much over one-half of the average increase of the past the above utmost capacity of the road will be tested in 1858.

As to the running expenses, as they were only 53½ per cent. in 1853 and 1854, there is every probability that with rigid economy and an increase in the traffic, they can be reduced to 50 per cent., but they have been estimated at 55 per cent., so as to leave ample margin for contingencies.

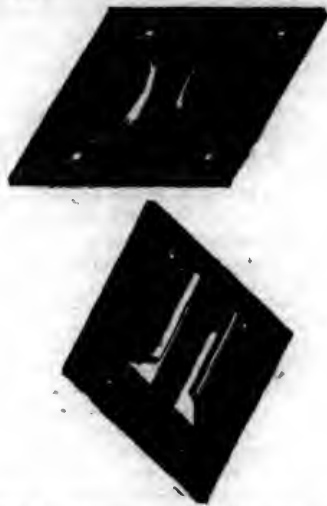
The effect of the monthly purchases by the Trustees, of the Bonds of the present issue on their market value, cannot fail to be immediate, and will insure to the original purchasers a certain profit within a moderate time; for whilst the amount outstanding will decrease each month, the absorption by the Sinking Fund will constantly increase, by the accruing interest on the Bonds in the hands of the Trustees. In 8½ years the Sinking Fund will absorb \$4,768,053, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among our most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie-place.

HOMER RAMSDALL, President.

NATHANIEL MARSH, Secretary.

New York, Oct. 23, 1854.



Patent Wrought Iron Railroad Chair.

THE undersigned are now prepared to manufacture their Patent Wrought Iron Railroad Chair, at the rate of fifteen tons per day. They are made exclusively from best Trenton Iron, which received the prize medal for strength at the World's Fair at London.

The patent is for the CHAIR itself—which is formed by raising the lip out of the plate sufficiently high to receive the rail. It is obvious that while the strain upon the lip is so slight as to remove all danger of its breaking, it becomes less the more tightly the lip is made to clasp the rail. The cheapness and durability of the chairs, and the facility with which the track can be adjusted, commend them to public favor.

SIZES AND PRICES.

A Chair 8 by 7½ inches, 3-8 inch thick, cost 28½ cents.					
" " " " 7-16 " " 33 "					
" " " " 1-2 " " 37½ "					
" " " " 5-8 " " 47 "					

Other sizes are made to order at equivalent rates. Sample Chairs will be forwarded, free of charge, on application to COOPER & HEWITT, 17 Burling Slip, New York.

December 1, 1852.

SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 23 Summer st., Philadelphia.

To Civil Engineers.

A GRADUATE of one of the best schools of Civil Engineering in Europe, lately returned to this country, wishes to connect himself with an Engineer of eminence and experience as assistant.—References unexceptionable as to qualifications and character.—Address Engineer, Box 3285. P. O., New York. 2t 45

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per lineal yard. For sale by

THEODORE DEHON,
26½ Broadway,
New York.

Contracts made as above for Rails delivered at American ports at lowest rates.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,

Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

ENGINEERS.

Atkinson, T. C.,

Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,

Chief Eng. Pittsburg and Connellsville R.R. Co., Pittsburg, Pa.

Edward Boyle,

Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
Office 123 Chambers st.

Clement, Wm. H.,

Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,

Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,

Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,

Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M. O.,

Civil and Mining Engineer, Cumberland, Md.

C. Floyd-Jones,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Gay, Edward F.,

Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,

Syracuse and Binghamton Railroad, Syracuse, N. Y.

Gzowski, Mr.,

St. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,

New Orleans and Nashville R.R., Aberdeen, Miss.

Holcomb, F. P.

Chief Eng. Augusta and Waynesboro, and Savannah and P. & W. R.R.s.
Macon Co., Ga.

S. W. Hill,

Mining Engineer and Surveyor, Eagle River,
Lake Superior.

Huger, T. P.,

Northeastern Railroad, Charleston, S. C.

D. Mitchell, Jr.,

Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley
Railroads, Pittsburg, Pa.

Samuel McElroy,

Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,

Sackett Harbor and Saratoga R. R., 24 William St., N. Y.

Miller, J. F.,

Buffalo and Conhocton Valley Railroad, Avon, N. Y.

Morris, Ellwood,

Engineer and Agent DAUPHIN & SUSQUEHANNA CO.,
Cold Spring, Lebanon Co., Pennsylvania.

Septimus Norris,

Civil and Mechanical Engineer, Philadelphia.

Sam'l. & G. H. Nott,

Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,

Civil Engineer, Office 73 South 4th st., Philadelphia.

Prichard, M. B.,

East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,

Chief Engineer Alleghany Valley Railroad, Pittsburgh, Pa.

Shanly, Walter,

Chief Engineer Bytown and Prescott Railway,
Prescott, Canada.

Roberts, Solomon W.,

Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,

South Side Railroad, Virginia.

Schlatter, Charles L.,

Civil Engineer, Ogdensburg, N. Y.

Straughan, J. R.,

Ohio and Indiana Railroad, Bucyrus, Ohio.

Steele, J. Dutton,

Pottstown, Pa.

Charles B. Stuart,

Civil Engineer, New York.

Edward W. Serrell,

Civil Engineer, 157 Broadway, New York.

P. J. Tournadre,

Chief Engineer Vicksburg, Shreveport and Texas R.R.,
Vicksburg, Miss.

Trautwine, John C.,

Civil Engineer and Architect, Philadelphia.

Troost, Lewis,

Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

Whipple, S.,

Civil Engineer and Bridge Builder, Albany, N. Y.

Wm. J. Young

HAS removed his Engineering and Surveying Instrument Manufactory to No. 33. North Seventh Street, Philadelphia.

BUSINESS CARDS.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES AND LEVELS on a new principle, with Fraunhofer's Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by E. & G. W. BLUNT,
New York, Dec. 1, 1851. No. 179 Water street.

James Herron, Civil Engineer,

OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.

PATENTEE OF THE

HERRON RAILWAY TRACK

Models of this Track, on the most improved plan may be seen at the Engineer's office of the New York & Erie Railroad.

W. G. ATKINSON,

MINING ENGINEER, SURVEYOR AND DRAFTSMAN
CUMBERLAND, MARYLAND,

Will attend to business in his Profession in the Coal Region and vicinity.

REFERENCES:

Jerry Cowles, Esq., New York.
Col. Wm. Young, do.
Jas. W. McCulloch, Esq., late U. S. Treas., Washington.
June 25, 1853.

To Engineers, Architects and Draughtsmen.

THE undersigned begs respectfully to inform Gentlemen in the above professions, that he has constantly on hand a great variety of instruments for Field and Office use.

JAS. PRENTICE,

Feb. 9, 1853.

1 Chamber street, New York.

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings, Private Dwellings, Stores and Factories, manufactured by the subscriber in great variety. Orders by Mail, or left at the Factory on Causeway street, will be promptly attended to.

HENRY N. HOOPER & CO.

Boston, March 23, 1850.

6m13

H. SAWYER

(of the late firm of SAWYER & HOBBS),
Manufacturer of Transits and Levels.

HAS removed to Union Place near Warrenton Av., Yorkers.
N. Y.

Sewall & Crehore

CIVIL ENGINEERS,
ST. PAUL, MINNESOTA.

JOSEPH S. SEWALL.

CHAR. FEND. CREHORE.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.
December 18, 1852. WM. S. RAMPSON, Agent.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor,

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 49.]

SATURDAY, DECEMBER 9, 1854.

[WHOLE No. 973, VOL. XXVII.]

MR. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

New York and New Haven Railroad.—Over-issue of Stock.....	769
Hartford, Providence and Fishkill R. R.....	772
Finances and Railroads of Arkansas.....	778
Baltimore and Ohio R. R.....	744
Grand Trunk Railroad.....	779, 775
Pacific Railroad of Texas.....	775
Hudson River R. R.....	776
Panama R. R.....	776
Virginia and Tennessee R. R.....	776
Evansville and Illinois R. R.....	776
Railway Policy and Railway Morals.....	777
Cleveland and Pittsburgh R. R.....	779
Finances of Virginia.....	785

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, December 9, 1854.

Journal of Railroad Law.

LIABILITY OF RAILROAD COMPANIES FOR FRAUDULENT ISSUES OF STOCK.

We give below the opinion of Judge Hoffman of the Superior Court of this State, in reference to the legality of the over-issue of the stock of the New York and New Haven Railroad Company, by their late transfer agent, Mr. Robert Schuyler. The facts of the case are materially as follows: Mr. Schuyler had negotiated a loan at the Bank of Commerce upon the security of a deposit of 370 shares of New York and New Haven stock fraudulently issued. Mr. Schuyler being indebted to the plaintiff, and there being a considerable margin, they lifted the stock, paying the amount of Schuyler's loan to the Bank. Upon the discovery that the stock was fraudulently issued, this action was brought against the Bank to recover the amount above paid. There were various points considered, but we give what chiefly relates to the discussion of the validity of the issues by Schuyler. The ground taken by the Courts was, that the Company being bound by such issues, the plaintiff received sufficient consideration for the payment of Mr. Schuyler's loan to the Bank, consequently had no cause of action.

Judge Hoffman elaborates two points of the case—the rights of the parties upon the assumption that the stock is worthless, and the validity of the over-issues. He decides that were the over-issues invalid, so as to carry no rights, then the plaintiffs might recover. Upon this point he says:—

Morris Ketchum, Thomas Rogers and Edward Bement vs. the President, Directors and Company of the Bank of Commerce of New York.

It is in the first place urged, that if this had been a sale of stock by an avowed owner, dealing as owner, no other warranty of title would have been implied than that the vouchers of stock were a pledge, and that the defendants were not cognizant of any defect in the title. But in my opinion this proposition cannot be maintained. It is admitted that the general rule, as stated by Chancellor Kent, is the law of our State; that if the seller is in possession of the article, and sells it as his own, and not as agent for another, and for a fair price, he is understood to warrant the title; and the opinion Justice Buller, in *Pasley vs. Freeman*, (3 G. R. 58,) that if the seller affirms the chattel, which is not in his possession, to be his, he is bound to answer for the title, is approved of by Chancellor Kent as possessing both good sense and equity. In *McKay vs. Cocker*, (3 Barbour, S. Ct. Rep. 326,) Justice Parker critically examines the authorities and sustains the rule thus expressed. * * * So in *Jones vs. Ryd*, (5 Gampton, 488.) In this case the defendants were bill brokers, and possessed of a navy bill, which purported to have been issued by the Navy Board, to have been registered on the 13th of July, 1813, and to be payable on the 15th of October, 1813, drawn on the Treasurer of the Navy, to Boll & Hobbs, on their order, for the sum of £1,884 16s. 10d. It seems that, on the face of the bill, the property tax was deducted, showing a result of £1,883 10s. 3d. The bill came into the hands of the defendants, who procured the plaintiffs to discount it, and received the avails. It appeared that the bill issued by the Transport Office, for \$884 16s. 10d, and before it was discounted, some person had altered it, by prefixing the figure 1 to the figures 884 and 683 in the several places in which they occurred, and prefixing the figure 1 to each of the dates of the 7th of July and 5th of October. All the parties were unconscious of the alterations. The true amount, however, had been paid by the Navy Office, and the present action was brought to recover the difference, about £1,000. The action was for money had and received, and was sustained. C. J. Gibbs observed: "Both parties were mistaken in the view they had of this navy bill; the one in representing it to be a navy bill of

this description, viz., genuine, the other in taking it as such. Upon its afterwards turning out that the bill, to a certain extent, was a forgery, we think he who took the money ought to refund it to the extent to which the bill is invalid. In the present case, the navy bill is not such as it purported to be, and therefore the plaintiff is entitled to recover." A case somewhat similar very frequently occurs in practice, said to be sanctioned on the authority of a case so decided *nisi prius* by Mansfield, Ch. J., viz.: "where forged bank notes are taken. The party negotiating them is not, and does not profess to be answerable that the Bank of England shall pay the notes; but he is answerable that the bills are such as they purport to be."

Having disposed of this branch of inquiry, the Judge comes to the main point in the case—the validity of the over issues. His reasoning upon this we give entire.

5.—What are the rights and position of the holders of such fabricated stock in relation to the company? I have before stated that as to the shares in question, they are plainly portions of this stock, whatever obscurity may attend the tracing of the rest. I cannot but add my fixed conviction that a vast mass of the disputed stock can be followed and identified, and I believe that could a competent tribunal prescribe some few and reasonable rules of appropriation and adjustment, the task would not transcend the power of mercantile ability to mark the whole. But it is enough in this instance that I find these shares stamped clearly and indelibly with the sign of their birth in a fraud and fabrication. Are the railroad company and its innocent stockholders bound for these shares? and, if so, what is the nature and extent of their liability? It is unnecessary to enter upon that wide field of investigation into the origin and nature of corporations, and the extent of their powers, over which the learning and reasoning of the able counsel would lead me. It is sufficient to say that the rules governing the ancient municipal corporations of cities and towns, can shed but little light upon a question like the present. Such corporations had originally their rise in the principle of protection of life and property from the barons and kings, and watch and ward was the duty of the burghers and the bond of their safety. Particular franchises were successively won from fear or favor. They were all inroads upon feudalism, and were all personal and peculiar privileges. But when the increase of trade and commerce led to an appreciation of the value of a combination of capital and effort—"when men, having learned that wonders could be accomplished by union, began to think union was competent for everything"—the formation of partnerships began. Joint stock associations fol-

lowed. The principle was at first a mere extension of the essential elements of a partnership to a greater number of members, with some variations of government. But the perils of personal responsibility to the members, and the unwieldy machinery of such a body, led to application to the State to give them the protection of an incorporation. Through all the judgments of courts, based upon the doctrines of the common law—through all the legislation of England, and of our own and other States, applicable to associations incorporated or otherwise, we find the great principles of a partnership recognized, changed indeed, modified, or impaired, but still pervading and discernible. Confining the inquiry to the most affluent foundation of our law—the law of England—we find that joint stock associations were known before the act of 1719, called the Bubble act; and they were based upon the principle of partnership, with an attempt to make shares transferable, and to limit the personal responsibility of members. That statute recognized the existence of such companies, and spoke of their mischievous consequences—that they had attempted to act as corporate bodies, pretending to make their shares in stock transferable, without legal authority by statute or charter from the crown. The act then provided that all such undertakings and attempts were void and illegal, and especially the acting, or presuming to act, as a corporate body, the raising or pretending to raise, transferable stock or stocks, or to assign any share, without authority. By section 25th, the act was not to restrain the carrying on of any home or foreign trade in partnership, in such a manner as had been usually done, or might be done according to law. The transferability of shares unrestricted and unregulated, was a blow at the accountability of every member of a partnership, by rendering the tracing of debtors difficult, and sometimes impossible to the creditor.—Such a power was therefore reserved for the Parliament or the Crown. After the act, however, the effort was perpetually made to engraft this principle upon the schemes of joint stock associations, and no less strenuously was it attempted, to limit the personal responsibility of the members to the amount subscribed, and exempt them from the demands of creditors. But the courts of justice invariably defeated these attempts, and fixed upon these joint stock companies every material attribute of a common law partnership, in the non-assignability of shares and the absolute personal liability of members. The expression of Lord Eldon was but the echo of a multitude of decisions, that the wealthiest nobleman in the land might be involved to his last acre, and his last shilling, by a connection with such a company.—It is sufficient to notice here the policy of our own State exhibited in the manufacturing statute of March, 1811, and found now in the Constitution itself, in regard to banking incorporations. The personal responsibility of the members was recognized, although limited to the amount of their respective shares of stock. (Sess. 34, ch. 67, Constitution of 1846, art. 8, sec. 7.) From the earliest judicial decision in our State to the present time, companies organized under this act have been spoken of as mere partnerships, with some of the privileges and powers of corporations.—(See vs. Bloom, 19 Johnson, 473; Bridges vs. Penniman, Hopkins, 304.) This view has been followed in a multitude of subsequent decisions; upon the same or similar statutes. It is sufficient to refer to Hargous vs. McCullough (2 Denio, 119,) which contain reference to many of them. In these statutes the right of transferring shares was given, and the mode left to the by-laws of the company; and in the general railroad act of our State (Laws of 1850, ch. 140) the points of assignability and personal liability are regulated. By the eighth section, the stock may be transferred in the manner prescribed by the by-laws of the company, but no shares are transferable until all the calls have been fully paid in. By the tenth section, each stockholder is made individually liable to the creditors to an amount equal to the amount

unpaid on the stock held by him for all debts, until he shall have paid up the whole amount due by him to the company; and all are made jointly and severally liable for debts to servants and laborers for services performed to the corporation, but not until after an execution against the company has been returned unsatisfied. The want of the attribute of transferability in shares of stock was a consequence of the policy of the English law, founded upon the principle of partnership.—The attempt of joint stock associations to render shares assignable was denounced by the law, because it violated that principle; and the Legislature clothed companies with the power in opposition to the partnership law, and in doing so imposed certain restrictions and provisions, such as public registrations of the transfer, to obviate, as far as possible, the evils which dictated the common law rule. Details of the provisions upon this subject in some of the English acts, may be found in the case of the Cheltenham, R. R. Comp. vs. Daniels, (2 R. R. and Canal Co. 728, and in Hebblewhite vs. McMorin, ib. 51.) Still, through the whole stream of authority and principle in relation to illegal companies or companies privileged with an act of incorporation, the doctrine of partnership is visible. The former were unauthorized, and the latter statutory partnerships; but the basis of the association was the same. Thus in the case of Ashby vs. Blackwell (2 Eden's Rep., 299,) a case of important bearing upon most of the questions here, the plaintiff was possessed of £1,000 Melthian Bank stock, and employed John Price, a broker, to receive the dividends for her. Price forged a power of an attorney from her, empowering him to sell the stock, which he did to the defendant Blackwell, and the stock was transferred to the latter on the books of the company. The bill was brought for a re-transfer of the stock, or satisfaction from the trustees of the Melthian Bank. It was agreed that the plaintiffs were entitled to relief, and the question was whether Blackwell or the bank should bear the loss. A case was made of great carelessness on the part of the Secretary, in receiving the forged power which was not authenticated as the by-laws of the company required. The Lord Keeper held that a trustee, whether a private person or body corporate, must see to the reality of the authority empowering him to dispose of the trust money; for if the transfer is made without the authority of the owner, the act is a nullity, and in consideration of law and equity the rights remain as before. That as to Blackwell, he thought it was not incumbent upon him to inquire into the letter of attorney; because the letter of attorney in that and similar cases, was no part of the purchaser's title. The title was the admission into the company as a partner *pro tanto*, he accepting the stock on the conditions of the partnership. The letter of attorney is only the authority to the company to transfer. The company ought to answer for their and their servants, negligence. He decreed that the stock be replaced in the name of the plaintiff, and that the bank pay Blackwell the amount he had paid upon the transfer, with interest. So in Bryant vs. the Warwick Canal Co., (23 Eng. L. and Eq. Rep. 91, Dec. 1853,) a bill was filed by a shareholder on behalf of himself and all others, &c., to recover money paid into a company provisionally registered and then abandoned, although an official manager had been appointed. The bill was sustained upon the ground of an ordinary partnership right. So in Stevens vs. the South Devon Railroad Company, (12 Eng. L. and Eq. Rep. 229) the partnership was applied on a very important and complicated case, where a clause in a statute bearing upon the question was held directory, and the subject was considered one of internal management in which a majority of partners will decide. And so in Courto vs. the Port Henry Iron Works (12 Barbour 27.) The court say, "The tendency of modern decisions is to assimilate the action, duties and liabilities of corporations to those individuals and commercial partnerships." But the power to assign shares was a power to introduce new members into the

partnership. The assignee was substituted for the assignor, in whole or in part, accordingly as the whole or a part of his shares was transferred. The holder of ten shares could introduce ten new partners in his place. True, they represented separately, what he represented in the aggregate; the representation collectively being of the same shares; but yet new partners were brought in by the will of one party alone. The general system adopted in unchartered companies was to require a subscription to the deed of agreement or settlement. But while this was essential to constitute members among the associates, much less was sufficient to render a person responsible to creditors. And the very rule and distinction between parties *inter se*, and to the world, was applied to these cases. (See Wordsworth 182, Mondesley vs. Le Blanc, 2 Cam. and pp. 409 n.; Harvey vs. Kay, 9, 13 and Cr. 356, and Ellis vs. Schucoek, 5 Bing. 521.) Next, it cannot be contested that if a company was chartered with a definite limited capital, and nothing was declared respecting the amount of the shares, the company could adjust them at pleasure; and could give that power to the managers or directors. It is equally clear that the shareholders could authorize the directors to increase the number of such shares; and, if this could not be done by transcending the limit of the capital and adding to it, it must be understood as authorized to be done by diminishing the value of the shares.

Cases can be imagined: cases, I understand, have occurred where such a method of raising money to meet the exigencies of a corporation, has been resorted to. It will not go to say that it cannot be imagined the stockholders intended to give a power, the effect of which would be to diminish their own profit. Such an answer might be made by a principal in every case of excess of authority. A joint stock company or a corporation then, if unfettered by express legislation, has an undoubted right to fix the number of shares into which the capital shall be divided, and when fixed, the associates may subsequently change it; and, if the power is reserved or implied in the articles of association, the directors or trustees may exercise such power. Thus in the Armagat Rail-road Co. vs. Mitchell, (6 Railway and Canal cases 236,) the shares of a company were originally fixed at £25 a share. It was held that this was lawfully done. The statute under which it was organized did not forbid it. A section of that act prevented any one being entitled to vote, except he possessed an interest in the capital to the amount of £25. It was also held that under the charter the directors had the power. The Lexington Company vs. Chambers (Metcalfe 110,) and the Kennebec Railroad Company vs. Jarvis (34 Maine Rep. 360,) tend to support the same position. I repeat and condense these propositions thus: The principles of a common law partnership govern joint stock associations, incorporated or unincorporated, except so far as modified by the statute, or fixed principles of law. The introduction of new members into a partnership is, upon common law doctrine, only allowable upon a joint consent. This joint consent may be exercised and proven, either by an actual agreement in each particular instance or by a delegation of the power to assent, to a particular body, or to a particular person. If the delegation is made to a particular body, it may be accompanied or not, with authority to that body to re-delegate it, and thus the question is first, whether the members entrusted the power directly to a particular officer; and next, if they did not, whether they entrusted it to a class of persons, with power of substitution; and lastly, have the latter made such substitution? Now if by a regular chain of developed power, the authority to introduce new members into this partnership can be established; if by the act and agreement of the stockholders, the evidences of such membership are placed in the power of an officer to authenticate and issue, then a general power or agency has been delegated to him. And then his abuse or fraudulent exercise of that power will not prevent the compa-

ny from being bound. This view meets the cogent argument of Mr. Wood, upon the nature of the agency in this case. What was the power delegated to Robert Schuyler, as transfer agent, and what was its extent? The first section of the charter passed 1st May, 1844, constituted Joseph E. Sheffield and others, naming them, "with such other persons as shall as shall associate with them for that purpose, a body politic and corporate, by the name of the New York and New Haven Railroad Company." The second section provided that the capital stock should be two millions of dollars, with the privilege of increasing the same to three millions, and to be divided into shares of one hundred dollars each, which should be deemed personal property, and be transferred in such manner, and at such places, as the bye-laws of the company should direct. By the third section the parties who were authorized to receive subscriptions, might make twenty thousand shares subscribed the capital stock of the company. But if the subscription exceeded thirty thousand, the same were to be reduced and apportioned in such manner as should be deemed most beneficial to the corporation. Under the fourth section, the immediate government and direction of the affairs of the company was vested in a board of nine directors to be chosen by the stockholders. Four of such directors formed a quorum for the transaction of business. By the seventh section, the directors were vested "with the power to make bye-laws and regulations, touching the disposition and management of the stock, property, and estate of the Company, not contrary to the charter, or the laws of the State or of the United States; the transfer of shares; the duties and conduct of their officers and their servants; and all matters whatsoever, which may appertain to the concerns of such company." By the twentieth section, the act might be amended, altered, or repealed, at the pleasure of the General Assembly. In the exercise of the powers conferred by the charter a resolution was adopted by the stockholders, to the following effect—(Book of Records, Nos. 20 and 21):—"Transfer and Certificates of Stock—The principal transfer office shall be in the city of New Haven, but transfer agencies may be established in the cities of New York and Boston, by resolution of the board of directors; and all transfers of stock at any office shall be made under, and in compliance with, such rules and regulations, and by such instruments of assignment and transfer (which need not be under seal) as may from time to time be made, ordered, and appointed by the Board of Directors." "Certificates of stock shall be in such form and issued under such rules and regulations as the Board of Directors may from time to time appoint and direct." The directors adopted the forms of transfers, certificates and blank power of transfer, and ordered their general use. On the 3d of February, 1847, the following resolution was adopted by the directors: "The receipts and certificates of stock on the books at New Haven, to be signed by J. E. Sheffield, as transfer agent; at Boston, to be signed by J. E. Thayer & Brother, as transfer agents; at New York, to be signed by Robert Schuyler, as transfer agent." Now a certificate of stock is a written declaration that the party in whose favor it runs, is entitled to the shares expressed in it. It is a written admission that such person is a member of the Company. The Company is a partnership, except as expressly qualified. The certificate, is, therefore, an admission that the person named is a partner. Did there then come down from the whole body of associates (the stockholders in this company), a power to Robert Schuyler to declare that the person mentioned in such certificate was a member? It seems to me that the affirmative is made out by the series of acts and resolutions I have stated. I do not see what link in this chain can be broken. Grant this, and the first part of Mr. Wood's powerful argument is overthrown. "You cannot by any rational deduction, imply a power in an agent to do that which it was totally out of the power of the principal to perform." Yet more strongly—you cannot imply

such power, when the principal was prohibited by the express law of the State from doing the act, and it was a violation of public policy and public law to do it." The first proposition of this argument is met by what is above stated. Irrespective of statutory prohibition, there was a power in the company to admit new members, and that power had been delegated to Robert Schuyler. And then we are led to the next position of the learned counsel: Does the charter or statute law prohibit the act? It is perfectly clear that when the Legislature has prescribed a limit to the capital of a corporation, a direct increase of the amount would be a violation of the compact, and a ground of forfeiture. In granting corporate privileges, the regulation of the capital is governed by two considerations—the necessity of raising an amount sufficient to accomplish the public object, and the forbidding a larger accumulation of money or property in the hands of one body than is essential for that purpose. For a company then to transcend the fixed amount is to usurp a right to increase the great element of corporate power, contrary to a fundamental policy of the State.—But it is not seen how this line of reasoning applies with the like or with any force to the increase by a company of the number of its shares, in any manner which leaves the capital precisely as it was before. If, as before observed, the charter of a company had fixed a capital, but was silent as to the number or par value of shares, the company (or its agents if entrusted with the power) might adjust and re-adjust such manner or value. If, again, when the charter, as in this case, directs that there shall be a defined number of shares of \$100 each, the associates had agreed to increase the shares by reducing the par value of what they held by a given per centage, would that be a violation of the charter such as to work a forfeiture, or would it be a matter only affecting the individual members as to their pecuniary interests in the stock? We find that under the present charter, there might have been thirty thousand members of the company. It is not easy to see what great rule of public policy is invaded if this number was voluntarily increased to forty thousand, and the limited capital remaining the same. The effect in the case suggested would be that each stockholder would reduce his share, for which he has paid \$100 to \$75, and receive his part of future profits upon the latter sum. But it is here necessary to examine with care a decision of the Supreme Court of Massachusetts, pronounced by its late distinguished chief justice, bearing upon this point. The case is that of the Salem Mill Dam vs. Ropes, (6, Pickering 32,) reaffirmed in (9 Pickering 187), and confirmed in (10 Pickering 147). It must be noticed that the case arose upon an action against a subscriber for payment of a call, which was resisted on the ground that his subscription was conditional, and that such condition had not been fulfilled. The charter was, that the capital should be \$500,000, and the shares 5,000, of \$100. The directors had attempted to go on with the business of the company, when only 2,687 shares had been subscribed. The Court held the defendant not responsible for the call, and the line of reasoning was in substance this: A subscriber has a right to the benefit of the expectation and possibility that the whole of the capital allowed by the charter may not be necessary for the object contemplated. If, then, when the capital is \$500,000, and the shares 5,000, and each share of course \$100, it should occur that \$250,000 will suffice for the object, a subscriber for one hundred shares will only be called upon to pay \$5,000 or \$50 a share. But if the shares are reduced in number to 1,500, each subscriber for 100 shares must pay \$10,000, or his utmost limit. This would be against the condition of his subscription. Again, every subscriber has a right to calculate upon a fund computed to be commensurate with the object, and that each of the 5,000 shares should be liable to a tax of \$100, to produce that effect. A power to reduce the shares to 1,000, without a power of taxing them beyond the \$100, would be a power to expend \$100,000

which might be totally insufficient, and might be wholly wasted and lost. Now, it appears to me that it is inaccurate to say that these cases prove that a reduction of the number of shares expressed in a charter is a violation of that charter. It is not correct to say that they prove that it is a violation or non-fulfillment of a condition in the contract between a subscriber and the company, the terms of which contract are found in the charter. Then the condition of the contract may be waived modified, or insisted upon, at the will of the subscriber, with the assent of the Company. And hence we are, in each particular case, to ascertain whether such was a condition of the contract, and whether, if it was, it has been waived. In this point of view the question was regarded by the Court, in the case of Lexington and W. Cambridge Co. vs. Chambers (18 Metcalf 311,) and in the Kenebec Railroad Co. vs. Jarvis, (34 Maine Rep., 360). In the last case the Court says that the contract there could not have had reference to any certain number of shares or certain amount of capital, as fixed by the charter, and there is no language used in the contract prescribing the number of the shares, or the amount of capital.

It may be admitted that an increase of the number of shares, by a reduction of the value of those already issued, by affecting the amount of the profits of the holders as well as the actual sum represented, stands upon a similar footing to a reduction of shares which tends to increase his liability or endanger his advance. But the question still, in each instance, is one of contract and authorization. Upon this question of forfeiture of the charter, I have examined the following cases, and the result, in my judgment, is that it is at least very doubtful whether the tribunals of Connecticut would determine this charter to be forfeited by the adoption of this stock as a part of the stock of the company, by reducing the value of the genuine shares in the manner pointed out. Kellogg vs. the Union Co., 12 Conn. Rep. 7; The State vs. The Essex Bank, 8 Vermont Rep. 489; Planters' Bank vs. The Bank of Alexandria, 10 Gill and John 346; Att'y Gen. vs. The Petersburg Railroad Co., 6 Tredell, 456; The People vs. Oakland County Bank, 1 Douglass, 282; State of Mississippi vs. The Commercial Bank of Manchester, 6 Smedes and Marshall, 233. See also the cases in this State cited in Angell & Ames, see 776, note. There remains one point upon this branch of the case, to which the observations of counsel have been to some extent directed, and that is as to the effect of the possession of a certificate merely, with or without a power to transfer annexed to or accompanying it. It is conceded, as a rule very general in its extent, that for the purposes of voting, or exercising any control in the management of the affairs of such companies, a registration on the books is necessary. Regulations of this nature are sometimes contained in the charter—sometimes prescribed in by-laws, and in our State directed by express statute as to various incorporations. It is sufficient here to refer to the general statute as to moneyed corporations—(2 R. S., 596, §36, 37 and 38,) and the General Railroad act adopting them, (laws of 1850, ch. 140, §5,) and to the case of Rosevelt vs. Brown—1 Kernans, Court of Appeals, 152. Again, as a general rule, it may be stated that such registration is essential to release an apparent owner from responsibility to the call or debts of the company. Sayles vs. Blanc, 14 Queens B Rep. 205; Wynne vs. Price 3 De Gex, and Smales 310; Adelder vs. Storms 6 Hill 626; Worrall vs. Judson 5 Barbour's Rep. 210. A certificate of the ownership of shares issued to a registered party, is, in truth, an evidence and declaration of a right of property to the shares expressed in it. The power to transfer, which may be annexed to it, is immaterial as to the party's own title. It serves the office of enabling him to invest another party with his own absolute right of property, and to obtain his recognition by the company as such. It serves the purpose of enabling such person to transfer the same right and interest to another, and so successively. But this

can be accomplished by any instrument of assignment, and, indeed, by a mere endorsement on the certificate—(Commercial Bank at Buffalo vs. Kortright 22 Wendell 362)—that the certificate is the substantial ground and evidence of title and interest, and the power to transfer but an adjunct will, I think, appear from the following decisions:—In *Dororet vs. Rothschild*, (1 Sim. and St. 590,) a bill was sustained for the delivery of certificates of stock in a loan to which the plaintiff had subscribed. In *ex parte Barriere* (11 En. L. and Eq. Rep. 128,) a party who took a certificate of stock, without complying with a by-law requiring registration, was held responsible. In *Newry R. R. Co. vs. Edwards*, (2 Exch. Rep. 118,) a person under similar circumstances was considered a shareholder from mere possession of the scrip. In *Cheltenham R. W. Co. vs. Daniel*, (2 Railway Cases 728,) and the same vs. *Medina*, (ibid 735,) the purchaser of scrip certificates who sought to get himself registered, but accidentally failed, was held to be a member. In *Bagshaw vs. Eastern R. W. Co.*, (6 R. W. canal cases 152, 160,) Chancellor Wigram stated it as an indisputable proposition that the holders of scrip certificates in the stock of a company could sustain a bill to prevent the misapplication of the capital. There was an inchoate right in such persons to become general shareholders. In *— vs. The Marblehead Co.*, (10 Mass. Rep. 476,) the delivery of a certificate with an endorsement upon it for valuable consideration, was held sufficient, and entitled the holder to the interest and title when the calls were paid in full. In *Ashley vs. Blackwell*, (2 Eden Rep. 300,) where it was held that a company was responsible to a party whose stock had been transferred under a forged power, the Lord Keeper said that the letter of attorney was no part of the title, but only an authority to transfer. The title was an admission into the company as a partner *pro tanto*, he accepting the stock on the conditions of the partnership. The letter of the attorney is only the authority to the company to transfer. And in *Fatman vs. Loback*, (1 Duer Rep. 354,) this Court held that the holder of a certificate, with a power annexed in blank, could retain the securities for moneys advanced to first pledgee of stock, although the owner had paid such pledgee in full. The possession of the documents gave the pledgee an equitable title, which, by filling up the power, he could convert into a legal one. Indeed, it seems difficult to avoid the conclusion that, as between immediate parties, a mere delivery of a certificate as security upon obtaining a loan of money would be an equitable pledge of the stock, equivalent to an equitable mortgage by a deposit of a lease. (See *Russel vs. Russell*, 1 Br. C. C. 209; *Moore vs. Choate*, 8 Simons. 308; *Welsh vs. Usher*, 2 Hills ch. Ca., 170.) It follows that the holders of certificates, even as I think, without powers of transfer, are equitably shareholders or members of this company, with a right to authenticate their title by procuring a transfer on the books. If they do not possess a power of transfer, it will only be a difficulty of evidence to make out their right. The result then is that the plaintiffs are entitled, under the certificate and power taken by them from Mr. Stevens, the President of the company, to be admitted as shareholders in the capital of the company in common with all other shareholders whose rights are admitted or shall be admitted, and that their right is in proportion to such whole number of holders upon the allotted capital of three millions of dollars. It will be seen that this view of the rights of the parties excludes any right to sue for damages or to sustain any action, except upon the ground of common ownership, unless, indeed, the company refuse admission. Whether in such a case a suit for damages, or a mandamus, is proper, I do not consider.—Since this opinion was written I have been referred to the case of *ex parte Hassinger*, (2 Ashmead's Rep. 287.) That case is strikingly in point, and the line of reasoning, in several particulars, similar to that I have pursued.

6.—The last subject of consideration raised by the counsel is, whether these plaintiffs are not so

far chargeable with notice of the character of this stock, as that upon that ground alone they must fail in this action. It appears that Mr. Ketchum, one of the plaintiffs, was a director and officer of the company at the time of the fraudulent entry of the stock, and since; and it is insisted that he was bound to know the operations of the company, the position of the books, and that his knowledge is that of the firm. It is, as I understand, admitted that he was a stockholder. The general law which I treated as applicable to this case, gives every partner an equal right to the control and inspection of books, and charges every partner with a knowledge of their contents. Besides, this right belongs to every corporator by settled rule of law. (*Rex vs. Shelly*, 3, T. R. 142; *Rex vs. Travanion*, 2d Chitty's Rep. 366 and N.; *Rex vs. Tower*, 4 M. & S. 163.) Again, by an act passed April 11, 1842, (Sess. laws, 1842, Ch. 165,) the transfer agent in this State, of any moneyed or other corporation existing beyond the jurisdiction of this State, shall at all reasonable times, during the hours of transacting business, exhibit to any stockholder of such foreign corporation, when requested by him, the transfer books of such foreign corporation, and also a list of the stockholders thereof, if in his power so to do. The second section imposes a penalty of \$250 for a refusal to make such exhibition. It will not escape attention, that the fraud in the present case was of the most apparent and glaring character. On the face of the stock ledger, stood two entries of the enormous extent of 5000 shares each, transferring those amounts from the transfer agent substantially to himself. And on the page of the ledger referred to in this entry, is the bald debt of 10,000 shares in two items, to the transfer agent. There never was a case of more flagrant neglect of all the accessible means of information on the part of a director taking stock directly from R. & G. L. Schuyler. When such a case arises, it will be difficult to avoid the application of the rule which places a party who has knowledge of a fraud, or the path to knowledge of a fraud, plainly before him, in the same position as the criminal himself. In the language of a Judge, who, at least, never left a decision or a proposition obscure. "It will be no public detriment if my decree tends to make the directors of public companies attend to the business of those companies, and teaches them not to leave the important transactions of millions to undirected clerks and book-keepers." (*Lord Nathington*, 2 Eden, 303.) If the consequence of the neglect fall upon the director, instead of the company, in the loss of his own demand, the rule will yet be more equitable in its application than it was in the case before the Lord Keeper.

I do not propose to inquire under what if any circumstances, a stockholder of the company, not a director, may be subject to a similar imputation of constructive notice. The field is wide and the cases numerous upon the question of what shall be sufficient to affect the conscience of a purchaser with the consequences of the fraud of the seller. In the present case it may be doubtful whether the firm is bound by the constructive knowledge of a member chargeable upon him as director; but in the next place, the plaintiffs are entitled to shelter themselves under the want of notice, implied or actual in the book. It does not appear that the bank, in its corporate capacity, or that any of its officers on its behalf, held stock, so as to entitle it to examine the books.

I have thus endeavored to discharge my duty in a case more serious and important than any other which it has been my lot to determine. No one can be more conscious than myself of my own inability to meet its difficulties and dissipate its darkness. No one could bestow more anxious thought and solicitude to decide it righteously.—I humbly trust that the hope which I have imbibed from the source of all truth and peace may be realized, and that this fierce struggle may end like the contest for the wells of springing water between the servants of Isaac and the herdmen of Gerar, when the stream of the fountain of Reboboth and

the fruitfulness of the land followed and rewarded the submission of the patriarch.

The complaint must be dismissed with costs.

It strikes us that the two points of the Judge's opinion do not harmonize. In the first place, he decides that had the stock been valueless, then the plaintiff would have had good cause of action. Where there is a mutual mistake as to the nature or quality of the subject matter of construction; a court of justice will restore parties to their original relations. It will also give relief where there has been a *partial* failure, as in the case of the Navy Bill above cited. Now the case under consideration is an almost exact parallel to that above. The plaintiff's purchased of the defendants 370 shares of the New York and New Haven Railroad Company's stock, the par value of which purported to be one hundred dollars. Both parties to the transaction supposed them to be what they purported to be on their face. But the *over-issues* having been previously made, they represented a value of only about sixty dollars. Now there being a mutual mistake as to the legal value of the shares, we cannot see, according to Judge Hoffman's doctrine, why they were not entitled to recover the difference, between the *real* and *supposed* value of the shares. If so, the suit was improperly dismissed. It strikes us that the two points of his opinion are at a dead lock.

The whole decision is a labored one, and does not, we think, take the most obvious view to the same conclusion—the liability of the company. If they are held, we think it will be on the ground that the company constructively assented to his frauds, and consequently are bound by them. There are very grave objections to Judge Hoffman's view of the case. The object of defining by statute the number and value of shares into which the property of a company shall be divided, is to protect the rights of the various members. When a person goes into a company, he naturally wishes to know the limit of his own liability and of the powers of the company. If there be no such limit, as Judge Hoffman decides there is not, people will be very careful in future how they go into joint stock companies. We presume an appeal will be taken from his decision, which renders further remarks unnecessary.

Hartford, Providence and Fishkill R. R.

The earnings from fifty miles of the Hartford Providence and Fishkill Railroad, in operation from June, 1853, to October 1 1854:

Amounted to.....\$179,048 65
The regular working expenses were... 63,550 02

Net earnings 16 months.....\$115,498 63

Of the earning, over one-half (\$98,031) was from passengers, and \$72,313 for freight. The receipts of the Company from all sources from June 1, 1853, to October 1, 1854, were \$1,820,240 84, of which \$622,792 were from sales of bonds, and \$60,560 from stock. The payments, during the same period have been \$1,746,099 41, leaving on hand, cash, \$71,141 43.

The net earnings for the past four years are thus stated:

Net earnings, 1850-1851.....\$55,101 83
Net earnings, 1851-1852..... 60,119 04
Net earnings, 1852-1853..... 69,629 52
Net earnings, 1853-1854..... 86,623 97

The floating debt of the Company, the amount needed to complete the stations, gradings, turn-

outs, &c., amounts to \$472,550 over the available means of the Company.

Arkansas.

We have the recent message of the Governor of this State with accompanying documents. They cover a period of two years. From them we learn the *floating* debt of the State, which amounted, two years ago, to \$175,751 has been extinguished, or nearly so; that the State revenue, by the present laws, is amply sufficient to meet the current expenditure. According to the last census, taken January 1, 1854, the population of 52 counties—Scott and Polk not heard from—was, Whites 187,224; Free colored persons, 614, and 59,979 slaves. The lands under cultivation in 49 counties, were 256,666 acres in cotton, and 600,513 in grain; the whole producing 160,779 bales of cotton, 11,536,969 bushels of corn, 332,535 bushels of wheat, and 1,040,206 bushels of oats.—The manufacturing interest is weak, as the amount of capital thus invested in 49 counties, was only \$16,220. The Governor recommends the prohibition of all bank bills below the denomination of five dollars.

FINANCES OF THE STATE.

The greater portion of the Message is occupied with the discussion of the *funded debt* of the State which has been created to establish her banking institutions. The "Real Estate Bank" was the first of these, to start which the State issued bonds to the amount of over a million and a half of dollars, receiving from the stockholders as security 141,980 acres of land valued at \$2,603,932. It appears that interest was regularly paid on these till July 1, 1841, since which time, nothing further has been done by the Bank to meet either the principal or interest.

In like manner, the State issued 500 more bonds of \$1,000 each to establish a Branch Bank to the above institution, and received in return a mortgage of 65,121 acres of land valued at \$776,840. It was distinctly specified in the charter, that these bonds were not to be disposed of *at less than par*, but in violation of this, they were hypothecated to the "North American Trust and Banking Co.," and the entire sum thus obtained was \$122,389.—Of any of these bonds the State has never since been able to get possession.

In April, 1842, when the Bank failed, the assets of the Bank were stated to be \$2,405,966, and its liabilities \$2,230,986, or nearly \$175,000 less than the assets. Since this period, however, the officers of the State have been excluded from all participation in or knowledge of the management of the concern. The Governor states it as his conviction, that the liabilities of the Bank are now nearly \$1,000,000 greater they were in 1842, leaving the institution consequently \$500,000 worse than nothing.

Of these 1,530 bonds the trustees, into whose hands the assets had been committed, hold 179, leaving 1,351 yet outstanding. The interest on these up to the 1st of October last, amounted to \$1,031,242; added to which are the sums of \$122,389 obtained on the hypothecated bonds, and \$225,666 interest on the bonds to same date.—Consequently, the entire State debt on account of the Real Estate Bank is \$2,607,909, falling due in October 1861. To meet this, she possesses 207,101 acres of land valued by commissioners under oath

at \$2,380,772. The Governor hopes that by the time these bonds mature, in consequence of the enhanced value of property caused by railroads and increase of population, the State will be able to pay not only all the debt and the interest on it, but can "yield to every stockholder a surplus equal to the present market value of his mortgaged bond."

In 1836, the State issued 5 per cent. bonds to the amount of \$169,000, and, in the following year 6 per cent. bonds to the amount of \$1,000,000, the former payable at 50, the latter at 30 years, to establish the *Bank of the State of Arkansas*. Of the five per-cent. bonds, 132 have been redeemed by the State and cancelled, and of the six per cents 98, leaving unredeemed of both kinds 989 of \$1,000 each. The interest unpaid by the Bank on these up to 1st of October, 1854, was \$713,665, making with the principal \$1,652,665, due on account of this bank. Of this sum \$448,510 were due, at same date, by the Real Estate Bank to the Bank of Arkansas, and are included among the liabilities of the former concern. The latter has succeeded in reducing its liabilities to some extent, so that the amount of its present indebtedness is about \$1,180,911. To meet this the remaining assets of the Bank, consisting of lands, town-lots, &c., taken by the Bank in payment of debts, are liable. These, the Governor thinks, will reduce the balance of the debt to not over a million at furthest; the property of the Real Estate Bank paying its way in full, and the State's floating debt being now almost extinguished.

RECAPITULATION OF THE INDEBTEDNESS OF THE STATE, 1st OCTOBER, 1854.

1,351 six per cent. bonds due Oct., 1861,	\$1,351,000
Interest on do.....	1,031,242
Amount received on hypothecated bonds	122,389
Interest on bonds.....	225,666

Total on account Real Estate Bank..	\$2,607,909
27 five per cent. bonds due	
1887, \$1,000.....	37,000
902 six per cent. " ".....	902,000
Interest on do.....	713,665

Total on account Bank of Arkansas.....	\$1,652,665
--	-------------

Total debt.....	\$4,260,574
Value of lands Mortgaged by Real Estate Bank.....	3,380,772
Debts due State Bank of Arkansas by do.....	\$448,510
Payments made on account by State Bank of Arkansas....	23,244
Lands &c., held by State from do. worth (say).....	180,911
	\$652,665

In reference to the payment of the debts of the State, the Governor says:

The State of Arkansas will never repudiate her just debts. She will honestly pay them all whenever she can command the means. When the bonds of the State were issued to the Real Estate Bank of the State of Arkansas, it was never intended that the people should be taxed to pay the bonds or the interest on them, but on the contrary, as required by law, the stockholders, (for security to the State and bondholders, for the payment of the bonds and the interests on them) mortgaged to the State 207,101 acres of land, valued by commissioners, under oath, at \$3,380,772 38. These lands embrace many of the best and most valuable plantations in the State. The State has not yet resorted to these mortgaged lands to raise money to pay the interest due on the bonds, and it is deemed safe policy to let them remain undisturbed until the large amount

of assets placed in the hands of trustees, under the deed of assignment, shall have been accounted for and every dollar which can be realized from the assets, sacrificially applied towards paying the debts of the bank. After the assets shall have been accounted for and so applied, the balance of the debt could be ascertained and proper measures adopted to secure the honest payment of every dollar of it without resorting to taxation for that purpose.

[It strikes us that this is rather cold comfort for the creditors, who have waited some twelve years without receiving a penny either as interest or principal. For aught appears to the contrary, as many more may elapse before any thing further will be done. At the same time, the State has recently received as a gratuity, and still holds nearly 10,000,000 acres of land, enough to pay the State debt twice over. The holders of the State bonds would, we have no doubt, be glad to receive what is due them in land. The absence of any intention shown of making such appropriation, is a disagreeable intimation that the creditors must continue to look to the assets of the exploded Bank for their pay.]

RAILROADS.

The sparseness of the population in the State, places it beyond the means of the people to construct a Railroad without aid from abroad. To make up for the lack of domestic means, the Government of the United States granted, by an act of Congress, dated February 9, 1852, the right of way and alternate sections of six miles in width on each side of the line, for the construction of a Railroad from the junction of the Ohio and Mississippi river opposite Cairo, via Little Rock, to the Texas boundary near Fulton, with branches from Little Rock, to Fort Smith on the Western boundary of the State, and from Little Rock to the Mississippi river. For the purpose of constructing the road contemplated by the above grant, three companies have been organized,—the Cairo and Fulton, the Arkansas Pacific and the Little Rock and Fort Smith, branches of the Cairo and Fulton Railroad.

CAIRO AND FULTON RAILROAD.

This company was organized April 13, 1853, and have completed a survey of the line of their proposed road. Its entire length is 301 miles.—The route surveyed exceeds an Air Line between Cairo and Fulton by only $6\frac{1}{2}$ miles. It will be a prolongation of the leading lines of roads through the States adjoining the Ohio river. A uniform gauge of $5\frac{1}{2}$ feet, is fixed by law in all the trans Mississippi States. The steepest grade on the road is $52\frac{1}{2}$ feet to the mile, about four-fifths of the entire line being either level or at less gradients than 30 feet to the mile. No curve is of less radius than 5,700 feet, and the greater part of double that length. In the North Eastern Division the line is for over 50 miles perfectly straight. In the middle and Southern parts where the river crosses numerous rivers and their water sheds, the works will necessarily be more expensive. The Arkansas is to be crossed at Little Rock by a bridge 1,220 feet long, and 57 above the surface of the water. Materials for grading, bridging, &c. are abundant and accessible; and, in many instances, lands have been gratuitously surrendered to the company by the proprietors along the line.

The following is a summary of the estimated cost of the work:

For grading, masonry, and bridging.....	\$2,179,489
For laying track.....	2,950,967
For depots, water-stations and turn-outs.....	491,400
For locomotives.....	288,000
For cars.....	218,800
For engineering and construction.....	245,146

Total.....\$6,373,802

Or \$21,175 per mile.

The officers for the present year are, Roswell Beebe, *President*, Daniel Ringo, *Vice-President*, William B. Wait, *Treasurer*.

LITTLE ROCK AND FORT SMITH BRANCH, AND ARKANSAS PACIFIC RAILROAD.

Crossing the above line nearly at right angles, in the Capital of the State, are two branches extending from Little Rock to the Mississippi river, and from Little Rock to Fort Smith respectively. These will form a continuous line from the South East to the North West of the State, or almost parallel with the Arkansas river. Congress has made similar appropriations to these as to the main line, and it is recommended to the State Legislature to invest 500,000 acres of swamp land as stock in each of these.

For the road to Fort Smith, two lines are proposed—one following up the Arkansas,—the other branching off from the Main line some distance north of Little Rock. The former of these, the *Arkansas Pacific* is 148 miles long. The other, the Little Rock and Fort Smith, 154 miles. The two roads would, however, unite upon a common line for about 84 miles east of Fort Smith.

The estimated cost of the Little Rock and Fort Smith road to a point of junction with Arkansas Pacific is as follows:

Graduation, bridging and masonry.....	\$587,309
Superstructure and fencing.....	896,660

Total.....\$1,483,969

Cost per mile \$17,608.

The estimated cost of the road from Fort Smith to the junction with the experimental line of the Cairo and Fulton Railroad is as follows:

Graduation, bridging and masonry.....	\$815,653
Superstructure and fencing.....	1,845,125

Total cost of 153¾ miles.....\$2,460,778

Cost per mile \$16,005

The estimates for rolling stock are....	187,900
Depots, workshops, &c.....	150,000
Engineering and contingencies.....	72,100

\$360,000

Making the aggregate cost.....\$2,820,778

Cost per mile.....18,350

According to the report of the Chief Engineer of the Arkansas Pacific Railroad, the estimates for its construction are as follows:

Graduation, Bridging and masonry from Fort Smith to Dardanelle, 74¾ miles.....	\$436,720
Graduation, bridging and masonry from Dardanelle to Little Rock, 72¼ miles.....	541,095
Bridge over Arkansas river.....	140,000
Superstructure and right of way.....	1,134,350
Rolling stock, depots, stations &c.....	210,800
Engineering and contingencies.....	100,000

Total cost.....\$2,422,965

Cost per mile \$16,472

"THE SWAMP LAND."

By an act of Congress passed September, 1850, granting certain swamp lands to several Western States, about 8½ million of acres have been recommended for confirmation to the State of Ar-

kansas; besides half a million more claimed, but hitherto disputed. As private claims exist on many of these which were previously granted by the General Government to several parties, the Governor thinks that 8 millions may be reckoned on with certainty as coming from that source. Up to October 1, 1854, the State had actually received of these, 5,567,051 acres.

To take charge and dispose of these, the Legislature created two successive Boards of Commissioners, who had sold up to the above date, 1,504,223 acres. To realize on the remainder of the lands, the State borrowed money for which she issued swamp land scrip or certificates secured by certain portions. These claims on the donated lands were disposed of to the amount of \$1,283,951. Of this sum there have been redeemed \$607,243, and the scrip paid into the State Treasury, leaving a balance of \$676,707 still unredeemed. To meet this would require 1,353,415 additional acres of land, reckoning their value at 50 cents an acre. These added to those formerly sold make a total of 2,857,640 acres whose proceeds have been paid into the State Treasury in some shape. Deducting these from the number actually received from the United States, leaves a balance of 2,709,400 acres more than will be required to meet the unredeemed scrip now outstanding, besides 2,500,000 yet expected from the General Government. Reckoning these at only 50 cents an acre, the value of the whole would be considerably over two millions and a half, besides the sum which the State has already received from this source.

In addition to the above, the General Government has granted about 2,211,840 acres of land to aid in the construction of the several roads named in this article making the whole amount of the recent grants to the State equal to at least 10,200,000 acres.

STATE REVENUES.

The State Revenue, according to the State Treasurer's Report, for the last two years has been as follows:

	Treasury Warrants.	Specie.	Total.
Amt. rec'd 4th quarter of 1852.....	\$61,784 88	\$28,082 85	\$79,767 73
1st 1853.....	275 89	1 38	276 77
2d ".....	3,353 88	55	3,354 43
3d ".....	5,381 23	.....	5,381 23
4th ".....	6,963 53	1 75	6,965 28
1st 1854.....	10,424 38	77 22	10,501 60
2d ".....	47,470 66	49,522 52	96,992 88
3d ".....	.....	10 26	10 76

Total revenue for 2 years.....\$125,653 95\$77,696 23\$203,350.18

Of the State Warrants given above at 1st October, 1852, a balance was outstanding amounting to.....\$58,833 43
Amount issued to 30th June, 1854.....116,918 31

Total.....	\$175,751 74
Of these the amount above given has been	
Received by Sheriff on account tax.....	\$125,653 95
Received on Auditor's sale.....	10,831 30
Received on State Secretary's sale.....	32 50
Amount redeemed by Treasurer with specie.....	38,862 15
	\$175,379 98

Balance outstanding 30th Sept '54.....\$371 76

The Legislature has only biennial sittings, and their public reports cover a period of two years.

Baltimore and Ohio Railroad.

This company are in trouble with the city of Wheeling. The former and the Ohio Central proposed forming a connection about four miles below the city, for the interchange of freight, though both terminate in the city. This connection the Wheeling people oppose, as hostile to their interest, and have procured an *injunction* to prevent its accomplishment. They say that they helped to build the road, and the charter does not contemplate the formation of any connection except at the city, and that the acts of the company would violate the charter of their rights. The following is a copy of their injunction;

"Ordered, That the Baltimore and Ohio Railroad Company, its officers, agents and servants be and are restrained and enjoined from lending or advancing to the Central Ohio Railroad Company any bonds of the North Western Virginia Railroad Company, now held by the Baltimore and Ohio Railroad Company, also from proceeding to carry into effect the contract mentioned in such Bill, between the Baltimore and Ohio Railroad Company and Central Ohio Railroad Company, or any such contract, agreement, arrangement or understanding, between the two last named Companies (or their respective officers or agents or any of them), by virtue or in pursuance whereof the one of those two companies is to receive from or deliver to the other, at or near Benwood, in said Bill mentioned, freight or passengers carried on the Railroad of either of them, or by virtue and in pursuance whereof the Baltimore and Ohio Railroad Company are constructing, or to construct or complete any such work or structure at or near Benwood aforesaid as are hereinafter mentioned and forbidden, or to use the same for the transportation of freight or passengers, or to use, employ, run, build, or own (in whole or in part, solely or with any other) any such steamboat as in said bill is mentioned, or to make any such loan as aforesaid; also from doing any such acts, whether in pursuance of such a contract, agreement, or understanding as last aforesaid or not, and from constructing, making or completing, or causing to be made, constructed or completed at or near Benwood aforesaid, or at or near the Ohio river below the said city of Wheeling, any wharf, pier, embankment, filling, wall, road-bed, or other structure within or below the banks of the Eastern bank of the Ohio river, and within low water line of the western shore of said river, and from placing, laying down or using, directly or indirectly on any such wharf, pier, filling, embankment or other structure, any railway track or tracks, and from connecting any such structure or work with the Baltimore and Ohio Railroad, or the main track thereof, by means of a railway track or tracks, or otherwise, and from building, owning, equipping, running, employing or using, (in connection with the Central Ohio Railroad Company or otherwise,) any steamboat for transporting or ferrying freight or passengers (or either) across the Ohio river at or near Benwood aforesaid; also from receiving or delivering, at or near the same place, goods, wares, merchandise or other freight or passengers, to be carried on the Central Ohio Railroad, or which shall have been carried on that road; and from making any expenditure of money, constructions, arrangement of trains, management, working or business of the said Baltimore and Ohio Railroad, designed or tending to cause or induce freight or passengers brought from or designed to be transported on the said Central Ohio Railroad, or to the Ohio river, to be received on or delivered from the Baltimore and Ohio Railroad at or near Benwood aforesaid; and also from forming any connection by direct ferriage or otherwise, between the Baltimore and Ohio Railroad and the Central Ohio Railroad, or in the business of transportation thereon (by the method described in exhibit B. filed in the said bill or otherwise) at or near Benwood aforesaid.

But this order shall not take effect until bonds

be given by the complainant, payable to the said Baltimore and Ohio Railroad Company, in the penalty of seventy-five thousand dollars, which bond shall be properly executed, under the corporate seal of the said city of Wheeling fully authorized by a legal and competent order of the Council of said city of Wheeling, to execute and deliver said bond, or said bond may be given by any person competent to give bond, but in either case with sufficient security, who shall testify to their sufficiency for the amount aforesaid, which bonds in either event shall be conditioned to pay to said Baltimore and Ohio Railroad Company, all such damages and costs as may be awarded to said Company, or as it may sustain and incur, in case the same shall be dissolved, or shall appear to have been improperly awarded.

—Signed, GEO. W. THOMPSON.

In reference to the above the Baltimore Americans say:

We are reluctantly compelled to admit that the control of the Baltimore and Ohio Railroad no longer rests with those who have expended their means and gone through long years of trial and of exertion to secure its construction—that Baltimore, though she has a score of millions invested in it, and her most important interest intimately depending upon it, is yet a secondary power in its management, subject to all the obstructions and obstacles that Wheeling, through a jealous spirit, aided by the stringent application of the technicalities of the law, may be able to raise up. The language of the order not only forbids the construction of a railway track to the river at Benwood, with the necessary piers and landing, but prohibits the taking up or landing of passengers or freight at that point, or the consummation in any other way of a connection there with the Central Ohio road. Wheeling, in effect, says—"Your through passengers and freight, though it unnecessarily detains the one against their will, and adds to the charges upon the transportation of the other, shall pass through this city. Our hackmen, our porters, and our hotel keepers shall have an opportunity to exact their charges from passengers, and our draymen must have the benefit of transshipping your freight. Our position and the stringency of the bargain by which we permitted you to reach the Ohio river, put this in our power, and we are determined to exact the pound of flesh named in the bond." This in plain words is the position of Wheeling. She has learnt of Erie, and follows out the example, without reference to her present good fame or to her welfare, which is sure hereafter to be injured by her present conduct.

Such is the result that follows the yoking of a commercial enterprise with municipal corporations. Any assistance rendered by such is too apt to be exerted against the interest of the former. We regard it a misfortune for a railroad company to have anything to do with corporate or municipal bodies. Political and selfish considerations are almost certain to control the action of such, of which the Baltimore and Ohio Railroad have had more than one example.

The attempt to fleece commerce by compelling it to perform a useless journey, as in the above instance, or in breaking bulk from car to car, as was recently attempted at Erie, is as much an act of barbarism, as for the feudal lord to exact a toll upon persons or property passing over, or near his domain. It is simply an exercise of might against right. There has been a good deal of this kind of buccaneering in several of the States, though it is gradually being shamed out of existence. A number of southern roads have been obliged to purchase, at a high cost, the right to carry property untaxed through the cities they traverse; as witness Augusta, Macon, and other places. The people of Wheeling claim to exercise

a similar act of sovereignty. We trust they will be disappointed. We hope they will be compelled to find some other way to employ themselves than by obstructing the business operations of the country. They should remember the fate of Erie, a town which literally stinks in the nostrils of every honest man, and which destroyed a bright prospect of future growth and prosperity, as well as present advantage, by her outrageous course. "Free trade" in railroads is the only true policy, and if a town does not happen to lie upon the routes of commerce, it is the height of folly and wickedness to oblige such routes to bend to her advantage. Railroads have greater objects than to be used to sustain the fortunes of a rotten borough, or as a means of supporting those who have not the capacity to help themselves, or to be made the instruments of private or selfish ends, and what is more, they cannot be so used.

Public opinion soon corrects a mischievous law. Its odiousness is only to be seen to cause it to be repealed. The people of Wheeling cannot succeed in what they propose, and they will do well to save their reputation and their money, by backing down from their pretensions.

Grand Trunk Railroad.

Our readers are aware that in August last, the Grand Trunk Railroad of Canada took a lease of the Atlantic and St. Lawrence Railroad, extending from Portland to the boundary line of the Province, for a period of 999 years, subject to the approval of the Provincial government. An act has just been passed by the Canadian Parliament, ratifying the lease, from which we copy the following:

And whereas, by an indenture bearing date the fifth of August, one thousand eight hundred and fifty-three, between the Atlantic and St. Lawrence Railroad Company, of the first part, and the Honorable John Ross, Benjamin Holmes, and William Jackson, of the second part, that the portion of the Atlantic and St. Lawrence Railway, which extends from the City of Portland, on the State of Maine, to the border line of this Province together with certain other property therein described, was demised to the said parties of the second part for the term of nine hundred and ninety-nine years, subject to the payment of the rent, and upon the terms and conditions in such indenture of lease contained. And, whereas, such lease was granted to and taken by the said parties of the second part as Trustees for the said Grand Trunk Railway Company of Canada, or for the purpose of transferring the same to the said company when the should be duly authorized to accept such transfer; and it is expedient that the said company should be authorized to accept a transfer or assignment of such lease from the said lessees, and to become the proprietors of the said portion of railway and other property, on the terms in such lease mentioned.

Be it therefore enacted, that it shall be lawful for the said Hon. John Ross, Benjamin Holmes, and William Jackson, or the survivors or survivor of them, to transfer and assign to the said company and for the said company to accept and take the said Lease and the interest and property of the said Lessees therein, on the forms and conditions in the said Lease mentioned, with such modifications and alterations as shall be agreed to by the Directors of the said company, and to indemnify the said Lessees from and against the covenants and conditions therein contained on the part of the said Lessees, and to hold the said portion of railway and other property subject to the rent, and on the terms and conditions in the said Lease specified with such modifications as aforesaid; and that in case the said Lease shall be surren-

dered to the said Atlantic and St. Lawrence Railroad Company, it shall be lawful for the said Grand Trunk Railway Company of Canada to accept a new Lease from the said other company on such other terms and conditions as may be agreed between the said companies.

So the Atlantic and St. Lawrence Railroad has been definitely merged in the Grand Trunk, and Portland selected as the winter port of the Canadas.

Pacific Railroad of Texas.

Gov. Pease has advertised for new propositions for the construction of the Pacific Railroad of Texas, on the ground that Messrs. Walker, King, and their associates have not complied with the terms of the law in making a deposit of \$300,000, required from the party undertaking to build the road. Among other reasons for declining the deposit are the following:—

"The two certificates of New York State stock are entirely acceptable, and such stock as the law authorizes to be received, but the other two certificates, viz: the preferred stock of the Sussex Iron Company and the Mechanics' Bank stock, of Memphis, are, neither of them, such stock as in my opinion the law requires to be deposited. The first and principal objection to these stocks is that they are not the description of stocks the legislature intended should be deposited. The 12th section of the "Act to provide for the construction of the Mississippi and Pacific Railroad," declares that the company shall deposit with the Treasurer of the State at least three hundred thousand dollars, in gold or silver, or evidences of debt of the State of Texas, or "other good par stocks." I think it is perfectly clear that the legislature intended by the words, "other good par stocks," evidences of debt of the United States, or some State of the Union, or of some corporation. Such stocks have an intrinsic value, because they must ultimately be redeemed in gold or silver. They could never have intended that this deposit might be made in the capital stock of a bank or manufacturing company, which is merely the fund of property employed in the business of the corporation, and its value is dependent upon the fluctuations and casualties of trade, and may be entirely destroyed by misfortune, mismanagement or fraud of the directors or officers."

"Upon a review of the foregoing statements in relation to the value of the stock of the Sussex Iron Company, the question naturally suggests itself, if this stock is really as valuable as the statement of the President of the Company would indicate, and if the gentlemen had the means to procure \$300,000 of this immensely valuable stock, and also \$298,000 of the stock of the Mechanics' Bank of Memphis, could they not, with the same means, have procured \$300,000 of good par evidences of debt, issued by the United States or some State of the Union, or some corporation, authorized to issue such stocks?"

"If I were acting for myself, individually, I should not consider either or both of these two stocks a sufficient security for three hundred thousand dollars, and I hold it to be the duty of an officer of the State to guard her interests as strictly as he would his own. I therefore say that if both these certificates of stock were the character of stocks that could be received under the law, I consider them insufficient."

This matter is turning out as we predicted. The State granted some 12,000,000 acres of land to the road, requiring a deposit from the party assuming to build it of \$300,000, to be returned in case such party complete 50 miles of the road within 18 months. Were the project an attractive one, and did the land possess any value, we should have supposed parties could have been found who would have advanced the above sum. That such have not been found, must be regarded as evi-

dence both against the feasibility of the project, and the value of the lands offered by the State.

American Railroad Journal.

Saturday, December 9, 1854.

Hudson River Railroad.

We think the holders of the Convertible bonds of this company are to be commiserated. If the directors persist in excluding them from the benefits by the *third* mortgage, they may lose their security altogether. The stock is steadily settling away, and there is great danger that it will pass into the hands of parties whose interests and those of the bondholders may be diametrically opposed. It has now a pretty strong look to such a result. We have no company east or west, that have treated their creditors as have the Hudson River Company. After borrowing, without security, what was supposed to be sufficient to complete the road, they put a new mortgage upon it, to secure temporary loans, undoubtedly made to the company by the directors and their friends. We understand that the purchasing of the acceptances of the company, at a high rate of interest, has been the manner in which the directors have been accustomed to use their surplus means. These being curtailed in these tight times, they take the course of relieving themselves by funding the floating debt, and pushing aside those who unfortunately trusted them without security. For directors to prefer themselves, and to shove aside others who would not, under similar circumstances, have trusted the company, is certainly a very dishonest act, no matter by whom committed.

Austrian Railroad Concession.

The public are aware of the pecuniary difficulties in which Austria has been placed for some time, and of the efforts made by that government to procure loans from her people to carry on the operations of her government. It is stated by the "Independence, Belgae," that that government, anxious to introduce a new era into her commercial policy and get relieved from her financial embarrassment, has concluded a treaty with Messrs. Percire and Ernest Andre, for the sale of her public works. Instead of opening subscription, or offering loans in foreign markets, the government resolved to raise funds on the sale of the railroads, mines, furnaces, &c., in their power, so as to secure to themselves sufficient resources for the future, and have the public works managed with that economy and energy which may be expected from private rather than governmental control.

The treaty thus concluded consists of the following articles:

- I. The concession of the Northern or Bohemian Railroad, from the frontier of Saxony, by Prague, to Bruun and Olmutz.
- II. The concession of the South Eastern or Central Hungarian Railroad.
- III. The concession of the railroad from Oravicza to Barcasch, or of the coal mines of the Banat on the Danube.

These concessions are made for 90 years. The length of these lines in operation is 612 miles, requiring in all about 200 miles for their completion. To promote this, the government concedes forever.

I. The Coal mine of Barcasch.

II. A surface of 20 to 25 square miles to be chosen in the coal field of Fauß Kirchen

III. State Iron Works, work shops for the construction of Machines, Foundries, Collieries &c., in the province of Temeswar, the price of which properties is estimated at \$40,000,000.

III. The government guarantees to the company a minimum dividend of 5 per cent. per annum, while the treaty lasts, and the company is exempt from all taxes on the works.

It is considered that the effect of this movement will be felt for the better throughout the empire.

Panama Railroad.

This company have been at work some seven years upon their road, and have expended, we suppose, six or seven millions of dollars, without ever making a formal report, as far as we can find out. From the first it has been a close mouthed concern. The right to take stock in the road, in the outset, was considered a great privilege—too great to allow it to become public property. It was consequently divided up among a small and wealthy party. The stock at one time sold as high as 145. The great amount of money made by the California steamers, led the public to suppose that a railroad across the Isthmus to connect the Atlantic and Pacific lines, would be equally successful; and because the managers of this line had made money, they were regarded as the proper persons to superintend the construction of the railroad. Instead of being such, more incompetent persons for their duties could not well be found. They were opinionated and self-willed, qualities which, when backed with money, often lead to the most mischievous results. To persons having access to means of information, it is notorious that the proceedings of the company have been characterised by the most reckless extravagance and incompetency, as far as the management which resides in New York, is concerned. The great names connected with the road have disarmed public suspicion and inquiry, till it is now too late to successfully interpose. The stockholders will find the horse gone, before they have thought to close the door of the stable, and the value of their property most seriously reduced by its excessive cost.

The result in the above case, is another illustration of the value of railroad reports. Had a full and detailed reports, showing the plans of the managers, and the means by which they proposed to accomplish them, been published annually, the mistakes that have been committed, would have been discovered at an early day and corrected. They would not have stood a moment's daylight. They have been practised with impunity, because the public knew nothing of what was going on. The result will be what we predicted more than two years since, a catastrophe. Had our calls for information been answered, a great loss might have been saved. A history of the management and doings of this company may be still withheld, and the stockholders may continue to pay blindfold as they always have done. We should think, however, that a fall of nearly 80 per cent. within about two years would create a stir. They may be yet far from the bottom of the abyss. Will they not join with us in calling for light?

Virginia and Tennessee Railroad.

This road is now completed to Wytheville, 136 miles from Lynchburgh. The balance of the line of about 70 miles is well advanced, there being only 83 sections of one mile each, the graduation of which is not completed. Nearly all of these will be closed up by the end of the year. The entire cost of work remaining to be done to complete the road to the Tennessee State Line, is as follows:

Graduation	\$75,000
Depots and other buildings.....	50,000
Bridges.....	40,000
Track surveying and cross-ties.....	70,000

Total.....\$235,000

The road will undoubtedly be finished during the coming year. This road on some accounts is the most important work in Virginia, as its success does not depend upon any hypothesis of its ability to command a traffic now in possession of other routes. It is the proper outlet for one of the best portions of Virginia, embracing some of her richest and most populous counties. It traverses one of the richest mineral districts in the State, possessing abundant deposits of coal, iron, lead, and copper. The whole country traversed, from the salubrity of its climate, is admirably adapted to manufacturing pursuits, which the road will develop on an extensive scale.

On the East, the road will have an outlet to Richmond, through the James River and Kanawha Canal, and to Richmond, Petersburg, Norfolk, Alexandria and Baltimore, by railroad. On the South, its line will be prolonged to the Gulf of Mexico, at New Orleans, Mobile and Pensacola; and to Memphis, Vicksburgh and Nashville, by roads already well advanced. It will form an important link in what must certainly be one of the most important and productive lines of railroad in this country. It has been constructed with extraordinary economy, as its cost, completed, will not exceed \$25,000 per mile.

We hope shortly to receive the late annual report of this company, when we shall give a more extended notice of its operations.

Increase of Transportation Charges on New England.

A large proportion of the New England railroads, particularly those running into and through Vermont and New Hampshire, have resolved upon an advance of 20 to 33 per cent. on their passenger fares, to take effect Dec. 1. The advance of the Connecticut River Road is 20 per cent., and makes the through and local fares at the same rate, and that three cents a mile. The connecting roads north and the Vermont and Massachusetts advance 33 per cent. The Western and Hartford roads make no change in their fares. These are already about three cents a mile, save the through fares of the Western.

Evansville and Illinois Railroad.

This important line of road has recently been completed, and is in successful operation to Terre Haute, a distance of 109 miles from Evansville. It is a very important addition to the railroad system of the West. As soon as the Illinois Division of the Ohio and Mississippi Railroad is completed, the above will form a part of the through route between Cincinnati and St. Louis. We believe it will prove one of the best routes in the West.

Railway Morals and Railway Policy.

In the last two numbers of the JOURNAL we endeavored to present the *rationale* upon which the railroad system of this country is based. We showed their low cost to be due to causes peculiar to this country; to a wise legislation; to more correct ideas as to their uses and objects; to a better standard of engineering; to the fact that the parties who are to be benefitted by them superintend their construction; to the corrective influence of public opinion, which enforces faithfulness and economy. Necessity has rendered us an eminently practical people. We transfer this training to our railroads. But our government partakes of the infirmity of all governments, and had it undertaken to construct our railroads, their cost would not have fallen much short of that of English roads. Had their construction been superintended by persons, whose habits and ideas sprung from the relations they have sustained to Government, or to the privileged classes, the result would have been the same. Persons acting under such influences have no proper notion of the value of money, or of that economy necessary to secure a return upon its outlay. They execute the works assigned them according to their ideal, of which cost is no element, nor despatch, a measure of success. Such persons feeling that nothing is to be gained by economy and diligence, give way to the natural tendency to sloth and extravagance. Our people, fortunately, have been governed in the construction of their works by a wiser principle. Railroads have been treated precisely as other commercial enterprises, in which not a penny can be wasted without being felt in dividends. We suppose at least one-third of the capital invested in English railroads has been lost. Still people wonder why they are not remunerative. The cause is palpable. A ship, that by extravagance has cost \$100,000 loses money, while an equally valuable one, at a cost of \$50,000 would prove very good property. In commercial enterprises money that is wasted can never form the basis of production. When once lost it can never be recalled. This fact more than all others should be kept constantly in mind. It is true that there are cases of great waste in this country which apparently do not affect the earnings of the roads. The reason is that we do not see how much greater such earnings would have been, with economy. There is another reason why railroads can for a time bear a much greater waste in their construction than other enterprises. There are no other in which capital can exact so large a return. A railroad constructed through an agricultural district of the United States, adds immediately at least five-fold its cost to the value of the property of such district. An agency that is so potent in creating values, may properly ask to share a portion of the gain due to its instrumentality. Money, therefore, properly expended in railroads in this country, yields a better return than the *average* of other investments, and even if a considerable part of its cost be wasted, still, for several years, the road, from a monopoly it may happen to enjoy, and from its immense influence in creating values, may yield a tolerable income on its excessive cost. But large profits lead to competition. Railroads economically built and well managed, the owners of which are content if they receive six per cent. on their cost,

come in competition with those built at an extravagant cost, which must regulate their charges by those that come after them, and in losing the monopoly they once enjoyed, they lose with it, the capacity to pay dividends. No kind of investment open to all, yields in the long run more than the common rates of interest. Capital steadily flows in the direction of profit till the *minimum* is reached; and often, the influence of a large profits in the outset, leads to an over-investment, which will not produce even the ordinary rates. Our railroads ought, in the outset, to pay better than other works, but they soon become amenable to the law of "supply and demand," and their profits are regulated by precisely the same law that governs other investments. If people want a steady income, they must not waste a penny in construction, and be content in the commencement, with the same rate of returns that they are willing to receive for years.

We believe the money that has gone into our railroads has been invested in conformity with the principles laid down, and that consequently, these works can be made productive, if our people are as wise for the future as they have been for the past. Of course, we do not mean to assert that all our roads will earn dividends upon their stock. Many of them have been constructed rather with reference to the incidental advantages that are anticipated, than from expectation of a *direct* revenue from them. Where the people of Indiana have subscribed one dollar to a railroad, they have benefitted five-fold, by its construction. The advantage is not remote and contingent, but *direct*; so that, should the stocks of their roads never receive a dividend, they would be vastly the gainers, notwithstanding. It is those who have contributed money to our road, and who derive no *incidental* advantage from them, that suffer from failure to pay. We make this distinction, as an explanation for the low prices of many of our stocks, and for the purpose of showing that their depression does not prove a loss of a corresponding amount of capital. If our new roads can meet promptly the interest on their debts, and provide for their ultimate payment, our people have achieved a vast success. But the stocks of a number of our roads will yield a better income than the interest on the bonds.

We also, in our last, pointed out the dangers to which our people are exposed in new works, undertaken to make money out of the *process* of construction, and indicated some tests by which these works might be distinguished from such as are *legitimate*. We stated that we have just reached the period in the progress of railroads, when the tendency to competing, branch, or useless lines manifests itself. It follows the closing up of our *useful* works. This tendency has received a thorough check for the present, in the recent reverse in monetary affairs, and the general unpopularity of railroad investments. Before this tendency shall again have an opportunity to manifest itself, our people will have come to a better knowledge of the cost, management, and productiveness of these works. They will then have the experience of the *past* to guide them. It is most fortunate, on many accounts, that the moment our system has reached an apparently healthy limit in many of the States, the further construction of any but lines of unquestioned prosperity should

be rendered impossible by *borrowing*. Before any great mistake has been committed, time is allowed to await the result of past effort. That experience will teach wisdom for the future, we have no doubt. For the real good of our railroads, the present stringency could not have happened at a better time.

It is in the *management* of our railroads, that our great peril lies. We have escaped many of the evils from which English railroads have suffered. But after our railroads come into operation, the principles and motives that control their *management* in the two countries more nearly assimilate. In both cases the inherent selfishness of human nature is the same. If there be any difference in this respect, it is one of *degree*, not of kind. There is the same tendency in both countries on the part of the owners of railroad property, to indifference and carelessness as to its management; the same difficulty in securing the services of competent officials; the same temptations to dishonesty or unfaithfulness. These are vices that belong to no parallels of latitude, and which are peculiar to no political organization. They are universal. It is on our exemption from them that the success of our roads must depend.

The first condition to success is *intelligent* management. This in a great measure, could be secured through the medium of properly prepared reports, detailing the experience of our railroad companies. For the want of such, each company is forced to go through the same process of education, often at great expense, to arrive at truths which have been long solved by other companies. Let a discovery be made in any branch of mechanical science, or in the mode of conducting elaborate business operations, and the press instantly diffuses the intelligence from one end of the country to the other. In this manner, the highest intelligence and training at once becomes the property, and soon the experience, of the novice. Every superior man, in this way, becomes an instructor, and the press the medium of his teachings. Under a similar system of instruction, society moves forward at a rate that far exceeds all former experience. But in railroad management the parallel ceases. Most of our railroad companies are *dumb*. Reports, if made at all, are only the baldest statements, showing that so much money has been received, and so much paid out. Any thing really instructive rarely finds place in their columns. What is valuable and peculiar in the management of the Erie never travels across the Hudson River to enlighten its neighbor on the opposite bank, which in consequence plods along for years in the old path, wasting as it goes. Whatever of light is developed by the Hudson River Road benefits that alone. What we have stated of these roads is mainly true of the whole country. The Erie Company have never made but one *valuable* report, and the Hudson River Road none at all. We suppose that the experience of both, if known, would prove very valuable in the management of other roads, the more so, in proportion to the time they have been in operation. Both companies ought to be able to give us the ratio that the expense of maintaining a road bears to the speed of the trains. The Erie ought to tell us the relative cost of the passenger and freight movement; the cost of transportation of different kinds of freight; the most fruitful sources of ac-

cidents and the means adopted for their prevention; the system of administration by which the road is worked; the means by which responsibility, efficiency and punctuality are secured; the improvements that have been effected in the working of the road, or in the machinery; the conditions upon which each is worked with the greatest economy; *in fine*, the entire system of management. If the road be well managed it has certainly much that is new and valuable to communicate. So in the office of the company. What is the mode by which their accounts are kept, and all the complicated operations of the company simplified and classified under their appropriate heads. It cannot be doubted that many companies, from the want of experience, or of proper examples, suffer a heavy loss in the manner of conducting their business operations, which might be saved, had they the benefit of the best standards of management which prevail. Instead of a hundred different, and many of them vicious systems, there would be but *one*, and that the *best*. All these advantages are lost by the silence of our companies upon all proper topics.

Again, full and detailed reports are the best possible safe-guard against improvident, incompetent or dishonest management. The stockholders would then know what the directors are about. Suppose the construction of a railroad or some new work be undertaken. The stockholders should always insist upon an exact statement of what is proposed to be done, of the cost of the work, and the means applicable to it. Suppose at the end of the year, the estimates are found to be entirely at fault, that the work has cost twice as much as it was supposed, such discrepancy should always be taken as evidence of incompetency or dishonesty. Their previous estimates at once convict the offending parties. The public have had enough of estimates that bear no kind of relation to the result, to tolerate them longer. As soon as directors and engineers found, that they would be held to a rigid accountability, they would strain every nerve to make good their statements. But how is it now? In a great majority of cases, no plan of operations is presented to the stockholders and nothing from which any estimate can be inferred of the ultimate cost of the road. The directors, consequently go blundering along, inventing as they go, some apology or excuse in case they fail to justify public expectation. No tangible point is presented upon which issue can be taken, and consequently, incompetent persons remain for a long time in important positions from which they would have been ejected upon the first reckoning day, had it been known what they had been doing. Every thing in the management of railroad companies should be as open and patent as the day. There should be no dark secluded spot in which dishonesty or incompetency can seek immunity. The New Haven Railroad is a notable instance of the effect of secret and irresponsible management. Had Mr. Schuyler admitted himself interested in the contract for the road, he would probably have been early ejected from the direction. Had detailed statements been made of the cost of the different items of construction, the stockholders would have seen that they were paying twice as much for work as it was worth. Had the arrangements which were made with other

companies been notorious, the directors would, without doubt, have been overhauled a long time ago. Had the directors required the usual annual statement for 1853, the frauds of Mr. Schuyler would have been prevented entirely, or nipped in the bud, and the company saved from ruin.

We repeat, that the *first* step toward the successful management of railroads, are full and frequent statements detailing the entire transactions of our companies. Such statements will *not* be made without due consideration. They are a public exhibition of the acts of the directors, or managing parties, and when a man appears before the public, he will endeavor to propitiate its good opinion. He is received with favor, only under the idea that he is what he appears to be,—competent and honest. The very fact forces him to be competent and honest. He can only sustain himself by justifying expectation: otherwise he forfeits both favor and his place. Suppose the same person were allowed to go on for years without ever being called to account. He would be a miracle of honesty, industry and principle, did he not become lax in his notions, indolent, and indifferent to his duties. Suppose him to be dishonest. Before his character is discovered, he may have completely sapped the company or institution of which he was an officer. Men of doubtful character are often kept straight by the force of public opinion. They may have too much policy to sin if they see exposure to be inevitable. We do not believe that Mr. Schuyler would ever have committed his frauds, had it not been for the Norwalk accident. Not that he would have been restrained by *principle*, but because he could not have done so without immediate exposure. The losses sustained by that accident placed it beyond the power of the company to pay a dividend for a year or two. Till one should be paid, he supposed nothing to occur to direct attention to his conduct. In the outset he undoubtedly intended to cancel all his issues. The payment of a dividend would have once discovered the fraud, and the certainty of discovery would have prevented its commission.

Again, the best intention to serve a company may be accompanied by utter incompetency. To be corrected, this incompetency must first be made known. Companies ought to compel report from their officials, at short notices, for this reason alone. Another grand advantage of a report is the fact, that immediately upon its publication, whatever it contains is compared with the best standard of management, and its defects immediately pointed out. A mirror is thus held up, in which the delinquent sees his own mistakes compared with the better conduct of others. He must reform or be disgraced. Every report would provoke the criticism of the community, and in this manner develop and make public the best ideas which prevail. Where on the other hand a company goes to sleep, the public go to sleep with them, and when any catastrophe happens, they only wonder at the result, but are unable to discover the cause, or point out the remedy.

The publication of the system of management of railroads has a tendency not only to render employees faithful, but educates the public mind up to the capacity to judge whether they are well or badly conducted. Intelligence must exist before public opinion can exert its corrective force.

And with a sound sentiment, there is no reason why a road should ever be badly managed. There is no inherent difficulty in the matter. To be understood, the subject of railroad management must be studied, to be studied the public must have access to information to whatever experience has developed. The reports of every company should be the mirror of its internal organization and management. These reports should annually go into the hands of every stock and bondholder, and in a few years, a vigilance committee would be found in every company embracing every person having a pecuniary interest in the success of the road. The advice and opinion of *such* a committee would point out a path of duty from which the managing parties could not deviate.

A knowledge of the best system would lead to the general adoption of the best principles or routine of management. A great cause of the waste is in the fact that many companies have no adequate system according which their affairs are managed. The impulse or caprice of the day controls the acts of the day. There is nothing that stockholders or directors of a road are so apt to overlook as the importance of conducting its affairs according to certain fixed rules or principles. When a person buys into a Banking company, he takes for granted that its affairs will be conducted upon the acknowledged principles of sound Banking. Most banks are conducted in this manner, and are successful. The *failure* is the exception. When a person buys into a railroad, does he feel assured that its affairs will be conducted upon the best standard of management that is known? By no means. In fact he does not himself know what such standard is. He consequently invests upon his faith in the *reputation* of the managing parties. Now there is no more fallacious standard. The reputation of being a good business man, and the capacity to conduct the complicated affairs of a railroad may by no means reside in the same person. Faith in great names is a great absurdity, and is the source of more mistakes in making investments in railroads than all other things. Mr. So and So, the manager of a railroad, has had a highly honorable and successful career, and to question his integrity or capacity in any matter would be regarded as a serious insult; consequently he is deferred to, almost to the extent of servility. His own will becomes the rule of his conduct, and the road is sacrificed to a point of *etiquette*. Instead of this, no factitious consideration should be allowed the least influence. Nothing should be presumed in favor of any. All should be stretched upon the same iron bed. The test of merit should be the capacity to serve the public in the new vocation. Because a man has been successful in trade, has been a member of Congress, or has commanded a regiment in the Mexican war, is no reason why his acts should be placed above suspicion or inquiry, nor why he should be allowed to preserve a mysterious silence in his various functions. Accountability in every department of management should be enforced in the most rigid manner, and neither titles nor reputation should sanction the employment of incompetent men any more than a fine coat of *paint* should justify the use of an imperfect, or unsafe wheel, or axle attached to a railroad car, or locomotive.

(To be continued.)

Grand Trunk Railroad.

The Richmond Branch of the Grand Trunk Railway was opened on the 27th ult. Its opening has been some time delayed by the non-completion of the Tubular Bridge over the Chaudiere River. Of this structure, "the State of Maine" gives the following account:

The Chaudiere bridge consists of an iron tube 9 feet square, and 1,100 feet in length, resting on 11 piers 92 feet apart from each other. The height of the tube from the river is 60 feet. The piers are, to the elevation of 8 feet above high water mark, constructed of large blocks of rough granite, extending on the upper side so as to form a solid and sharp cut-water, capable of resisting any pressure of ice at the highest spring floods. The upper portion of the piers are of fire brick of the best description. The total width of the tube on its upper surface is 16 feet, including a light iron gallery on each side for pedestrians. Viewed from a short distance, the entire structure looks slight and open, and light as gossamer, and anything but the enduring and substantial way over which hundreds of tons weight of passengers and goods will pass, at 40 miles an hour, without causing a deflection of more than an inch—between the piers. To meet the demands of the climate, allowance is made for contraction of the metal in winter, and its expansion in summer, the bridge being nowhere fixed to the masonry and having a space of two or three feet clear at each end where it unites with the banks.

Cleveland and Pittsburgh Railroad.

The earnings of the Cleveland and Pittsburgh Road for November are, in round numbers, \$50,000—showing an increase of 25 per cent. on the same month of last year. The comparative figures of the past eleven months are as annexed:

	1852.	1853.	1854.
January.....	\$7,779	\$19,498	\$20,889
February.....	11,495	24,083	26,063
March.....	15,740	31,139	37,790
April.....	23,804	38,980	42,767
May.....	25,332	35,364	51,284
June.....	28,468	35,825	47,729
July.....	28,738	34,373	36,643
August.....	30,861	36,548	37,241
September.....	44,004	42,871	42,988
October.....	37,313	44,323	54,149
November.....	29,362	40,550	50,000
December.....	22,896	35,330	....

Total for 11 months, \$282,895 \$383,454 \$447,537
Increase.....\$64,088

Engines for Sale.

Attention of the managers of new roads of the five feet gauge, in want of additional motive power is invited to the advertisement of Mr. Thos. M. Cash in this number of the *Journal*. It will be observed that he offers two superior engines and tenders for immediate delivery, manufactured at one of the best establishments in the country.—There being each of passenger and freight engines this opportunity is a favorable one for a new road, desirous of increasing its power at short notice and low cost.

Chicago Locomotive Works.

The Chicago Locomotive Company held their meeting a few days since at which the following named gentlemen were appointed trustees:

W. H. Brown, Robert H. Foss, Thomas George, M. Laffin, E. J. Lake, George Steel, A. G. Throop, Wm. H. Scoville, Thomas Dyer.

Subsequently Wm. Brown, Esq., was elected President, and E. J. Lake was appointed Superintendent. Under the efficient management of these gentlemen, we have no doubt the company will soon realize their highest anticipations. Mr. Lake is a man of much experience, and will give

his personal attention to managing the affairs of the company. Mr. Scoville will have time to devote more attention to the mechanical department, and we shall now hope to see Chicago railroads supplied, in a great measure, after their first equipment with Chicago built locomotives. Success to the enterprise, we have no doubt is the hearty wish of all our citizens.—*Chicago Tribune*

Raleigh and Gaston Railroad.

Receipts of the Raleigh and Gaston Railroad Company for the year ending the 29th September, 1854, have been \$238,410 21. The entire expenditures on all accounts, including dividend, were \$159,701 97, leaving \$78,708 24. The receipts from freight, passengers and mail were \$173,923 77, and the current expenses \$70,530 96, showing a profit on the year's business of \$103,302 81.

Hudson River Railroad.

At a meeting of the Board of Directors of the Hudson River Railroad Company, held on Saturday last, two of the out-of-town Directors, Messrs. Josiah W. Wheeler, of Hyde Park, and Alanson Robinson, of Buffalo, resigned their seats, in order that Directors from the City might be elected in their stead, and Messrs. James Boorman and Samuel Sloan (of the house of George McBride & Co.,) were unanimously elected to fill the vacancies.

It is stated that two-thirds of the recent issue of 3d mortgage bonds have been taken.

Bureau Valley Railroad.

The Bureau Valley Railroad extending from Bureau, on the Rock Island and Chicago Railroad, 113 miles from Chicago to Peoria 47 miles, is completed.

(For the American Railroad Journal.)

Iron Bridges.

Assuming, as in a former article, that cast iron is, taking all things into the account, the best material to resist a compressive force, the next inquiry in order is, what substance within reach of the bridge builder is most capable of sustaining a tensile strain? Wrought iron has long been selected for this duty in almost all mechanical constructions; even in most cases where the compressive force is resisted by wood. Nearly all Railroad bridges in this country are composed of wood and wrought iron combined. No complaint is heard against the safety of the wrought iron bolts used in such bridges, although the failure of any one of them would be attended with disastrous consequences. The change of texture, or crystallization of its particles induced in wrought iron by constant exposure to a heavy strain, appears to be a bugbear of science, rather than the result of experience. A piece of iron that has been over-strained, or nearly broken, loses a portion of its strength, but if the strain has not been excessive, the quality of the iron is unimpaired.

According to the published experiments upon the strength of materials, it may be doubled if the maximum strength of iron in a state of tension bears as great a proportion to its weight as that of some kind of wood. But it should be borne in mind that the entire strength of wood in tension can never be obtained in practical construction, as it is always necessary to cut away a part of its bulk to secure a bearing, or shoulder, to which the strain is to be applied. In long timber chords, where several pieces are necessary to obtain the requisite length, this difficulty is greatly augmented. I believe, for the above reasons, that not

over one half of the entire strength of wood can ever be brought into action.

To this difficulty wrought iron is obviously not liable, as the more accommodating nature of its composition renders it possible to make additions to its length and thickness, connected in the same manner as are the fibers of any part of it, and with the same tenacity; so that, by judicious construction the whole strength of a tie rod of iron may be brought into use. Thus the economy of iron, as well as its safety in resisting a tension, must be obvious to all.

It is but the dictate of sound judgment and practical experience that leads us to conclude that the best application of iron in the composition of a bridge, is such that all parts that are to bear a tension strain should be of wrought iron of suitable quality and requisite size, and all parts that are to sustain a compressive force should be of cast iron, of suitable section and size.

D. BLANCHARD, Troy.

United States Mint.

The total deposits for eleven months of the year compare with the two preceding years as follows:

	1852.	1853.	1854.
January...	\$4,161,688	\$4,962,982	\$4,215,579
February...	3,010,222	3,548,523	2,514,000
March....	3,892,156	7,533,752	3,932,000
April.....	3,091,037	4,766,000	3,379,000
May.....	4,345,678	4,425,000	3,506,000
June.....	6,089,474	4,548,179	4,000,000
July.....	4,193,880	3,505,331	3,940,200
August....	2,671,563	4,512,000	2,940,000
September.	4,253,687	3,027,805	2,660,000
October...	4,140,069	4,452,000	600,000
November.	7,279,941	3,650,006	829,350

Total...\$47,729,295 \$48,928,552 \$32,515,929

The following figures show the operations of the Philadelphia Mint for the month of November. It will be seen the receipts of gold from California were only \$825,200, and from all other sources only \$4,150. The great falling off in the receipts of gold there is attributable to the operations of the San Francisco Mint and the Assay Office in New York.

DEPOSITS—GOLD BULLION.

	Value.
From California.....	\$825,200
Other sources.....	4,150

Total gold deposits.....\$829,350

SILVER BULLION.

Including silver purchases.....\$405,900

Total gold and silver deposits....\$1,235,250

COINAGE.

	No. of pieces.	Value.
Gold coinage.....	347,561	\$529,298
Silver coinage.....	2,120,000	288,000

Total.....2,467,561 \$817,298

The *Philadelphia Bulletin* makes the following statement:

Foreign export of specie, 1847 to 1854.....	\$180,310,044
Foreign import of specie, 1847 to 1854.....	56,920,063

Excess of export.....	\$73,388,981
Export of specie from Jan. 1 to Dec. 1, 1854, about.....	40,000,000

Net exports since California discoveries.....\$113,388,981

Here we have the total drain of our metallic currency since the year that California began to supply us of her abundance. From authentic re-

ports, some of which have been published, and from the reports of the Mint this year, we derive the following statement of our native gold products since 1847:

Deposits of California Gold at all the Mints to Dec. 31, 1853, about.....	\$212,000,000
Deposits of California Gold at Philadelphia Mint from Jan. 1 to Dec. 1, 1854.....	32,515,929
Deposits of California Gold at San Francisco and New Orleans Mints from Jan. 1 to Dec. 1, 1854, (part estimated).....	8,000,000

Total home production of gold.....\$252,515,929
Deduct specie export, as above..... 113,389,981

Excess of specie in the country...\$139,125,948

The comparative exports of specie for several years have been as follows:

	1850.	1851.	1852.
January.....	\$90,361	\$1,266,281	\$2,868,958
February.....	278,708	1,007,689	3,561,543
March.....	172,687	2,868,361	611,994
April.....	290,407	3,482,182	200,266
May.....	741,735	4,506,135	1,834,893
June.....	880,434	6,462,367	3,556,355
July.....	1,518,080	6,004,170	2,971,499
August.....	1,411,736	2,673,444	2,935,833
September.....	1,033,918	3,490,142	2,122,495
October.....	1,421,423	1,779,707	2,452,301
November.....	905,394	5,033,996	809,813
December.....	1,208,760	5,668,235	1,180,305

Total.....\$9,982,948 \$13,743,209 \$25,096,255

	1853.	1854.
January.....	\$747,679	\$1,845,682
February.....	1,121,020	579,724
March.....	592,479	1,466,127
April.....	767,055	3,474,525
May.....	2,162,467	3,651,626
June.....	3,264,282	5,168,183
July.....	3,924,612	2,922,452
August.....	1,183,973	4,548,320
September.....	1,241,191	6,547,104
October.....	4,757,972	3,359,398
November.....	3,855,775	3,598,001
December.....	3,131,851	.....

Total.....\$26,753,356

Central Military Tract Railroad.

Within four or five weeks, there will be another new line of railroads extending from this city to the Mississippi upon an entirely new route, opened to the public. The Chicago and Aurora Road was completed last year. The Central Military Tract Road, which is an extension of the former, now approaches its completion, a distance of 84 miles, to Galesburg, in the heart of the Military Tract country. The cars are now running, although the road is not fully opened for business, to Walnut Grove, about fourteen miles north-east of that place, and the track is rapidly extending to the termination of the road and will be completed within two weeks. Arrangements have also been made between the Chicago and Aurora and the Central Military Tract companies, and the Peoria and Oquawka Company, which secure the completion of that part of the road of the latter company between Burlington and Galesburg in the month of December; and for the present, the road will be operated and managed by the Central Military Tract Line of roads. The work of laying the track between Burlington and Galesburg is already more than half completed, and a train of cars now runs regularly every day in connection with stages running to and from the Central Military Tract Road at Walnut Grove, where at present the cars on that road stop; and we learn that already considerable travel between this city and Southern Iowa is taking this route. The track is approaching Galesburg from N. E. and S. W. and in the time we mention above, will meet, and the connection between Chicago and Burlington will be complete.

Lubrication.

This is no small item of expense to railway companies, while the best and cheapest material which can be applied, is a question of much interest and importance to all engaged in the use of running gear and machinery. Messrs. JAMES BAYES & Co. of Philadelphia, are now introducing various kinds of lubricating grease, adapted to the use of all classes of the running stock of railways. The peculiar characteristics of the articles manufactured by this firm are, the degree of perfection in which they perform all the requisites of lubrication, their freedom from gum or other glutinous substances which often tend to clog rather, than ease the working of machinery and their adaptability to all kinds of weather. These are the advantages claimed for the articles offered by Messrs. JAMES BAYES & Co., and they have the testimonials of persons of undoubted veracity who have tested it, to establish the truth of this claim.

The address of the firm will be seen by reference to their advertisement in another column, to which we invite the attention of railway superintendents. This season of the year, and the weather which we are now experiencing are admirably adapted to furnishing a severe and satisfactory test of the qualities of any lubricating material; and we advise that samples be sent for and tried at once. Oils are very high, and notwithstanding the numerous inventions which have been made lately to relieve them from a portion of the demand, they continue to advance. A cheap material for efficient lubrication is very desirable. Let all that offer have a fair trial. All things now-a-days require more light, and much lubrication.

Finances of Virginia.

The following is an official statement of the Financial Condition of the Fund of Internal Improvement of the State of Virginia, 30th of September, 1854:

Bank Stocks.....	\$1,143,850 00
Old James River Company Stock..	142,000 00
Railroad Company Dividend Bonds.	230,568 00
Bonds of Companies guaranteed by State.....	4,500 00

\$1,520,918 00

1. Loans to Companies other than temporary loans:	
James River and Kanawha Company	2,346,000 00
Winchester and Potomac Railroad Co.....	83,833 33
Trustees of town of Bath.....	2,500 00
Railroad Companies.....	2,400,000 00

\$6,352,751 33

2. Productive Subscriptions, viz:	
Railroad Companies.....	\$275,000 00
Navigation Companies.....	282,500 00
Turnpike Companies.....	352,521 27
Bridge Companies.....	14,400 00

3. Temporary Loans to Railroad Companies.....	364,091 56
---	------------

Productive.....\$7,641,464 16

4. Subscriptions to Internal Improvement Companies which have been completed and those in progress paying no dividend:	
Railroad Companies.....	\$9,161,461 58
Navigation Companies.....	4,364,036 00
Plank Road Companies.....	331,330 46
Turnpike Companies.....	1,656,465 20
Bridge Companies.....	83,040 00

\$23,238,797 86

The State Auditor further reports:

The Internal Improvement Fund possesses productive investments amounting to \$7,641,464 16, which is an increase of \$2,005,237 86 over the amount held at the end of the fiscal year for 1853. In addition, the Commonwealth holds \$2,619,945 33 of productive stock, making an aggregate of \$10,286,448 99 of productive stocks, the revenue of which is applied to the payment of the interest and the redemption of the principal of the public debt. There is realized upon the above amount, an average rate of six per cent. per annum.

I deem it proper to deduct the amount of productive funds from the above ascertained amount of the debt; and therefore the public debt of Virginia, less the above amount of productive investments, on the 1st day of October, 1854, is \$12,087,727 55. The punctual payment of the interest, and the redemption of the principal of the debt, which has or may be contracted by this Commonwealth, cannot be doubted.

The State, in addition to the above amount of productive, owns \$15,597,333 70 of unproductive stock, in Internal Improvements, most of them being railroad companies, the works of which are not yet completed. A very considerable portion of said stock, it is believed, will become productive.

Finances of the United States.

According to the Report of the Secretary of the Treasury, the receipts and expenditure of Government for the past fiscal year, ending 30th June, were as follows:

Balance in Treasury 1st July, 1853. \$21,942,892 56

Receipts from Customs 1st quarter. \$19,718,822 00

Receipts from Customs 2d quarter. 13,587,821 27

Receipts from Customs 3d quarter. 16,896,724 83

Receipts from Customs 4th quarter. 14,020,822 17

Total from Customs..... 64,224,190 27

Receipts from Lands 1st quarter..... 1,489,562 05

Receipts from Lands 2d quarter..... 2,223,076 89

Receipts from Lands 3d quarter..... 2,012,908 36

Receipts from Lands 4th quarter..... 2,745,251 59

Total from Lands..... 8,470,798 39

Receipts from Miscellaneous 1st quarter..... 147,994 87

Receipts from Miscellaneous 2d quarter..... 101,968 64

Receipts from Miscellaneous 3d quarter..... 486,091 93

Receipts from Miscellaneous 4th quarter..... 118,666 10

Total from Miscellaneous..... 854,716 54

Total receipts..... \$95,492,597 76

The Expenditures for the year were as follows:

Civil List..... \$4,649,384 98

Foreign Intercourse..... 7,736,677 13

Miscellaneous..... 13,530,310 33

Interior Department..... 2,600,054 79

War Department..... 11,733,629 46

Navy Department..... 10,768,192 89

Redemption of Public Debt, Interest and Premium..... 24,336,380 68

Total Expenditure..... \$75,354,630 26

Balance in the Treasury July 1, '54. \$20,137,967 56

The following are the receipts of the 1st quarter of the present year, ending 30th September:

From Customs.....\$18,639,798 45
From Lands..... 2,731,654 12
Miscellaneous..... 149,850 28

Total.....\$21,521,302 85
The Expenditures for the same period have been—

Civil, Miscellaneous,
and Foreign In-
tercourse.....\$6,241,749 31
Interior Department 2,175,737 13
War Department... 3,367,039 92
Navy Department... 2,508,791 09
Redemption of Pub-
lic Debt..... 1,876,013 17

Total.....\$16,169,330 62

Amount of Public Debt outstanding
1st July, 1853.....\$67,340,528 75
Amount of Public Debt outstanding
1st July, 1854..... 47,180,506 05

Being a reduction in 12 mos. of..\$20,160,122 73
The estimated Receipts from all
sources for the remaining three
quarters, are.....\$42,500,000 00
The estimated Expenditures for
same time are.....\$48,176,550 79

Locomotives for Sale.

THE Subscriber offers for sale the following Locomotives and Tenders, suited for a 5 feet gauge.
One very superior 18 ton Passenger Engine, Driving Wheels, 5½ feet diameter with 8 wheel tender.
One very superior 16 ton Freight Engine, Driving Wheels, 4 feet diameter with 8 wheel Tender.

The above machines are from one of the best shops in the country, built and finished in the best manner, and can be delivered in ten days from receipt of order. To any company in want of such machines, these are recommended.

For Price, terms, &c., apply to THOS. M. CASH,
Philadelphia Railway Agency,
No. 80 South Fourth st.
PHILADELPHIA.

Hammer's Patent Reclining Car Seat

for Night or Day Travelling.

THE subscriber, having been appointed sole agent for the sale of this Seat, begs to call the attention of Railroad Officers to this valuable improvement for comfort in Railroad Travelling. They can now be furnished at about the same cost as the ordinary car seat, and with the manufacturer's present arrangement, they occupy but little more space in the car.

THOS. M. CASH,
49 6ms No. 80 South Fourth st., PHILADELPHIA.

Railroad Iron.

500 TONS No. 1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,
89 and 101 John st.
N. B.—The above Iron constantly imported.

SEYMOUR, MORTON & CO.,

GENERAL RAILROAD AGENCY,

Office, Metropolitan Bank Building, No. 110 Broadway.
HAVE to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:
LOUISVILLE CITY BONDS, at 30 years.
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.
MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.
LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of railroads in any part of the country, including furnishing corps of engineers and contractors, locomotive engines and cars, railroad bridges, McCallum's Patent, railroad iron, chains, spikes, switch iron, &c., &c.

DINSMORE'S

RAILWAY GUIDE,

EDITED principally by the Railroad Superintendents themselves, making it the most reliable and perfect work of the kind published, and the only one containing the time tables of all the railroads in the United States and Canada.

Its extensive sale makes it one of the best ADVERTISING MEDIUMS EXISTING.

Sold principally in the Cars to travellers when they have leisure to read, and is taken by them not only as a Railroad Guide, but as a Directory to the best Mercantile and Mechanical

DINSMORE & CO., Publishers,

47 NASSAU ST. N. Y.

Ontario, Simcoe & Huron R.R.

CANADA.

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron, a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day. On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kakoolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS.—In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

CHAMPLAIN CANAL.

Sealed proposals will be received at the Canal Commissioner's Office, in the city of Albany, until the 20th day of December, 1854, at 9 o'clock a.m., for the following described work, to wit:—

Description of the work. Penalty When to be in bond. completed.
Three combined locks, towing path bridge and necessary section work to bring the same into use, located at Waterford.....\$18,000.. April 1st, 1856.

ENLARGEMENT OF THE ERIE CANAL—MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse, until the 21st day of December next, at 9 o'clock in the forenoon, for the following described work, to wit:—

Description of work. Amount of penalty in bond. Time of completion.
Section 157.....\$1,200.. April 1st, 1855
" 189..... 2,300.. " " 1857.
" 190..... 4,000.. " " "
" 191..... 4,700.. " " "
" 192..... 7,200.. " " "
" 193..... 8,600.. " " "
" 194..... 8,700.. " " "

Culverts on sections No. 189 to 197, inclusive... 2,800.. " " "
Road and farm bridge abutments on sections No. 189 to 193, inclusive..... 3,100.. " " "
Road and farm bridge abutments on sections No. 194 to 197, inclusive..... 2,300.. " " "
Putnam Brook waste weir on section No. 192..... 900.. " " "

ENLARGEMENT OF THE OSWEGO CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Fulton, until the 22d day of December next at 9 o'clock in the forenoon, for the following described work, to wit:—

Section 5 { Liverp'l } \$9,000.. April 15, 1857.
" 6 { Level. } 6,000.. " " "
" 7 & 8 { " } 8,000.. " " "
" 18 { " } 8,000.. " " "
" 19 { Phoenix } 7,000.. " " "
" 20 { Level. } 7,000.. " " "
" 21 { " } 6,000.. " " "

Culverts on sections 5 & 6 2,500.. " " "
" " 18, 19, and 21..... 2,500.. " " "
Bridge at Phoenix..... 600.. July 1st, 1855.
Lengthening guard lock 2..... 400.. April 15, "
Bridge at Oswego..... 1,000.. " " "

ENLARGEMENT OF THE CAYUGA AND SENECA CANAL.

Sealed proposals will be received at the Engineer's Office, in the village of Albion, until Wednesday, the 27th day of December next at 9 o'clock a.m., for the following described work, to wit:—

Section 232 with penalty in bond of.....\$3,700
" 233 " " 5,410
" 234 " " 7,600
" 235 " " 4,500
" 236 " " 5,400
" 237 " " 4,600
" 238 " " 6,500
" 239 " " 8,300
" 241 " " 6,100
" 242 " " 4,300
" 243 " " 3,800
" 244 " " 2,000
" 285 " " 8,000
" 286 " " 7,000
" 287 " " 6,000
" 290 " " 9,200
" 291 " " 8,100
" 292 " " 8,000
" 293 " " 7,500
" 294 " " 8,400
" 295 " " 6,200
" 296 " " 7,300
" 297 " " 6,500
" 298 " " 6,700
" 310 " " 3,000
" 311 " " 6,700
" 312 " " 6,800
" 313 " " 10,000
" 314 " " 7,300
" 315 " " 8,500

Culverts on Sections 232 to 244..... 2,300
" " 285 to 298..... 8,000
" " 310 to 315..... 5,000
Mud Creek Aqueduct..... 5,500
Bridge Abutments on Sections 232 to 244. 5,700
" " 285 to 298. 7,000
" " 311 to 315. 3,100
Waste Weir on Section 313..... 500

Section 232 to 244, both inclusive, with the Culverts and Bridge Abutments on said Sections, to be completed by April 1st, 1857. The remainder of said work to be completed by the 1st day of April, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborers' wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent. of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the Canal Commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to them, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the time specified for the several lettings.

Dated at ALBANY, November 29th, 1854.

HENRY FITZHUGH,
FREDERICK FOLLET,
CORNELIUS GARDINER, } Canal Comm'rs.
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

CIVIL ENGINEERING.

COURSE OF INSTRUCTION

in UNION COLLEGE, Schenectady,
under the direction of Prof. W. M. GILLESPIE.

THIS department will re-open on January 6th, 1855. It comprises thorough instruction and practice in all the branches necessary to fit students for prosecuting advantageously this important Profession. Among its subjects are Drafting (Mechanical, Isometrical, &c.); Surveying (Land, Maritime, Mining) with Compass, Transit, Theodolite and Sextant; Location of Railroad Curves; Levelling; Roadmaking; Mensuration and Calculation of Earthwork, Masonry, &c.; the Strength of Materials and Stability of Structures; Principles of Construction of Masonry and Carpentry; Bridges; Canals; Waterworks; Practical Astronomy, &c.—The above subjects are pursued in connection with such of the regular college studies of Mathematics, Natural Philosophy, Modern Languages, &c., as are desirable. The Fees for both, including room-rent, &c., are the same as to the ordinary college course, \$19 per term, and \$7 entrance fee. Students may pursue any of the above branches for which their previous acquirements fit them. A thorough and ready knowledge of Arithmetic, Geometry (Plane and Solid) and Algebra (through equations of second degree) is necessary for those commencing the course. If further information is desired, address the Register of the College. 48 24.

RAILROAD CAR GREASE.

James Bayes & Co.,

6 MINOR STREET,

PHILADELPHIA.

MANUFACTURERS OF

SOFT WHITE GREASE,

For Coal and Freight Cars, Heavy Machinery, etc., etc.,

STIFF WHITE GREASE,

For Water-Wheel Gudgeons, Heavy Bearings, Rollers on Inclined Planes, OMNIBUSES, WAGONS, AND OTHER CARRIAGES,

In Cans, Kegs, and Barrels.

SUPERIOR YELLOW GREASE,

For Passenger Cars, etc., etc.

THE above different kinds of Grease, having been in use for some time past on several Railroads in the United States, can be confidently recommended for their general usefulness and economy. 49 17

SAMPLES FORWARDED UPON APPLICATION.

New York and Erie R. R.

On and after Monday, Nov. 20th, and until further notice

PASSENGER TRAINS

will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a.m. for Buffalo.
DUNKIRK EXPRESS, at 7 a.m. for Dunkirk.
MAIL, at 8½ a.m. for Dunkirk and Buffalo, and intermediate stations.—Passengers by this train will remain over night at any Station between Binghamton and Corning, and proceed the next morning.

ROCKLAND PASSENGER, at 2½ p.m., (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p.m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5 p.m. for Dunkirk and Buffalo.

EMIGRANT, at 5 p.m., for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 5 p.m.

These Express Trains connect at Elmira, with the Elmira & Niagara Falls Railroad, for Niagara Falls, at Buffalo and Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

47 17. D. C. McCALLUM, General Sup't.

Iron Rolling Mill Property for Sale.

The particular attention of capitalists desiring to enter AT ONCE (WITHOUT THE DELAY of putting up new works,) into the manufacturing of Iron, is called to the following:

The mill is situated UPON TIDE WATER (and ACCESSIBLE at ALL SEASONS of the year for shipments) between New York and Philadelphia—Coal can be had at the very lowest rates—and in point of convenience and situation is perhaps SECOND to NONE IN THE COUNTRY. In ADDITION to its PRESENT adaptation to the manufacture of MERCHANT AND BOILER IRON, it has machinery in operation for making WROUGHT IRON RAILROAD CHAINS AND SPIKES, and could readily be prepared for MAKING RAILS together WITH ALL THE advantages of a first-class establishment. It is well known that in the present prosperous condition of the business THE PROPERTY WILL PAY ITSELF IN ONE YEAR and the reason of the property being disposed of, is that the owner is engaged in a heavy business in the State of New York. A VERY LIBERAL SPECIAL charter may BE BOUGHT, under which the Mill can be worked, if wanted. It is needless to say more, as parties interested can obtain all information by applying to

J. WOOD & SON,

76 South 4th street, Philadelphia.

P. S.—A portion of the purchase money may remain on the property, or otherwise. 44. 44.

THOS. M. CASH,
PHILADELPHIA RAILWAY AGENCY,
FOR THE PURCHASE OF ALL ARTICLES
required by

RAILROAD COMPANIES ON COMMISSION.

Office No. 80 South Fourth Street, near Walnut,

PHILADELPHIA.

REFERENCES.

RICHARD NORRIS & SON, Locomotive Builders, Philadelphia.
WM. D. LEWIS, Esq., Pres't Catawissa R.R. Co., "
CHARLES H. FISHER, Esq., "
JOHN CALDWELL, Esq., Pres't S. Carol'a R.R. Co., Charleston.
J. PINCKNEY HUGGER, Esq., Pres't N. East'n R.R. Co., "

Notice to Contractors.

EUROPEAN & NORTH AMERICAN R. R.

NEW BRUNSWICK.

Contract for Sleepers or Cross Ties.

WANTED 100,000 Hachmetae or Cedar Sleepers to be delivered in equal proportions at the Port of St. John and the Bend of the Petitcodiac River on or before 1st of August next.

The Ties to be sound and straight, nine feet long, ten inches by six inches, with a hewn surface top and bottom of not less than eight inches.

Parties desirous of tendering for the above or any portion of them are requested to send in their prices to the undersigned at his office, St. John, on or before the 25th December, 1854.

W. E. ROSE.

St. JOHN, NOV., 1854.

47 44.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
M. of M., Baltimore and Ohio R. R. Co.,
or, BRIDGES & BRO.,
64 Courtland st., New York.

19 17

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE SOUTH AND WEST.



Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$15 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	16 00
An extra charge will be made for meals and state rooms on board the boats. S. L. SPAFFORD, General Sup't.	
27 17	

Faggotted Car and Engine Axles

FORGED BY RANSTEAD, DEARBORN & CO., BOSTON, Mass.

These Axles are drawn from the faggot entirely by the hammer, and are all warranted.

Boiler and Tank Rivets, Nuts and Washers; All Sizes of Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N Y

Welded Wrought Iron Tubes.

THE subscribers having lately added to their Cumberland Nail and Iron Works an establishment for making Wrought Iron Tubes, are now prepared to supply the trade with tubes two to twelve feet in length, furnished with screws and ferrules on their ends, of the following sizes—inside diameter,

¾, 1, 1½, 2, 2½, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000.

Warranted and fully proved, equal to the best Pipes manufactured.

All orders addressed to us will receive prompt attention, and liberal discounts from the list of prices will be allowed to the trade.

REEVES, BUCK & Co.,
No. 45 North Water Street, Philadelphia.
28 6m.

July 13, 1854.

Railroad Iron.

THE Undersigned, having made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton Works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchants Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

February 15, 1850.

COOPER & HEWETT
17 Burling Slip, New York.

For Sale.

A STATIONARY Engine having cylinders 13 inches, bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,

Paterson, New Jersey,

Jul. 14 29 tf.] or 74 Broadway, New York.

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and PASSENGER LOCOMOTIVES of different classes, with the most modern improvements,—

also MACHINISTS' TOOLS,

especially adapted to Railroad Repair Shops, and to the construction of machinery generally. These Tools are of the most approved construction and consist in part of Engine Lathes, Hand Lathes, Vertical Drilling Lathes, and Planers of various sizes and lengths, Compound Planers, Shaping Machines, Slotting Machines, Bolt and Nut Machines, Gear Cutting Engines, Chucks, Compound Slide Rests, Machines for boring Crank Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c.

COTTON MACHINERY of all descriptions, BOILERS, SHAFTING and MILL WORK, CASTINGS, and all work usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Supt., Lowell, Mass.

J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

WANTED.—To take charge of the sale or introduction of certain valuable PATENTED MECHANICAL INVENTIONS, a person who can furnish satisfactory evidence of character and ability, for such business.—Address, stating views as to remuneration, &c., L. P. C., Post Office, New York. 44 St.

NEW YORK AND ERIE RAILROAD LOAN.

The Committee appointed to report in regard to the financial affairs of the New York and Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed proposals, to be opened on the 10th of January next, for the purchase of \$4,000,000 7 per cent. Bonds, redeemable in twenty years, with interest, coupons payable 1st February and 1st August.

And that for the purpose of gradually reducing the debt of the Company, the New York and Erie Railroad Company pledge themselves in said Bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of Trustees, to be by them invested, as well as the accruing interest on the investments, in the Bonds of the New York and Erie Railroad Company of the new issue, as long as they can be purchased at or under par. And that whenever the said Bonds of the new issue cannot be purchased at or under par, then the said Trustees to invest the said monthly payments and the accruing interest in any Bonds of the New York and Erie Railroad Company which can be purchased at or under par.

And whenever it shall be impossible to purchase any of the Bonds of the New York and Erie Railroad Company at or under par, then the said Trustees shall invest the said monthly payments and all accruing interest in such Bonds of the New York and Erie Railroad Company as can be purchased at the lowest rate.

And all Bonds on being purchased by said Trustees shall be canceled by writing or printing on the face "Held by the Sinking Fund of the New York and Erie Railroad Company," but that the interest warrants on said cancelled Bonds shall be collected by said Trustees, as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest or the conversion of convertible Bonds into Stock of this Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in said Trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to the Company.

And the Committee would further recommend that the Board of Directors adopt the following resolutions:

Whereas, The period has arrived when it is expedient and necessary to close the construction account of this Company, to be reopened only when the imperative necessity of the increasing traffic on the road, and the state of the finances

of the Company will render it perfectly evident that it is proper and justifiable to reopen it, so as to increase the present capacity of the Road.—Therefore

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after reimbursing the Income Bonds due 1st February next, be charged to transportation expenses.

Resolved, That as often as the Bonds purchased by the Sinking Fund amount to 10 per cent. on the Capital Stock, this Company will, upon receiving due authority from the Legislature of this State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in the daily papers, so that the public have cognizance of the future policy of the Company.

(Signed.)

CHARLES MORAN.

SHEPHERD KNAPP.

WILLIAM E. DODGE.

NELSON ROBINSON,

GEORGE F. TALMAN.

Special
Finance
Committee.

New York, Oct. 21, 1854.

Sealed proposals will be received at the office of the NEW YORK AND ERIE RAILROAD COMPANY in the City of New York, until the 10th of January, 1855, for the purchase of \$4,000,000 of the bonds of the Company, bearing 7 per cent. interest payable semi-annually on the 1st day of February and August, redeemable in twenty years.

The NEW YORK AND ERIE RAILROAD COMPANY pledge themselves in said bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And whenever it shall be impossible to purchase any of the bonds of the NEW YORK AND ERIE RAILROAD COMPANY at or under par, then the said trustees shall invest the said monthly payments and the accruing interest, in such bonds of the NEW YORK AND ERIE RAILROAD COMPANY as can be purchased at the lowest rates. And all bonds when purchased by the said trustees shall be cancelled by writing or printing on their face: "Held by the Sinking Fund of the NEW YORK AND ERIE RAILROAD COMPANY;" but the coupons on such cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the NEW YORK AND ERIE RAILROAD COMPANY, and the accruing interests, or the conversion of convertible bonds into stock of the Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in such Trustees be closed, and all cancelled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay 10 per cent. in cash on the notice of the acceptance of their bids; 20 per cent. on the 20th of January; 30 per cent. 1st February; 20 per cent. 15th February, and the balance on the 1st of March.

The Income Bonds of the NEW YORK and ERIE RAILROAD COMPANY will be received in part payment at par, and the accrued interest till day of surrender to the Company.

The Directors of the NEW YORK and ERIE RAILROAD COMPANY, in offering the present loan to the public beg leave to state that it will be amply sufficient to pay the Income Bonds redeemable on the 1st February next, and the entire present floating debt of the Company, as well

as to complete all the unfinished work now under way.

By a resolution of the Board of Directors, all future outlays of every kind beyond the proceeds of the present loan, will be charged to expense account, and paid from the income of the Company, after payment of the interest on the funded debt, and the monthly payment to the Sinking Fund.

After the negotiation of the present loan and the redemption of the Income Bonds, the position of the Company will be—

Stock	\$10,024,000
Bonds of 1867, First Mortgage	3,000,000
Bonds of 1859, Second Mortgage	4,000,000
Bonds of 1883, Third Mortgage	6,000,000
Bonds of 1862, Convertible	2,500,000
Bonds of 1871, Convertible	4,351,000
Bonds of 1875, present loan	4,000,000

Total

\$24,875,000
In the opinion of the Directors it is perfectly safe to estimate the gross earnings of the Road, for the coming year, at \$6,000,000, from which must be deducted:

Expenses 55 per cent.	\$3,300,000
Seven per cent. on debt \$24,851,000	1,739,570
Sinking Fund	420,000
	\$5,459,570

Net revenue equal to over 5 per cent. on stock applicable to cash dividends and contingencies

540,430
The Directors of the Company are confident these estimates will be fully realized. The gross receipts since the Road has been in operation to Dunkirk, have been for passengers and freight alone—

1851 to 1852 \$3,047,748
1852 to 1853 4,138,424 \$1,690,676, say 35½ per ct.

1853 to 1854 5,122,666 934,242, say 23½ per ct.
The business of the road depending mainly on the local traffic, must inevitably increase in the same ratio as the population of the Counties through which it passes. In the opinion of the Superintendent, Mr. McCollum, the road in its present position and with its present equipment, can earn \$8,000,000. If the future increase in the receipts be estimated at only 15 per cent. per annum, which is not much over one-half of the average increase of the past the above utmost capacity of the road will be tested in 1858.

As to the running expenses, as they were only 53½ per cent. in 1853 and 1854, there is every probability that with rigid economy and an increase in the traffic, they can be reduced to 50 per cent., but they have been estimated at 55 per cent., so as to leave ample margin for contingencies.

The effect of the monthly purchases by the Trustees, of the Bonds of the present issue on their market value, cannot fail to be immediate, and will insure to the original purchasers a certain profit within a moderate time; for whilst the amount outstanding will decrease each month, the absorption by the Sinking Fund will constantly increase by the accruing interest on the Bonds in the hands of the Trustees. In 8½ years the Sinking Fund will absorb \$4,768,053, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among our most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie-place.

HOMER RAMSDALL, President.

NATHANIEL MARSH, Secretary.

New York, Oct. 23, 1854.



Patent Wrought Iron Railroad Chair.

THE undersigned are now prepared to manufacture their Patent Wrought Iron Railroad Chair, at the rate of fifteen tons per day. They are made exclusively from best Trenton Iron, which received the prize medal for strength at the World's Fair at London.

The patent is for the CHAIR itself—which is formed by raising the lip out of the plate sufficiently high to receive the rail. It is obvious that while the strain upon the lip is so slight as to remove all danger of its breaking, it becomes less the more tightly the lip is made to clasp the rail. The cheapness and durability of the chairs, and the facility with which the track can be adjusted, commend them to public favor.

SIZES AND PRICES.

A Chair 8 by 7½ inches, 3-8 inch thick, cost 28½ cents.	
" " " " 7-16 " " 33 "	
" " " " 1-2 " " 37½ "	
" " " " 5-8 " " 47 "	

Other sizes are made to order at equivalent rates. Sample Chairs will be forwarded, free of charge, on application to COOPER & HEWITT, December 1, 1852. 17 Burling Slip, New York.

SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

To Civil Engineers.

A GRADUATE of one of the best schools of Civil Engineering in Europe, lately returned to this country, wishes to connect himself with an Engineer of eminence and experience as assistant.—References unexceptionable as to qualifications and character.—Address Engineer, Box 3285, P. O., New York. 2t 45

Railroad Iron.

2,000 TONS Railroad Iron, 54 to 60 lbs. per lineal yard. For sale by

THEODORE DEHON,

26½ Broadway,

New York.

Contracts made as above for Rails delivered at English or American ports at lowest rates.

NUGENT'S COLLEGE

OF ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

ENGINEERS.

Atkinson, T. C.,
Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,
Chief Eng. Pittsburg and Connellsville R.R. Co., Pittsburg, Pa.

Edward Boyle,
Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
Office 123 Chambers st.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,
Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M. O.,
Civil and Mining Engineer, Cumberland, Md.

C. Floyd-Jones.,
Division Engineer 3d and 12th Divisions,
ILLINOIS CENTRAL RAILROAD,
Vandalia, Ill.

Gay, Edward F.,
Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
Syracuse and Binghamton Railroad, Syracuse, N.Y.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,
New Orleans and Nashville R.R., Aberdeen, Miss.

Holcomb, F. P.
Chief Eng. Augusta and Waynesboro, and Savannah and P. & W. C. Railroads, Marietta, Ga.

S. W. Hill,
Mining Engineer and Surveyor, Eagle River,
Lake Superior.

Huger, T. P.,
Northeastern Railroad, Charleston, S. C.

D. Mitchell, Jr.,
Chief Engineer Pittsburg and Steubenville, and Chartiers Valley
Railroads, Pittsburg, Pa.

Samuel McElroy,
Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,
Sackets Harbor and Saratoga R. R., 24 William St., N. Y.

Miller, J. F.,
Buffalo and Conhocton Valley Railroad, Avon, N. Y.

Morris, Ellwood,
Engineer and Agent DAUPHIN & SUSQUEHANNA CO.,
Cold Spring, Lebanon Co., Pennsylvania.

Septimus Norris,
Civil and Mechanical Engineer, Philadelphia.

Saml. & G. H. Nott,
Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,
Civil Engineer, Office 73 South 4th st., Philadelphia.

Prichard, M. B.,
East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
Chief Engineer Alleghany Valley Railroad, Pittsburg, Pa.

Shanly, Walter,
Chief Engineer Bytown and Prescott Railway,
Prescott, Canada.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburg, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Schlatter, Charles L.,
Civil Engineer, Ogdensburg, N. Y.

Straughan, J. R.,
Ohio and Indiana Railroad, Bucyrus, Ohio.

Steele, J. Dutton,
Pottstown, Pa.

Charles B. Stuart,
Civil Engineer, New York

Edward W. Serrell,
Civil Engineer, 157 Broadway, New York.

P. J. Tournadre,
Chief Engineer Vicksburg, Shreveport and Texas R.R.,
Vicksburg, Miss.

Trautwine, John C.,
Civil Engineer and Architect, Philadelphia.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,
Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

Whipple, S.,
Civil Engineer and Bridge Builder, Albany, N. Y.

Wm. J. Young
HAS removed his Engineering and Surveying Instrument Manufactory to No. 33, North Seventh Street, Philadelphia.

BUSINESS CARDS.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES AND LEVELS on a new principle, with Fraunhofer's Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by E. & G. W. BLUNT, New York, Dec. 1, 1851. No. 179 Water street.

James Herron, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.,

PATENTEE OF THE
HERRON RAILWAY TRACK
Models of this Track, on the most improved plan may be seen at the Engineer's office of the New York & Erie Railroad.

W. G. ATKINSON,
MINING ENGINEER, SURVEYOR AND DRAFTSMAN
CUMBERLAND, MARYLAND,

Will attend to business in his Profession in the Coal Region and vicinity.

REFERENCES:
Jerry Coates, Esq., New York.
Col. Wm. Young do.
Jas. W. McCulloch, Esq., late U. S. Treas., Washington.
June 25, 1853.

To Engineers, Architects and Draughtsmen.

THE undersigned begs respectfully to inform Gentlemen in the above professions, that he has constantly on hand a great variety of instruments for Field and Office use.

JAS. PRENTICE
Feb. 9, 1853. 1 Chamber street, New York.

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings, Private Dwellings, Stores and Factories, manufactured by the subscriber in great variety. Orders by Mail, or left at the Factory on Causeway street, will be promptly attended to.
HENRY N. HOOPER & CO.
Boston, March 23, 1850. 6m13.

H. SAWYER

(of the late firm of SAWYER & HOBBY),
Manufacturer of Transits and Levels.
HAS removed to Union Place near Warburton Av., Yorkers, N. Y.

Sewall & Crehore

CIVIL ENGINEERS,
ST. PAUL MINNESOTA.
JOSEPH S. SEWALL. CHAR. FRED. CREHORE.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and Warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.
December 18, 1852. WM. S. SAMPOON, Agent.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 50.]

SATURDAY, DECEMBER 16, 1854.

[WHOLE No. 974; VOL. XXVII.]

MR. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

Railway Economy and Railway Morals.....	785
Railroad Laws of Louisiana.....	786
Vermont and Massachusetts Railroad.....	787
Old Colony and Fall River Railroads.....	788
Dorchester and Milton Branch.....	791
South Shore Railroad.....	791
Memphis and Charleston Railroad.....	791
New Orleans and Jackson Railroad.....	791
New York and Erie Loan.....	792
Dividends for the current half year.....	792
Wabash and Erie Canal.....	792
Atlanta and Lagrange Railroad.....	795
Journal of Railroad Law.....	796
New London, Willimantic and Palmer Railroad.....	796
Georgia Central Railroad.....	797

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, December 16, 1854.

Railway Economy and Railway Morals.

Intelligence and integrity are the qualities necessary to a proper management of railroads.—The former must be possessed by the public, as well as by the persons in charge of them. The public, or in other words, the owners of railroads, are the parties to be served, and are to direct the mode. The duties of those entrusted with the immediate management of roads are simply ministerial. Now every person is poorly served who does not know when he is well served. There are exceptions, but the rule is as stated. No matter how faithfully disposed, in the outset, the employees may be, they must feel that those who give them their places are able to judge whether they are well or poorly filled, or they will forget their obligations, to serve themselves. In every relation of life, the intelligence of the superior becomes that of the subordinate—becomes his principle of action, securing his respect, and faithful service. Such are the conditions of success in every enterprise requiring the co-operation of a large number of persons, and numerous grades of service. By the publication of the facts developed in the construction and management of railroads, the intelligence necessary to their proper

management is gradually acquired by their owners. It can be acquired in no other manner.—This is the reason why we have so steadily insisted upon the importance of the publication of full reports by railroad companies. In their publication is involved no less a problem than the success of our roads; for self interest will always direct intelligence to its proper ends; and when the two co-exist, integrity is the product. It is of little avail to arouse the moral sentiment against bad management, if no substitute for such exist in the popular mind. The sentiment against bad management is strong enough in England, but this has been unable to effect the needed reforms. It is strong enough in this country, but it will not alone save our roads from disaster. No one among us wishes to see his own property, or that of his neighbor destroyed. He submits to the loss only because he cannot see any mode by which it can be avoided. So with our railroads. The numerous successful roads show that they possess no inherent vice, which renders success impossible.—Other roads are unsuccessful—because they have not an equally intelligent management.—The reports of a company, properly made, would soon disclose the character of its management; and if bad, would secure the needed reforms.—The whole problem of success is consequently narrowed to one proposition.

In our last article, we stated with sufficient distinctness the information that reports should contain, and showed that the best examples of management would soon become the standard for every road in the country. We know no reason why any concealment should be practised. If the directors have misjudged, their feelings are not to be considered. Those of the stockholders should always exert a paramount influence. Yet how few companies ever make a clean breast of their transactions; of their entangling alliances, of the unlucky investments they have made, or enormous shaves to which they have submitted. These are, withheld either for the fear that the directors will be called to account, or that the stock or securities of the unlucky road may be affected. But if the directors of a company are incompetent, ought not the fact to be known at the earliest instant? If the value of a road be impaired, ought not the stockholders and the public to know

it? Concealment only aggravates the evil. The indiscriminate and excessive fluctuations of railroad securities of all kinds show how much in the dark are the public, which has no firmer ground for conviction than conjecture. Now there is no reason why this should be so. The public mind would rest in a state of comparative repose, did it see things as they are. Its fluctuations in such case would only reflect a change in the actual value of the road.

While we must look to the development of a higher standard of education and intelligence as the means of securing in the end competent management, there are certain rules, which though resting upon sufficient reasons not necessary to be developed at greater length, may be laid down as axioms in railway economy.

1st. No company should be allowed to exceed the scope, or depart from the articles of copartnership originally entered into, without the unanimous consent of the stockholders.

When a person goes into a company upon a well defined agreement as to the objects in view, the majority have no right to violate that agreement. If they desire to introduce new articles, it is only just that they release, upon reasonable terms, the objecting party. Another advantage resulting from holding companies to the original propositions, is the fact, that companies so held will in the outset take very good care to provide for all future contingencies that may arise.

2nd. No road should be commenced till detailed and properly vouched estimates are prepared of its cost. Engineers should be made responsible for the correctness of their estimates. In such case we should have fewer examples of roads half completed, crushed for want of means.

3d. Parties lending to railroad companies should do so only upon the basis of a sufficient stock subscription, obtained from those living upon the line of the road, or immediately interested in its proper construction or management. The management of a road should always reside with such parties as have the best opportunities to oversee it, and who must pay the penalty for bad management in the loss of their own property.

4th. The managing directors should receive an adequate and stipulated sum for their services entirely devoted to the company,

should be held to the ordinary responsibility of agents, and should never be allowed to derive any incidental advantage from the position they hold.

5th. A strict accountability, the publication of every important act of every official, and semi-annual reports, which should be mirrors of the internal organizations and operations of a company, should be rigorously exacted.

6th. We think, too, that the stockholders of every company should possess a source of information independent of the directors. At each annual meeting, the stockholders should choose, say, three of their number, who, without having any voice in the management of the road, should have access to the books of the company, to all the acts and agreements of the directors, to all sources of information that may enable them to form an opinion as to the policy of the directors, and the management of the road, and report, if they see cause, to the stockholders, at the annual meeting, as well as at other times. We would have this committee appointed, so that the minority should be heard, which could be done by allowing no stockholder to vote for more than one of the committee, and by making such committee consist of the three persons having the highest number of votes. As matters now go, a bare majority control the entire interest in a road, allowing the minority no rights or voice in the management. Now, while the majority must exert a paramount authority, this is no evidence that they are competent to conduct a road properly, or that the minority have no right, or are capable of rendering no service or useful suggestion. The latter ought to have the right of examination, and remonstrance, if nothing more. Suppose such a committee be appointed by the stockholders of the Hudson River, Erie and Central roads of this State. Assuming all these roads to be well managed, it is more than probable that all suffer from defective management, or oversight in many important particulars. There are always two sides to a question, and when only one is presented partial views are the result. It may be that the policy of the majority is radically wrong, and needs only to be exposed to be corrected. Should companies neglect any step that can shed light upon and supply intelligence to its management.

We have in previous articles endeavored to present the *rationale* of the railway system of this country; to point out the more important dangers to which it is exposed, and the means by which they are to be avoided. If we are correct in our views, and have suggested useful means of reform, we hope to have the support of those interested, in securing their adoption. If we point out errors or abuses in their management we hope to be effectually seconded by those most interested,—the holders of the stock and bonds in our roads.

Sussex and Warren Railroad.

The Directors of the Sussex and Warren Railroad Company are putting under contract twelve miles of the road, from Franklin N. J., to the New York State line. This road will connect with the Orange and Sussex Road near Warwick, in this State. The Orange and Sussex connects at Chester with the Newburgh Branch. When the two former roads are completed to Chester the New Jersey Franklinite company will have an outlet for their products by railway to Newburgh on the Hudson.

Railroad Laws of Louisiana.

In 1852, the fundamental law of this State underwent several important alterations, in regard to the construction of railroads and other public works. According to the Constitution of 1845, the Legislature had not the power to pledge the faith of the State for the payment of contracts made by any individual or corporate body beyond \$100,000; unless, in the enactment creating the debt, the ways and means for its liquidation were also provided, and unless the next Legislature chosen re-affirmed the obligation. The State was also expressly prohibited from subscribing to the stock of any corporation, or creating corporations by special statute, except for political or municipal purposes. Besides, the existence of all such bodies was limited to a period of 25 years.

The effects of this began to be felt in the trade and prospects of New Orleans. It was found that for commercial purposes the *Mississippi was beginning to be drained* by the railroad system of the Northeast, and still more recently, by the Southern cities. Norfolk, Charleston, Savannah and Mobiles had successively begun to draw to themselves the trade of the Ohio, Mississippi and Missouri valleys; threatening to render, in time, the situation of New Orleans as the key to the "Father of Waters," of no consequence whatever. In the circumstances, the people felt that they must either make an effort to keep abreast of the improvements going on, or allow themselves to completely fall behind in spite of their enviable position.

In consequence of the revision of the Constitution in 1852, an act, in the form of a General Law for the promotion of public improvements, was passed by the Legislature, and approved March 12th of the same year. This was followed by special enactments for the organization of the New Orleans, Jackson, and Great Northern and the New Orleans, Opelousas, and Great Western Railroads.

Below is given an abstract of the most important provisions of these several enactments.

Sec. 1. Of the General Law authorizes any number of persons, not less than six, on compliance with the provisions of this act, to organize themselves into a corporation for the executing of internal improvements, prohibiting them from engaging in any general agricultural or mercantile, exchange or banking business of any kind.

Sec. 2. Confers the usual corporate privileges, limiting the existence of the company to 25 years. (By a special enactment, the charters of some Railroad Companies, as the N. O., Jackson and Great Northern, have been rendered perpetual, or till the voluntary dissolution of the company.)

Sec. 3. Requires to be named in the charter the name, objects, amount of capital, and other matters belonging to the corporation.

Sec. 4. Requires the charter to be entered in the Recorder's Office, and its provisions to be published in a local newspaper for a certain period previous to the formation of the company.

Sec. 5. Gives the Stockholders, at general meetings, power to make alterations in the act of incorporation, under certain restrictions.

Sec. 6. Regulates the affairs of the company in case of insolvency.

Sec. 7. Prohibits any Railroad or Plankroad company from constructing roads through the

streets of any incorporated city or town, without the consent of the municipal council:—such consent, however, not to be afterwards withdrawn during the existence of the company.

Sec. 8. Provides that no stockholder shall be liable for the company's debts, beyond the amount of unpaid balance due the company, or the shares owned by such stockholder.

Sec. 9. By this section, corporations are prohibited from constructing their works so as to impede or obstruct the safe and convenient use of highways, prevent the drainage of land, or obstruct the navigation of rivers.

Sec. 10. Exempts companies formed under this act from the provisions of an act passed in 1848.

The following additions and amendments were subsequently made to the above law, and approved at same date.

Sec. 1. Police Juries and municipal corporations are permitted to subscribe to the stock of corporations for executing works of internal improvement in the following manner.

Sec. 2. All ordinances so passed shall contain, *first* a statement of the number and amount of shares purported to be subscribed; *second*, the levy of a tax on the landed estate sufficient to pay the amount of said subscription.

Sec. 3. The same to be approved by a majority of the votes on whose property the tax is to be levied, at a special election to be held for that purpose. Should such proposed ordinance be rejected, the sense of the voters in like manner may be again taken, at any subsequent period, and at an interval of not less than six months.

Sec. 4. Enjoins that stock so subscribed shall not belong to the corporation or parish, but to the tax-payers. When less than full shares have been paid, the party to have the right of contributing sufficient to pay up the balance of such shares.

By an act approved April 28, 1853, the Legislature made provisions for giving the aid of the State to Railroads and Plankroads, in the following manner.

By the first section it is made the duty of the State Treasurer, whenever he shall be authorized by a special law, to subscribe to such works on behalf of the State, to the amount of one-fifth of their capital stock. The second section requires that for the payment of the above, the Governor shall issue coupon State bonds bearing interest at 6 per cent. and payable at 40 years, which bonds are to be transferred to the Railroad or Plankroad Company. The third section enjoins that these shall be issued only in proportion to the actual payments made from other sources. Section fourth requires that all bonds thus issued shall be received by the companies at not less than par; but should they be sold for more than par value, the President to pay into the Treasury of the State the excess received, to be applied to the appropriation for interest on the same. By the fifth section, the President of any company in which the State shall be a subscriber, is required to furnish the Governor on the application for such bonds, a statement of the amount called in and received from individuals, and other subscriptions certified under oath; on the receipt of which the Governor is enjoined to issue bonds in the manner authorized. The sixth section makes the stock thus held by the State with its revenues, to

be especially set apart for the payment of the principal and interest of the bonds thus issued.—Section seventh makes an appropriation by the State for the payment of the interest on the bonds, until the company shall declare six per cent. dividends, also when the revenues amount to eight per cent. or more, the excess over six to be applied to the purchase of the bonds. Section eighth gives the Governor and Senate authority to appoint three of the Board of Directors. Section ninth directs that when the General Assembly shall authorize the loan of public bonds to any such Company, they shall be issued in the same manner and terms as when subscribed, and provision made in the act for their redemption; besides requiring security from the company of their being paid at maturity. The tenth section requires the President and Directors of the road in which the State is a Stockholders, to make a report on the condition of the company within one week of the meeting of the Legislature, each year.

Vermont and Massachusetts Railroad.

Station—in Boston, Fitchburg Railroad Station.

Officers—President: Thomas Whittemore.

Treasurer: John Rogers, Office 13 Exchange street, Boston.

Superintendent: Otis T. Ruggles, Fitchburg.

Annual Meeting: Second Wednesday in February. Close of financial year, December 31st.

CHARTERS.

The Vermont and Massachusetts Railroad, with its branch to Greenfield, was constructed under authority given in three charters.

First, The Act of the Legislature of Massachusetts, March 15th, 1844, empowering the Vermont and Massachusetts Railroad Company to build a road from some convenient point on the Fitchburg Railroad, in Fitchburg, by certain specified routes, to the southern boundary, or Vernon, or Guilford, in Vermont, or to the Southern boundary of Winchester in New Hampshire.

Second, The Act of the Legislature of Vermont, Oct. 1843, authorising the Brattleboro' and Fitchburg Railroad Company to build a road from Brattleboro' to meet the Fitchburg Railroad at the line of the State.

Third, The Act of the Legislature of Massachusetts, May 8, 1848, authorizing the Greenfield and Fitchburg Railroad Company to build a road from the Vermont and Massachusetts Railroad in Montague, to the town of Greenfield.

By subsequent legislation in Vermont and Massachusetts, those companies were united and became one Company; so that the road from Fitchburg to Brattleboro', and also the branch to Greenfield are owned by the Vermont and Massachusetts Railroad Company, which has been authorized, from time to time, to increase their capital stock, issue preferred stock, and to give a mortgage of the road to trustees for the security of bondholders.

HISTORY, DESCRIPTION AND CONSTRUCTION.

The Vermont and Massachusetts Railroad Company was organized November, 1844. At the time of its incorporation the policy of the State of New Hampshire not being such as to encourage railroad enterprises, the construction of a road through the northern part of Massachusetts to Vermont was regarded as the most promising method of obtaining communication with the upper valley of the Connecticut, Northern New York, and the Canadas, whilst at the same time another avenue would eventually be opened by way of Troy, to the West. To accomplish these objects was a main design, though much was expected from way business, in undertaking the Vermont and Massachusetts Railroad. The road commences at Fitchburg, in the county of Worcester, passes by the valley of Nashua, to the summit, twelve miles above Fitchburg, then seizes upon the valley of the Otter river, (a branch of Miller's) in Gardner, which it generally follows to the confluence with Miller's in Winchendon; from that point it keeps the valley of this latter stream to Grout's corner in Montague, and thence runs along the Connecticut, through Northfield, crossing the Connecticut river near the State line of Vermont, and thence up the Westerly side to Brattleboro'. On portions of the line the excavation was hard pan, and there were also deep rock cuttings; on other portions, numerous and costly bridges, large amounts of masonry, and heavy embankments on the river banks were necessary. The Connecticut is crossed at Northfield, at a difficult point by an expensive bridge of four spans, 166 feet each, with a way for common travel, on the lower cord and for the trains on the deck. The construction of the road commenced in Autumn of 1845; it was opened to Baldwinville, 21 miles, October, 1847; to Athol 33 miles, January, 1848; to Grout's corner, 48 miles, December, 1848; and to Brattleboro' 69 miles, February 12, 1850. The Greenfield Branch from Grout's corner to Greenfield, 8 miles, was begun in 1849, but not completed until December, 1850.

The principal characteristics of the Vermont and Massachusetts Railroad are as follows:

Length of main road, single track, 69 miles.

Length of Greenfield Branch, 8 miles.

Length of sidings, $5\frac{1}{2}$ miles.

Weight of rail per yard, 56 lbs.

Maximum grade with its length in main road 58 feet for 1 6-10 miles.

Maximum grade with its length in Branch 45 feet for $3\frac{1}{2}$ miles.

Total rise in main road 808 feet; total fall 990 feet.

Total rise in branch road 81 feet; total fall 168 feet.

Shortest radius of curvature, with length of curve in main road, 1,000 feet for 1,900 feet; except at Grout's corner, where it is 924 feet for 1,200 feet.

Shortest radius &c. in branch 1,000 feet for 400 feet.

Total degrees of curvature in main road $3,314^{\circ}$. Do. in branch road 607° .

Straight line in main road $27\frac{3}{4}$ miles.

Do. branch 2.9 miles.

Wooden truss bridges 6,738 feet.

Way stations 16, flag stations 2, total 18.

Equipment—Engines 12.

Passenger cars 8.

Baggage cars 5.

Merchandise cars 174.

Gravel cars 25.

CONNECTIONS AND CHARACTER OF BUSINESS.*

By the Cheshire R. R. at Ashburnham, and the Vermont Roads at Brattleboro', the Vermont and Massachusetts Railroad is connected with the

lines in Vermont to Canada and Northern and Western New York. At Greenfield, it joins the Connecticut River Railroad, and at the same point, it will unite with the Troy and Greenfield Railroad when completed. These junctions indicate the character of the business derived from other roads, to which it is partially a trunk road. Its way business, as to freight, is of a miscellaneous character. Passing through or running near towns enjoying water-power facilities, it transports a variety of manufactures, among which are large quantities of wooden ware, chairs, tables, &c. On the route are eligible sites for mill privileges not yet improved to their full capacity, which would admit of extensive manufacturing establishments. There has been a gradual increase of the business of the road since its opening, as will appear from the following tables:

		Comparison of the Earnings for five years.	
		1849.	1850.
January	.....	\$8,031 80	\$10,474 50
February	.....	8,679 14	11,251 49
March	.....	11,047 20	11,569 97
April	.....	13,368 40	14,563 66
May	.....	12,618 37	14,442 38
June	.....	11,792 51	13,659 75
July	.....	11,995 86	16,106 27
August	.....	14,767 61	19,118 66
September	.....	13,827 27	18,630 91
October	.....	14,047 98	16,662 95
November	.....	13,024 58	16,058 44
December	.....	12,016 47	13,868 40
Miscellaneous	.....	1,297 40	15,306 65
Totals	.....	\$145,117 69	\$177,694 68
		Annual Rate of Increase of Earnings.	
		1849.	1850.
		\$145,117 69	\$177,694 68
		\$177,694 68	\$195,922 64
		\$195,922 64	\$220,906 70
		\$220,906 70	\$248,854 99
		\$248,854 99	
		Gain in 1850 over 1849	
"	"	1850	18,576 90
"	"	1851	18,228 86
"	"	1852	24,963 16
"	"	1853	27,948 29

FINANCES.

Almost from the outset, the Vermont and Mass. Railroad Company had to contend with serious pecuniary difficulties, growing out of the change of policy in New Hampshire which led to the incorporation of competing roads, the costliness of their enterprise, and the pressure in the money market. They failed in an application for the aid of the State, and were compelled to carry forward their undertaking against many obstacles and much opposition. To meet the monetary embarrassment and complete the road, stock was sold at a discount, bonds issued and loans obtained at high rates of interest, and by payment for individual guarantee of notes of the Company. But these expedients were not sufficient; and in the summer of 1849, by a vote of the stockholders, the road and the franchise thereof were mortgaged to secure the bonds of the Company to the

amount of eleven hundred thousand dollars. This was done for three avowed purposes, viz: 1st, to pay the floating debt; 2d, to finish the Greenfield Branch; and 3d, to cover the amount of outstanding bonds. This restored the credit of the company. The Treasurer's statement, at the close of the last financial year, was as follows:

Statement showing the Cost, Mileage, &c., &c., of the Vermont and Massachusetts Railroad, from its opening to the present time.

Year.	Cost.	Mileage.	Cost per Mile.	Gross Receipts.	Current Expenses.	Net Receipts.	Dividend.	Receipts from Passengers.	Receipts from Freight.	Miscellaneous.	Earnings per Mile.	Per centage of Gross Earnings.	Do. of Net Earnings.
1847	Not completed and leased to Fitchburg Railroad till January, 1849.												
1848	\$3,160,801	74	\$42,708	\$145,117	\$116,407	\$29,710	0	\$63,000	\$92,738	\$2,497	...	...	...
1849	3,406,241	77	44,236	177,694	164,359	23,334	0	71,464	112,446	5,984	...	...	...
1850	3,450,004	77	44,805	180,617	166,616	16,102	0	84,691	86,088	20,635	...	...	...
1851	3,451,628	77	44,826	218,679	200,030	18,648	0	73,881	99,607	44,866	...	...	...
1852	3,456,313	77	44,887	244,323	281,178	13,144	0	88,775	111,470	49,077	...	...	...
1853													
* For eleven months.													
General Statement of the Vermont and Mass. R.R. Company.													
Dr.													
Construction Accounts, including Main Road & Greenfield Branch, Equipment, Interest Dividends & Discount on Bonds sold.....													
													\$3,453,488 42
Cash, on hand.....													28,854 54
Machine Shop Stock (on hand)....													7,143 66
Fuel, on hand.....													13,369 50
Oil and Waste, do.....													351 91
Notes Receivable.....													17,219 65
Sundry Accounts.....													5,519 39
Cash and balances due from connecting roads.....													17,537 83
													\$3,542,984 94

Cr.	
Capital Stock.....	\$2,233,959 87
Total amount of Bonds issued.....	959,000 00
Notes payable.....	175,792 68
Road Rent in 1848.....	69,292 61
Road Income, after paying Interest and all Expenses, from January, 1849, to date.....	104,518 81
Sundry small accounts.....	421 47
	\$3,542,984 94

Boston, Dec. 31st, 1853.

Locomotive for the Narrow Gauge.

A rare chance is now offered by the New Jersey Locomotive and Machine Co. for the purchase of a new Engine, adapted to the four foot eight and one-half inch gauge. For a full description of the Engine, see advertisement. The reputation of this company for constructing engines of the best patterns, choicest materials, and giving them the highest finish, is as good as that of any other establishment in the country. The Engine is, no doubt, a good one, and, as will be seen, was made to order for a road which is unable to pay for it, on which account it will be sold at a bargain.

The Old Colony and Fall River Railroads.

Station—Kneeland, near Sea street, Boston.

Officers—President: Alexander Holmes.

Treasurer: John M. Washburn.

Superintendent: George Haven.

(Offices at the Station.)

Annual Meeting: Last Thursday in January.

As the above companies were consolidated September 6th 1854, the history of each is given up to the time of that event. To this is added an account of the terms and arrangements of the consolidation.

OLD COLONY RAILROAD.

CHARTER.

The Old Colony Railroad Company, with a capital of ten thousand shares of one hundred dollars each, was incorporated by the Legislature of Massachusetts, March 18th, 1844, and authorized, on the usual conditions, restrictions, liabilities, and reservations, to construct a railroad from a point in South Boston through Dorchester, Quincy, Braintree, and other towns to Plymouth. Subsequent Acts, passed 1845-1854, empowered the Company to extend their road into Boston proper; to build a branch from Abington to Bridgewater, with an alternative right of building a road from Bridgewater to South Braintree, now a part of the Fall River Railroad, and to make other branches; to widen the road, and lay a second track between Boston and South Braintree; to increase their capital stock; to lease and operate certain connecting roads; to unite with the Fall River Railroad Company, as hereinafter specified.

HISTORICAL NOTICE.

The Company was organized June 26th, 1844, and the road was soon after located, and placed under contract. It was so far completed, as to be partially opened for travel between South Boston and Plymouth, Nov. 10, 1845. In 1846, the road was extended into Boston, and by an arrangement with the Boston and Worcester Railroad Corporation, a station on Albany street adjoining that of the Boston and Worcester Railroad was rented for the use of passenger trains. The Abington Branch (extending from the main road

in Abington to Bridgewater) was built in 1846-7, the company having elected to build it rather than the road from Bridgewater to South Braintree, which they had the alternative right of building, and opened for travel, June, 1847. The present station, on Kneeland street, was erected and occupied in 1847. Eleven and a-half miles of second track, from Boston to the junction with the Fall River Road at South Braintree, were built in 1848.

In the autumn of 1847, two leases were taken, and a contract made, which are important features in the history of the Old Colony Railroad.

By the first lease, Sept. 20th, 1847, the Company covenanted, on the completion of the South Shore Railroad in a satisfactory manner, to maintain, keep in complete repair, and operate as if a part of their own road, said South Shore Railroad, for a term of five years, paying six per cent. on its cost annually, as rent. The Company further covenanted that, when six miles of the South Shore Railroad should be graded and ready for the superstructure, to guarantee the payment of the bonds or notes of the South Shore Railroad Company, for the sum of \$25,000, payable in seven years from their date, with interest semi-annually; and when the whole of said South Shore Railroad should be graded and ready for the superstructure, to give a like guarantee for the payment of bonds or notes, for a like sum of \$25,000, in ten years from their date, with interest semi-annually; the Old Colony Railroad Company to be secured and indemnified by a mortgage of the South Shore Railroad. The Old Colony Railroad Company reserved the right to renew this lease, on the expiration of the first five years, for another term of five years, paying 7 per cent. as rent.

The guarantees specified in the lease were given in September, 1848, and in May, 1849. No mortgage of the South Shore Railroad appears to have been given; and the bonds were cancelled in 1850-51.

The reason why no mortgage was given, was because the South Shore R. R. Co. were obliged to raise more money to complete their road, and if the arrangement had been carried out, they would have had no security but a second mortgage to offer, and at that time, no money could have been borrowed upon it. So it was agreed that the Old Colony Railroad Company should be discharged from their agreement to guarantee the bonds, and that the bonds which had been guaranteed and issued should be taken up and returned. The South Shore Company subsequently mortgaged their road for a larger sum than was provided for in that agreement.

The South Shore Railroad was opened for travel January 1st, 1849.

By the second lease, November 10th, 1847, the Old Colony Railroad Company agreed to keep in repair and operate the Dorchester and Milton Branch Railroad, running over it not less than eight times daily, for five years from the time said railroad should be completed and in order for use, and to pay six per cent. per annum on its cost, as rent. Further conditions of the lease were, that the lessees should have the right any time during its continuance to purchase the Branch, paying therefor in stock of the Old Colony Railroad at its par value, and that the lessees, if so

electing, might continue the contract for a second five years; provided, however, that for this second term, the running over the road more than two trips each day, was to be at the option of the lessees.

The Dorchester and Milton Branch was opened for travel in December, 1847.

To adjust difficulties which had arisen under the leases, new agreements were made in 1851. First, with the Dorchester and Milton Branch, by which the right of that Company to renew the lease was compromised by an actual renewal for three years, or until January 1st, 1856; the Old Colony Railroad Company taking a mortgage to relieve them against the endorsement of the \$30,000 of bonds. Second, with the South Shore Railroad Co., fixing the two times on which the rent specified in the lease should be paid, and adjusting other matters of difference. The lease expired April, 1854, and was not renewed.

The contract entered into December 1st, 1847, was with the Fall River Railroad Corporation.—By the terms of this contract, extending from its date to August 4th, 1856, the Old Colony Railroad Company were to build a second track of $11\frac{1}{2}$ miles from Boston to the junction at South Braintree; furnish the Fall River Railroad Company with all necessary and convenient accommodations for passengers, merchandize and cars at the stations on the line, and at the terminus of their road; and the latter company were reciprocally to do the same. The Fall River Railroad Company were to take the risk of their cars, and of the merchandize transported by them, when on the Old Colony Road; and the Old Colony Railroad Company were to take the risk of passengers. Each corporation was to find its own clerks, agents, &c.; and other articles, unnecessary to be specified here, were provided for in the agreement. The service to be performed by the Old Colony Railroad Company, was to take over their road to Boston all regular trains of the Fall River Railroad delivered at the Southern terminus of that road in the village of South Braintree; also to deliver returning trains from Boston at said terminus, at such times as the Fall River Railroad Company should elect; and when desired by the other contracting party two daily passenger trains, besides the steamboat train, were to be taken each way, stopping only at North Braintree and Quincy, unless to leave or take passengers for the Fall River Road. The proceeds from the transportation of passengers and merchandize were to be divided between the two corporations, pro rata, according to the distance carried on the roads of each; the Old Colony Company paying to the Fall River Railroad Company for the use of cars, risk thereof, and the benefits of the connection, one half cent per mile per passenger, and one half cent per mile per ton for merchandize when on the Old Colony Road.

At the annual meeting of the stockholders of the Old Colony Railroad Corporation, December 26th, 1849, a committee of investigation was appointed to examine the affairs of the Company. This committee made a report, under date of April 8th, 1850, in which they stated that the accounts of the Company had been improperly and incorrectly kept;—that the road had been injured by the running of heavy gravel trains under agreement with Mr. Evans, contractor, for the purpose of filling

up certain flats in the southerly part of Boston; that the leases, above described, had resulted in serious losses, the contract with the Fall River Railroad Company working unfavorably; that the building of the Abington Branch was an investment which had yielded no income; and that these and other causes accounted for the comparative unprofitableness of the Old Colony Railroad.

DESCRIPTION AND PHYSICAL FEATURES.

The Old Colony Railroad leaves Boston near the foot of Kneeland Street, passes by a bridge and embankment, to and through the westerly corner of South Boston, across Dorchester Avenue, (formerly Dorchester Turnpike,) over the marshes, Dorchester Bay and Neponset River to Quincy; thence by way of Braintree, South Weymouth, Abington, East Bridgewater and other towns to Plymouth, the line being generally not far from the sea shore. There is but little of deep cutting or high embankment on the whole route, excellent gravel having been found along the route. The road bed is uncommonly good, and generally free from water. The principal features of the main road and its branch are given in the Report for 1853, as follows:

Length of main road..... $37\frac{1}{4}$ miles
Single track on main road..... $25\frac{3}{4}$ "
Double track on main road..... $11\frac{1}{4}$ "
Length of Abington Branch, single track. $7\frac{3}{4}$ "
Sidings, &c..... $6\frac{7}{8}$ "
Weight of rail, main road.... 56 to 70 lbs per yd.
" branch..... 50 to 56 " "
Maximum grade in main road. 39.6 feet for 6,000 ft.
" branch " 39.6 " " 10,500 ft.
Total rise and fall in main " 509.2 "
Shortest radius of curvature in main road..... 520 " " 450 ft.
Total degrees of curvature [in Boston.
in main road..... 85.3°
Straight line in main road.. 30 miles, 860 feet
" " branch " 5 " 4,708 "
Wooden truss bridges..... 217 "
Other wooden "..... 2,915 "
Way Station..... 16 "
Flag "..... 7 "
Equipment engines..... 13
Passenger cars..... 25
Baggage "..... 4
Merchandize cars..... 150
Gravel "..... 20

The road is in good repair, and run with care and safety.

CHARACTER OF BUSINESS.

Its route being through a number of populous and thriving villages, the Old Colony Railroad has had a large amount of way travel. By its connections it has obtained passengers and freight from the South Shore, Cape Cod, Bristol County, Nantucket, Dukes County and New York. On the line are extensive manufactures of shoes, iron works, and other manufacturing establishments.—The road has also been largely engaged in transportation of gravel for filling up flats for the city of Boston, and for other purposes.

FINANCIAL CONDITION.

The policy of the Directors for a few past years has been to reduce the capital and provide for the liquidation of the debt: and to this end the surplus earnings have been reserved. The Report of 1853 gives the capital stock paid in as \$1,964,070 00; the Funded Debt as \$223,200 00; the Floating Debt as \$70,888 13; the Total Surplus as \$274,863 15. The average rate of interest paid during the year was 6 per cent. per annum.

Statement showing the Cost; Mileage; Cost per mile; Gross Receipts; Current Expenses; Net Receipts; rate of Dividend; Receipts from Passengers; Receipts from Freight; Miscellaneous; Earnings per mile; per centage of gross Earnings; Do. of net Earnings, of the Old Colony Railroad since the opening of the first division to the present time.

Year, November 10th, the road was opened for travel.	1846	1847	1848	1849	1850	1851	1852	1853
Cost of Road and Equipment.	\$1,897,068	1,636,682	2,080,903	2,292,400	2,293,634	2,293,634	2,293,634	2,293,634
Length in Miles.	37	44	46	45	45	45	45	45
Cost &c., per Mile.	\$37,768	37,196	46,242	50,942	50,967	50,967	50,967	50,967
Gross Receipts.	\$125,711	171,163	227,860	276,066	296,170	318,076	322,213	374,819
Current Expenses.	\$67,230*	87,020*	99,012	226,722	216,702	240,924	220,703	262,063
Net Receipts.	\$68,481	84,183†	128,848	49,344	79,468	77,151	101,510	112,756
Dividend.	6	6	6	6	6	6	6	6
Receipts from Passengers.	\$101,857	124,776	160,703	184,669	196,482	208,682	218,733	266,891
Receipts from Freight.	\$27,403	41,627	53,766	65,632	65,430	63,174	47,694	86,476
Miscellaneous.	\$3,449	4,850	5,380	5,662	5,257	7,068	7,160	27,610
Earnings per Mile.	\$3,398	3,890	5,062	6,113	6,882	7,068	7,160	8,361
Per cent. of Gross Earnings.	88.998	10.458	10.925	11.999	12.913	13.868	14.019	16.346
Per cent. of Net Earnings.	\$4,901	6,140	4,212	1,714	3,608	3,864	4,426	6,356

* The expenses are here obtained by deducting the net earnings from the gross receipts as these are given in the Reports to the Legislature; but in these reports the items under the head of Expenditures, amount when carried out, to \$72,107 for 1846, and to \$125,184 for 1847.

† After deducting, the Report says, besides ex

FALL RIVER RAILROAD.
CHARTERS, &C.

The Fall River Branch Railroad Company was incorporated, March 14th, 1844, with authority to build a road from Fall River either to Myricks station on the New Bedford and Taunton Railroad, in Taunton, or to the station of the Taunton Branch Railroad in Taunton. On the 25th day of March, 1845, the Randolph and Bridgewater Railroad Company was incorporated, and authorized to build a road from Bridgewater to the Old Colony Railroad in Braintree or Quincy; and on the 26th of March, 1845, the Middleborough Railroad Company, with authority to build a road from Bridgewater to the Fall River Branch Railroad Company and with any other corporation empowered to build a road from Bridgewater to the Old Colony Railroad.

Under the powers granted to the last named Company, a union of the stocks of the three corporations, and their organization as a united corporation, was consummated, August 8, 1845.

By an act passed April 16th, 1846, the union of the three corporations was recognized and the united companies authorized to take the name of the Fall River Railroad Company. Subsequent acts authorized the increase of capital stock, the extension of the road to Fall River, changes of locations with the Cape Cod Branch in Middleborough and other doings.

The capital stock allowed the respective companies in their charters, was as follows:

Fall River Branch R. R. Company.....\$400,000
Randolph and Bridgewater R. R. Co..... 400,000
Middleborough R. R. Co..... 250,000

\$1,050,000

CONSTRUCTION, DESCRIPTION &C

The road from Fall River to Myrick's station was opened for travel June 9, 1845; but the whole road was not completed and in operation until 1847-8. Leaving the Old Colony Railroad at South Braintree, the Fall River Railroad runs in a Southerly direction, through Randolph, East Stoughton, North Bridgewater, East and West Bridgewater, Middleborough (where there is a junction with the Cape Cod Railroad) to Myrick's station, (where there is a junction with the New Bedford and Taunton Railroad) and from that point to Fall River.

The principal characteristics of the road given in the report of 1853 are as follows:

Length of road, single track, 42 242-100 miles

Length of sidings, &c., 6 miles.

Weight of rails, per yard, 54, 56, 57, and 60 lbs.

Maximum grade, 44 88-100 feet—length 2,400 feet.

Total rise and fall, 874 feet.

Shortest radius of curvature, 955 for 400 feet.

Total degrees of curvature, 685° 36' 54" 5" feet.

Straight line, 30 338-1000.

Wooden truss bridges, 67 feet.

Other wooden bridges, 802 feet.

Way stations 7.

Flag stations 9.

penses, interest, and amount paid and due the Dorchester and Milton Branch.

† Besides expenses, the Report says, rents, interest, extra interest, &c., of previous years were deducted from the gross receipts.

Equipment engines, 10,
Equipment passenger cars, 19.
Equipment passenger cars, 2nd class, 3.
Baggage cars, 10,—3 being platform.
Merchandise and gravel, 146.

CHARACTER OF BUSINESS.

Besides the income derived from local travel, towns on the route, and the manufactories at Fall River, this road, in connection with the steamers at Fall River forms one of the principal lines from Boston to New York, and as such does a large business.

FINANCIAL CONDITION.

According to report of 1853, the capital stock authorized was \$1,200,000: the capital stock paid in was \$1,050,000; debts receivable, stock and cash were \$64,744 96; debts payable, \$6,208 43, leaving balance in favor of the company of \$88,536 53; materials on hand valued at \$41,232 80. The total surplus was \$87,762 42.

Statement showing the Cost, Mileage, &c., &c., of the Fall River R. R., from 1845 to 1853 inclusive.

Year.	Cost.	Mileage.	Cost per mile.	Gross Receipts.	Current Expenses.	Net Receipts.	Dividend.	Receipts from Passengers.	Receipts from Freight.	Miscellaneous.	Earnings per mile.	Per centage of Gross Earnings.	Do. of Net Earnings.
1845....	\$317,805	11	\$28,891	\$15,796	\$8,205	\$7,591	0	\$13,279	\$2,227	\$290	\$1,436	\$4,970	\$2,388
1846....	828,084	41	20,196	64,119	53,783	10,336	0	51,520	11,615	983	1,663	7,743	1,248
1847....	1,070,985	41	26,120	111,354	77,986	33,367	3	77,040	30,991	3,232	2,716	10,398	3,115
1848....	1,145,983	42	27,283	184,344	75,467	108,877	6 1/2*	118,391	62,335	3,617	4,389	16,086	6,569
1849....	1,146,003	42	27,286	174,043	119,712	54,330	3†	102,638	65,543	5,852	4,144	15,187	4,741
1850....	1,068,000	42	25,428	210,080	109,768	100,312	0	121,293	80,767	8,019	5,002	19,669	9,392
1851....	1,050,000	42	25,000	223,322	122,527	99,794	7 1/2	133,398	91,094	7,883	5,631	22,126	9,392
1852....	1,050,000	42	25,000	229,445	129,855	99,589	8	133,907	88,506	7,932	5,483	21,852	9,464
1853....	1,050,000	42	25,000	294,183	167,533	126,650	8	163,952	121,680	8,549	7,004	28,017	12,066

* \$31,000 were appropriated towards cancelling construction debt.
† The Total income Dec. 1st, 1850, was \$110,712 77; of this \$84,000 were appropriated to the payment of debts.
contracted for construction, leaving \$26,712 77 as surplus.

UNION OF THE OLD COLONY AND FALL RIVER RAILROADS.

The Legislature of Massachusetts passed an act, March 25, 1854, authorizing the consolidation of the Old Colony and Fall River Railroad Companies, under the title of the *Old Colony and Fall River Railroad Company*, at such times and on such terms, as should be mutually agreed upon, and approved by a majority of the votes of the stockholders of each of said corporations, at meetings regularly called for the purpose. This Act also gave to the new Company all the powers, and privileges; and imposed upon them all the duties, restrictions and liabilities which the respective companies enjoyed, or to which they were subject, at the time of union, and provided for the calling of the first meeting.

At meetings of the Old Colony Railroad Corporation and of the Fall River Railroad Company, held simultaneously, March 23, 1854, and May 4, 1854, the two voted to form one corporation and agreed to submit for adjustment to certain arbitrators, the question of the relative value of the property and proportions of stock in the joint corporation that should be shared by the stockholders in each.

The arbitrators selected were the Hon. John Davis of Worcester, John H. Clifford, Esq. of New Bedford, and W. H. Swift, Esq. of Boston.

Owing to the decease of Mr. Davis, and by consent of the Directors of both companies who were authorized to grant it, the award, by agreement to be final and conclusive, was made by the two surviving arbitrators, and opened at the first meeting of the new corporation, September 7, 1854. The decision of the referees was as follows:

"The value of all the property of the Old Colony Railroad Corporation, including its franchise, rights of action, and assets of every description, subject to all its debts and liabilities, absolute and contingent, we award and determine to be the sum of Sixteen Hundred and Fifty Thousand Dollars; which sum is to be deemed and taken to be the contributory interest of said Old Colony "Railroad Corporation to the capital stock of the Old Colony and Fall River Railroad Company," on the 30th day of June, A. D. 1854.

The value of all the property of the Fall River Railroad Company, including its franchise, rights of action, and assets of every description, subject to all its debts and liabilities, absolute and contingent, we award and determine to be the sum of ten hundred and fifty thousand dollars; which is to be deemed and taken to be the contributory interest of said Fall River Railroad Company to the capital stock of the "Old Colony and Fall River Railroad Company," on the 30th day of June, A. D. 1854.

We further award and determine, that the whole capital stock of the Old Colony and Fall River Railroad Company aforesaid, shall be the sum of twenty-seven hundred thousand dollars, represented by twenty-seven thousand shares, of the par value of one hundred dollars each. The proportion of said capital stock to be shared by the stockholders of the Old Colony Railroad Corporation shall be sixteen thousand five hundred shares thereof—and the proportion of said capital stock to be shared by the stockholders of the Fall River Railroad Company, to be ten thousand five hundred shares thereof.

And in consideration thereof, the entire property of the said Old Colony Railroad Corporation, and of the said Fall River Railroad Company, real and personal including, their respective franchises, rights of action, and assets of every description, shall be deemed and taken to have vested in, and become the property of "The Old Colony and Fall River Railroad Company," on the 30th day of June last past, subject to all their respective debts and liabilities, absolute and contingent, which are to be assumed and borne by the said *Old Colony and Fall River Railroad Company*."

At the above named meeting, the organization of the new corporation was effected; the report of a committee appointed to consider what should be the amount of the capital stock of the Company was adopted, and the directors instructed to carry it into effect. This report was, that the capital stock of the Old Colony Railroad Corporation, represented by certificates which had been issued, was \$1,965,100, and that of the Fall River Railroad Company \$1,050,000, making an aggregate of \$3,015,100; and this aggregate sum, the committee were of opinion, should be the capital stock of the new Company, to be divided according to the proportions stated in the award of the Referees, viz.: in the proportion of sixteen thousand five hundred to the stockholders of the Old Colony Railroad Corporation, and ten thousand five hundred to the stockholders of the Fall River Railroad Company.

It was determined by the directors that the earnings, expenses, &c., of the new Company from July 1, 1854, should be on account of the new Company, in case the union should be consummated; and, as this was in fact done, and the new Company organized Sept. 7, 1854, the accounts of it date back to that time. The award of the Referees was made with reference to the value of the property as of that day. The entire property and rights of the two companies have become vested in the new company, and both the old corporations are now extinct. The stockholders of the Old Colony road received by virtue of the award at the union, a dividend of \$22.919 per cent. in the stock of the united companies, and the stockholders of the Fall River road a dividend of \$13.093 per cent., besides a share in the new Company for each share they respectively held in the old ones.

Dorchester and Milton Branch.

Station at station of Old Colony and Fall River Railroads, Boston.

Officers.—President—

Treasurer, Seth D. Witney, Milton.

CHARTER.

The Dorchester and Milton Branch Railroad Company incorporated by the Legislature of Massachusetts, April 16, 1846, with a capital of nine hundred shares of one hundred dollars each, was authorized to construct a railroad from the Old Colony Railroad at Neponset village in Dorchester, through Dorchester and Milton, to the Upper Mills, so called, in Dorchester or Milton. Subsequent acts passed 1848-1853, authorized the increase of capital stock; the issue of preferred stock; the lease of the franchise of the company to the Old Colony Railroad Company; the issue of notes or bonds, to be guaranteed by Old Colony Railroad Company; the mortgage of the Branch to the Old Colony Railroad Company, and to apply rents and

incomes to payment of liabilities as the company may arrange with the Old Colony Railroad Company.

CONSTRUCTION &C.

The road was ready for equipment in December, 1847. It is 3,33-100 miles in length, single track laid with rails of 52 lbs. to the yard.—The maximum grade is 36 9-10 feet per 6,000 feet; the total rise and fall is 54½ feet; shortest radius of curvature, 410 feet, length 200 feet; straight line 2,42-100 miles; length of wooden truss bridges 101 feet.

FINANCIAL CONDITION.

The road is operated, and has been, from the opening, by the Old Colony Railroad Company under a lease, for the conditions &c., of which, see Old Colony Railroad above. By report of 1853, the capital stock paid in was \$73,340; funded debt, \$39,500; floating debt, \$4,958; total funded and floating debt, 44,458; average rate of interest during the year 6 per cent. per annum.

South Shore Railroad.

Station—In Boston, at Station of Old Colony and Fall River Railroad.

Officers.—President, Alfred C. Hersey.

Treasurer, Gilman Davis, Office 27 State street, Boston.

CHARTER.

The South Shore Railroad Company, incorporated by the Legislature of Massachusetts, March 26, 1846, was authorized to construct a railroad from a point at or near the Old Colony Railroad in Quincy, through Braintree, Weymouth, Hingham, Cohasset, Scituate, and Marshfield to Duxbury. By an act passed April 20, 1847, the company were authorized to commence their road in Quincy or Braintree, and terminate the same at Cohasset.—The capital stock was limited to \$600,000 in shares of \$50 each.

CONSTRUCTION AND CHARACTERISTICS.

The construction of the South Shore Railroad was commenced November, 1847, and the road was opened for travel, though not entirely finished, January 1st, 1849. The following are the principal features of the road, as given in the report to the State for 1853:

Length of single track, 11.5 miles.

Weight of rail per yard, 52 lbs.

Maximum grade, 34 85-100 feet for 3½ miles.

Total rise and fall, 259 4-100 feet.

Shortest radius of curvature, 447½ feet for 697½ feet at junction with Old Colony Railroad.

Total degrees of curvature, 704°, 42'.

Total straight line, 7 8-10.

BUSINESS AND FINANCIAL CONDITION.

From January 1, 1849, to April 1, 1849 the road was operated by the Old Colony Railroad Company at the risk of the South Shore Railroad Company. From April 1, 1849, the road was leased to the Old Colony Railroad Company for five years i. e. until April 1, 1854, (see Old Colony Railroad above) when the lease expired and was not renewed. Since the last date the road has been operated by the company on their own account, but no report has yet been made of their doings.

By the report of 1853, the financial condition of the company was as follows: capital paid in \$259,585; funded debt, \$134,500; floating debt \$2,049 29; total funded and floating debt, \$136,549 28; average rate of interest paid during the year 6 per cent. per annum.

Memphis and Charleston Railroad.

We are enabled, says the Charleston Courier, to lay before our readers a few facts touching the present condition and prospects of this great work, in which our city is so deeply interested in every point of view. The directors of the road have had to struggle through a season of unusual difficulty and depression, and we are truly pleased that they have been able to pass through with comparative success, when almost all Southern enterprises of this kind were seriously interrupted. The stringency of the money market and the difficult of cashing even good securities without a heavy discount, have borne peculiarly hard on roads in process for the last six months, and nearly all have been forced to suspend operations.

Of the Memphis and Charleston Road, 108 miles are in operation, and 83 miles in addition completely graded, which connect Decatur with Stephenson, Ala.

The bridge at Decatur is near completion, and only awaits a favorable stage of water in the Tennessee River to procure the timber and iron needed. The track laying will then commence at each end of this section, and be carried on as speedily as possible, when there will be a continuous road of 127 miles, connecting Charleston, via the Nashville and Chattanooga Road, with the rich and populous basin of the Tennessee as far westward as Tusculumbia.

The Company have also twenty-five miles ready for the iron, which will soon be laid eastward from La Grange, to which point the track is completed. There will then be completed on this western division seventy-five miles, and on the eastern one hundred and twenty-seven on the main trunk, exclusive of a branch of thirteen miles—all of which will be in operation in time for the next season.—The iron necessary for this extent has been purchased, and much of it already delivered. A small amount of first rate securities will be negotiated to meet the cost of freight and duties; but the Company are provided with means for all other demands. After this, there will only be a gap of seventy miles in the centre, which will be filled up as fast as can be done safely and certainly, under the existing state of the money market.

The bridge over the Tennessee River at Muscle Shoals will be two thousand feet long. There are thirteen piers of immense and heavy masonry, which have been completed on a solid rock foundation. The wood work is going on, and the work will be ready to receive the iron in January.

We may, therefore, reasonably expect that by the first of October, 1855, we shall have a direct connection with Tusculumbia.

New Orleans, Jackson and Great Northern Railroad.

Our fellow-citizens will be rejoiced to learn that Col. Wm. S. Campbell, the President of the New Orleans, Jackson and Great Northern Railroad, has succeeded in selling the bonds of the company, at good rates, to the amount of £65,000 or upwards of three hundred and fifteen thousand dollars. The sum realized will be sufficient to pay up the advances made by Messrs. Jas. Robb & Co., to the road, and also perfect the road sixty-five miles beyond the point it has now reached in the State of Mississippi. In addition to this negotiation, the President has succeeded in purchasing a large quantity of iron on very liberal terms.

By this acquisition of means, a fresh impulse will be given to this great enterprise, assuring us the completion of a line of road which will secure us the ensuing year 150,000 bales of cotton, from the region of country penetrated by the road. Although the road is at this time only entering the State of Mississippi, there is not the least doubt that we shall receive over it this season full thirty thousand bales. We conversed with a gentleman yesterday from Natchez, well posted up in the business of that city, and he assured us, that the road will take from Natchez alone this season ten thousand bales. The prospects are bright and encouraging, and the prosperity of the undertaking, with the triumphant con-

summation of the hopes and expectations of its most ardent projectors, placed beyond the contingency of a doubt.

American Railroad Journal.

Saturday, December 16, 1854.

Dividends for the Current Half Year.

Only a few roads will pay dividends for the last half of the present year. One story will suffice for all, in explaining the cause. They contracted in an easier state of the money market debts, for money expended on construction, which, with the continuance of an easy money market, would have been funded without difficulty, but which must be paid from *earnings*, or carried at heavy rates of interest. The former alternative will be generally adopted; by some companies from policy; by others from necessity.

If a dividend has been earned upon the whole cost of a road, it may be proper to pay one, notwithstanding a part of this cost is in the shape of a *floating debt*, provided this can be carried at a reasonable rate. The objection to the payment of a dividend, with a floating debt, is that fluctuations in the money market which are of constant occurrence, may compel a company to carry such debt at a great sacrifice, which if chargeable to earnings, reduces in an equal degree the dividend fund; and further, that while a floating debt exists it may be difficult to ascertain what the net earnings are. The floating debt is a lurking place in which incompetency or dishonesty can hide. This is the ground of objection against the payment of a dividend with a floating debt. While such a cover exists, stockholders must, of course, feel a certain amount of uncertainty as to what the net earnings of a road are.

Giving all due weight to this view of the case, which seems to be entertained by most of our companies, and assuming that many roads will earn dividends where none will be declared, and that nothing can be urged against the integrity of the management of such roads, it is not clear to our minds that some of our companies will not err on the side of excessive caution. The living of a vast number of people are the earnings of our roads. This source of income cannot be cut off without compelling those deprived of it to make sacrifices to supply their wants, much greater, perhaps, than their proportion of the loss submitted to by the company to raise the money for a dividend. Upon such an assumption, saying nothing of the *principle* involved, it is clear that more might be saved by the payment of a dividend than by omitting one.

Again:—The *market value* of the stock of a railroad is governed more by what it annually yields, than its intrinsic value. The omission of a customary dividend always carries a stock down, while the value of the stock is really increased by the fact that earnings have been expended in *construction*. Now we know that every man owning stock in a railroad is accustomed to use it for the purpose of raising money or of sustaining his credit. The stock of a *dividend paying* road can be always so used. But the omission of a dividend may render this impossible, and a man may be deprived of means nearly equal to the amount of stock held, which may prove his ruin. All this might have been avoided by a sacrifice of a small

sum by the company, which to the individual stockholder would amount to only a few dollars.

The duty of a company in the premises depends upon the facts of each particular case. It is difficult to lay down rules of universal application, because what would be proper for one company might not for another. The credit attached to one board of directors may enable a company to command money at a low rate of interest, while another company, perhaps equally deserving, could not raise a penny. Waiving, therefore, any rule, or standard to be followed, the loss and distress occasioned by the *non-payment* of a dividend, should teach directors that degree of caution which will never suffer them to repeat their present mistake. It is not to be expected that the directors of a company should be wiser than the mass of the community, and hence the necessity of a rigid adherence to certain rules, the reason of which, in times of extraordinary confidence and buoyancy, may not be apparent. Certainly, no one could have supposed a year since, that such companies as the New York Central, and the Little Miami, with their stocks at a large premium could under any circumstances find it difficult, or impossible to raise money at the lowest usual rates. Yet the result shows that the application of the earnings of a railroad from their proper objects, under the most favorable prospects, is always attended with danger, and should never be allowed. Had the result been foreseen, neither company would have placed it out of their power to pay a dividend *in cash*. The acts of both companies were at the time generally approved, and the expenditures undertaken were altogether proper, had the money been provided before they were commenced. But had the stockholders been asked, whether they should have been carried forward at the expense of *dividends*, the answer in the negative would have been unanimous.

The result in the above cases should not be lost upon other companies. The owners of Railroad property want and need its income as it arises.—They invest in roads with this expectation, and they cannot be disappointed without suffering great loss and distress. The first and only duty of the directors is to carry out the *intentions* and *expectations* of the stockholders. Having placed it out of their power to do so without great loss, or the violation of a fundamental principle in railroad economy, a company should, of course, take the *less* of two evils; but they should never again allow themselves to be placed in a position where the wants and necessities of stockholders have to be sacrificed to principle or a higher necessity.—There is one class of persons interested in railway property, who have no right to complain—the bondholders. The omission of dividends must add very largely to their security, and shows that their advantage is preferred to that of all others.

Interest on Railroad Bonds.

Notwithstanding the small prospect for dividends for the first proximo railroad companies are unusually prompt in providing the means to meet the interest on their Bonds. We learn that Messrs. Winslow, Lanier & Co., the great house in this city for the payment of interest on railroad securities, and who will pay some \$700,000 on coupons alone, on the 1st of January, have already been placed in funds by a number of companies, and at

a much earlier date than usual. We should not have spoken of this fact in ordinary times; but when so many believe that the bottom has dropped out of every thing, it may be well to know that our railroad companies are still "right side up." We believe we hazard nothing in saying that a steady improvement is going on, both in the means of our people, and in public confidence. After the commencement of the new year, we expect to see a very different aspect of affairs.

The New York and Erie Loan.

Sufficient progress has been made in the negotiation of the new loan of this Co., to leave no doubt that the whole will be seasonably taken; or so much as is necessary to relieve the immediate wants of the company. Responsible names are already down for over \$2,000,000,—with a large force still in reserve. Among the heavy takers are Messrs. Winslow, Lanier & Co., who take \$100,000. As the operations of this firm have been in a different direction, and as they have never had any complication with the Erie Road, and as their means and credit would be unaffected, except in common with every citizen, by its success or failure, the large sum taken by them can be regarded in no other light than as a testimonial to the real merits of the work, of their approval of the policy of the company, and the management of the road. As such, it possesses a value to the Co. far greater than the pecuniary aid they render, large as it is.

The company are also greatly indebted to Mr. Moran, one of the new directors, not only for his efforts in securing the adoption of a policy which has restored the Co. to confidence and credit; but in the negotiation of the new loan, of which he is a large taker. We have but few men among us who could have effected what he has accomplished. After all the vicissitudes which this Co. has undergone, we should like to know one which stands stronger in public confidence.

Engineering Lithography.

Attention is invited to the card of Mr. G. WEISENBORN, in another column. The specimens of his work which have come under our notice are superior, both in style and execution.

Wabash and Erie Canal.

The Wabash and Erie Canal extends from Toledo, at the West end of Lake Erie, to Evansville on the Ohio river, a distance of 464 miles, and is probably the longest canal in the world. Originally, as its name imports it was designed only to connect the navigable waters of the Wabash river with Lake Erie. The marked depression in the summit ridge or table land dividing the St. Lawrence and Mississippi waters, found at the confluence the St. Joseph's and St. Mary's rivers, where the City of Fort Wayne now stands, suggested the idea, even as early as the days of the Pioneers, of a Canal to connect these waters. From the first discovery of the country by the French, this route had formed a water communication for the traders in their progress, between Detroit and Vincennes, with a portage of only 8 miles.

Through the efforts of the delegation from Indiana mainly, Congress passed an act, which was approved on the 2d of March, 1827, granting to that State one half of five miles in width of the public lands on each side of the proposed Canal, from the Lake to the terminus on the Wabash river. This, on the first survey, was fixed at the

mouth of the Tippecanoe river, a distance from the Maumee Bay of 213 miles.

This munificent grant of the public domain was the first of any magnitude, made for the promotion of public works, and may therefore be viewed as initiatory to the policy afterwards so extensively pursued, of granting alternate sections for these objects; and in the benefits of which many States have so largely shared.

This grant having been made, by the terms of the Act, to the State of Indiana, while 84 miles of the route were within the limits of Ohio, the question of separate State sovereignty was at once brought up in a practical shape,—Ohio refusing, of course, to permit another state to cut her soil, or to exercise jurisdiction in any shape within her borders. Commissioners were appointed by both States with plenipotentiary powers, and by them a compact was arranged, which was duly ratified after one or two years' delay—Indiana agreeing to surrender to Ohio the land, and Ohio stipulating that she would construct the canal, and guarantee its use to the citizens of Indiana upon the same terms as to her own citizens. From this period the canal, though one entire work, as respects all its commercial interests and aspects, became separate into two divisions, as regards its finances, construction, and management. It is to the Indiana Division, that the following historical description refers.

The portion of this grant falling to Indiana east of the Tippecanoe amounted to near 4,000,000 of acres.

The construction of the canal from the East line of Indiana to the mouth of the Tippecanoe was undertaken as a State enterprise and placed under the management of a Board of Canal Commissioners. At the time of letting the first contracts, David Burr, Samuel Lewis, and J. Vigus, composed this Board. The excavation was commenced at Fort Wayne, on the 1st of March, 1832. Joseph Ridgeway, Jr., an Engineer from Ohio, had been employed in 1830, to locate and prepare for contract the middle Division of 32 miles, and upon his resignation in 1832, Jesse L. Williams was appointed Chief Engineer of the entire work, which situation he has continued to fill to the present time, with the exception of five years from 1842 to 1847. The middle Division 32 miles in length was finished, and the first boat passed through on the 4th of July, 1835; and it will illustrate the prudence and rigid economy of the times, to state that this Division, with the usual proportion of lockage, and an important dam, cost but \$7,177 per mile, though built in the wilderness.

The first Board of Fund Commissioners was composed of Jeremiah Sullivan, Nicholas McCarty, and William C. Linton; and it was through this Board, in 1832, that the State of Indiana first presented her securities in financial circles abroad, for the purpose of obtaining a loan. The caution of that early period, and the fear of foreign indebtedness which then governed her councils, are exemplified by the fact that the first loan was limited to two hundred thousand dollars. For the payment of this, the lands granted by the General Government were pledged in addition to the faith of the State—a pledge which the State, to her credit, has sacredly maintained, and provided for, in the subsequent adjustment of her State debt in 1847. The first loan, one hundred thousand

dollars, in six per cent. stock, was taken by the House of J. D. Beers & Co., of New York, at a premium of 13¼ per cent.

In 1836, the State embarked in her general system of internal improvements, embracing Canals, Railroads, and over 1,300 miles of Turnpike roads and, in this general system, the Wabash and Erie Canal was merged.* It was also by the same law extended down the Wabash to Terre Haute, and thence across the country, by a different name, to the Ohio at Evansville. The "day of small things" had passed.

The State, having by the act of 1836, decided to extend the Canal to Terre Haute, nearly 100 miles further down the Wabash, became entitled to a corresponding extension of the grant of land, under the act of 1827. This construction of the act, though not in the view of the Legislature when the extension was authorized, nor until it was partly constructed, was at length suggested and matured; and after some delay was fully sustained as the sound, legal construction, by the Attorney-General of the United States, Benjamin F. Butler, Esq., and carried out by Congress. By this fortunate, though late discovery of her rights, nearly 300,000 acres of land, worth one million dollars, were added to the canal fund of the State.

At a subsequent period, while the public works of the State were in a condition of almost hopeless suspension, Congress was induced, upon the application of the State, through her members in that body, ably seconded by enterprising citizens of the south-western portion of the State, to grant, for the completion of the Southern Division of the Canal, one-half of all the lands remaining unsold in the Vincennes District. Upon the selection of these lands, this grant was found to amount to 793,583 acres.

The several donations of land, amounting in all to about one and a half millions of acres, between the State line and the Ohio River, have formed the basis of the fund for the construction of the Canal.

But with the financial crisis of 1840 came the prostration of State credit and the total suspension of all her public works. For six years, the interest on her State debt had remained unpaid. The Wabash and Erie Canal was then finished, and navigable to Lafayette. This, with its tolls and lands, was found to be the only sound plank in the wreck. With this as a basis upon which to build, the resuscitation of the State's credit was, after some years of depression, conceived of by enlightened and patriotic men as a thing possible. During the session of 1845-6, Charles Butler, Esq., as the agent of the State's creditors, submitted to the Legislature a plan for arranging the funded debt of the State, and the completion of the Wabash and Erie Canal to the Ohio River.

The entire indebtedness of the State, besides the Bank loans, including interest to 1st January, 1847, was over fifteen millions. Under its magnitude, which was increasing at the rate of some

*It is quite worthy of remark here that this extensive system of public works, though far too large for that period, has since been completed with some changes, by individual enterprise—For one Turnpike, the New Albany and Salem Railroad has been substituted. The Peru and Indianapolis Railroad takes the place of one of the canals, and the Fort Wayne and Chicago Road is in progress, in lieu of another canal.

\$800,000 a year, by unpaid interest, the people had become dispirited. Considering the then depressed condition of every branch of private business, the individual indebtedness, and the limited population at that period, the failure of the State to meet her annual interest, must be viewed as a necessity of the times. It is scarcely too strong a view of the case to say that the State was literally unable to pay the interest in full by taxation, without imposing burthens upon the people really oppressive.

With the accumulating weight of the debt, it is scarcely possible that the payment of the entire amount would ever have been attempted, but for this arrangement. Even by this time a new generation would have been pressing close upon the heels of the one which had contracted the debt, and the moral obligation, by the lapse of time, and the long acquiescence in default, would have grown less and less.

Under these circumstances, the suggestion providing for one half the debt by a pledge of the lands and prospective revenues of the Canal, was hailed as a measure of relief. It was as a light springing up where before all had been enveloped in darkness. It seemed to bring the debt into a manageable shape. From that period, hope took the place of despair, and the citizens of the State were inspired with new courage in the prospect of seeing her relieved from pecuniary discredit, and her creditors in the receipt of what was justly their due. The adjustment of the State debt, and the redemption of public credit became the leading topic, and, at the session of 1846-7, the measure was finally consummated by the passage, in a form acceptable to the State's creditors, of the "act to provide for the funded debt of the State of Indiana, and for the completion of the Wabash and Erie Canal to Evansville."

Perhaps no measure of Legislation ever elicited more general interest, nor has there been any in the history of Indiana fraught with results more beneficent upon the general interests of the State. Two leading objects seem to have induced its enactment, both worthy of the zeal and ambition of an independent State—first, the payment of her entire indebtedness, principal and interest, justly and equitably; and second, the completion of the Canal to the Ohio River.

The high ends and aims of this state debt act, and its general spirit and intention, are so well set forth in the Preamble, that it may be well to transcribe it as follows:

"Whereas, honour and justice alike require that such equitable provision should be speedily made for the discharge of the pecuniary obligations of the state as shall be just and acceptable to its creditors, honourable to the people of Indiana, and, at the same time, within the ability of the state, without further involving the people in a general debt: And whereas, an arrangement, based upon a moderate taxation, and the completion of the Wabash and Erie Canal to Evansville, it is believed, will secure the objects aforesaid:—And whereas, in order to insure so desirable a result, a large portion of our bondholders have manifested a willingness to aid in the completion of said canal, within the ensuing four years, to the Ohio river: And whereas, this proposition embraces, as a general arrangement, the payment, by taxation, of two and a half per cent. on the unprovided public debt of the state, and a reliance for the remaining two and a half per cent., on the lands, tolls and water rents of said Wabash and Erie Canal, (after paying expenses of construction

and repair,) thereby greatly relieving the people of Indiana from burthensome taxation, and virtually discharging them from any liability for the said remaining interest, and looking alone to said canal, its tolls and other revenues, for half the interest on said entire public debt: And whereas, there is reason to believe that the plan embraced in the following provisions is entirely within the means of the state successfully to accomplish—that it will be acceptable to our creditors—honourable to the people represented by this general assembly, and will add to the wealth, prosperity and advancement of Indiana: therefore, &c."

In a supplemental act, without affecting the principle, it was provided that for one half the debt a five per cent. state stock should be issued payable out of the State revenues, and for the other half a five per cent. Canal stock should be issued payable only out of the Canal revenues.

It was a part of the arrangement that \$800,000 should be advanced towards the completion of the Canal, the bondholders subscribing to this advance, thereby securing to themselves certain advantages by way of preference.

The whole arrangement of this State debt seems to have been proposed and consummated upon principles of mutual accommodation and justice—the State agreeing to recognise the entire debt, including arrears of interest, and also the disputed bonds amounting to nearly \$4,000,000, which had been lost to the State by the failure of the Morris Canal and Banking Company, to pay by direct taxation as large a proportion thereof as the circumstances of her citizens at the time would warrant; and for the remainder, to set apart, no doubt in good faith, her only available public work, with its lands and tolls; while on the part of her creditors, though unpaid of their promised interest for six years preceding, it was agreed to undertake the completion of the canal, at a cost of over two millions, and to await the future revenues of the work for one half the State's indebtedness; yielding up therefor the bonds of the State bearing upon their face her pledged faith.*

So far as the State is concerned, the working of the arrangement has proved most beneficial. It has placed her credit upon a firm basis, and brought into her territory a vast increase of wealth. Not only are the burdens of taxation for State purposes diminishing, but her finances have begun to figure out the period, not very remote, when, with the steady workings of a small sinking fund, the entire half of the original State debt assumed by her may be paid off.

How far the other half of the debt resting upon the canal may be provided for, remains as yet uncertain. The Southern Division of the canal has but recently been finished, and during its progress the net tolls of the finished part, as well as proceeds of lands, were specifically devoted to that object. Much will depend upon the protection which the canal and the general interests of the rust shall receive at the hands of the State, and the bearing of her Legislation upon it.

The State did not guarantee the sufficiency of

*It will be observed that it was only in trust for a specified object not in fee simple, that the canal and lands were conveyed, the State reserving the right to terminate the trust and resume the control of the work by satisfying the debt, and also retaining under the trust, for the protection of her residuary interest, a share in its management.

the canal revenue to discharge the one half of the original debt. And yet it is plain that she might so act, in the exercise of her sovereignty, as to incur a moral and equitable obligation to make it good—the only obligation, after all, by which sovereign States are governed. Should there be any material failure, it will have resulted mainly, no doubt, from the construction of parallel and contiguous railroads—a species of competition not in the view of either contracting party in 1846, and which has been invited by the Legislation of the State. Without knowing the state of the case—whether such roads will be completed, or what may be their effect, it will readily be perceived that a grave question may arise here. The State creditors sought not the possession of this canal as a voluntary investment of capital. It was the result of the State's necessities. The State, in offering the canal as an equivalent for half the debt, and her creditors in accepting it, had reference, not to its banks, its waters, or its locks but to the tolls to be derived from its trade; and if this trade be diverted, the character and value of the equivalent becomes wholly changed—the consideration has failed. And if this diversion shall have taken place, through the act or permission of the State, a new aspect is given to the case.

The physical characteristics of that portion of the canal lying within the State of Indiana may be briefly stated as follows:

Length from State Line to Evansville... 880 miles.
Total cost of construction (about).... \$6,500,000
Total Lockage..... 549 ft.
Height of summit level at Ft. Wayne (water surface) above Lake Erie..... 185 ft.
Whole number of Locks..... 73
" " Aqueducts..... 19
" " Culverts..... 239
" " Dams..... 16
" " Road Bridges..... 190
Size of Lock Chambers..... 90 by 15 ft.
Minimum size of Canal
from Fort Wayne to
Evansville..... 40 ft. wide and 4 ft. deep.
From Ft. Wayne to State
Line..... 60 ft. wide and 5 ft. deep.*

The tonnage of the canal in Indiana for 1853 amounted to 210,000 tons. The largest agricultural export is corn, of which the shipment in 1854, from the Wabash Valley, has reached 3,400,000 bushels.

Under the State Debt Act, the canal with its lands, and all its varied interests, was placed for the purposes therein specified under the management of three Trustees, two to be chosen by the subscribing bondholders, and one by the State Legislature. The Trustees are, on the part of the bondholders:

CHARLES BUTLER,
THOS. DOWLING.*

On the part of the State: BENJ. R. EDMONSTON.
Chief Engineer: JESSE L. WILLIAMS.

Resident Engin'r in charge
of Southern Division: WILLIAM J. BALL.

The following statement exhibits the amount and character of the stocks issued, and for which the Wabash and Erie Canal, its lands and revenues were pledged by the State; and also the amount

* The Ohio Division has a minimum capacity of 50 ft. width and 5 ft. depth from the State Line to its junction with the Miami Canal, and thence to Toledo 60 feet width and 5 feet depth. Lockage on Ohio Division 164½ feet, making a total Lockage between Toledo and Evansville of 713½ ft. averaging 1.54 ft. per mile.

and character of stocks liable to be issued in surrender of the Bonds of the States of Indiana outstanding.

Preferred Canal Debt, 1st January 1853.

The following statements exhibit the entire Preferred Canal Debt:

1st. The advance by subscribing bondholders, 6 per cent. Loan..... \$815,900 00
2d. Preferred Canal Stocks issued to subscribing bondholders on account of Principal and Interest, viz:

Preferred for Principal on account of Internal Improvement Bonds.....	3,659,500 00
Preferred for Principal on account of Original Wabash and Erie Canal Bonds.....	420,000 00
Special Preferred for Interest, 1841 to 1847, on Internal Improvement Bonds... \$1,090,437 50	
Do. 1847 to 1853. 1,097,850 00	
	2,188,287 50
Special Preferred for Inter'st, 1841 to 1847, on Original Wabash and Erie Canal Bonds.....	\$125,075 00
Do. 1847 to 1853. 126,000 00	
	251,075 00

Total issue of Preferred Canal Stocks to subscribing bondholders, drawing interest 5 per cent. from 1st January, 1853, \$6,518,862 50, and with loan making..... 7,334,762 50

3d. If to this be added the Certificates issued for Original Wabash and Erie Canal Bonds, which were surrendered but not subscribed on, the following is the result:

Deferred Certificates issued for Principal..... \$271,000 00

Special Deferred Certificates, issued for Interest, 1841 to 1847..... \$81,295
Do. 1847 to 1853..... 77,400

159,325 00
430,325 00

Making an aggregate of.... \$7,765,087 50
from which is to be deducted 20 per cent. of the Principal of the 6 per cent. loan, paid off on 1st November, 1854..... 163,180 00

Leaving..... \$7,601,907 50
Deferred Canal Stocks issued to Bondholders, who did not subscribe to the \$800,000 loan. Principal and Interest..... 1,131,000 00

Total stocks issued..... \$8,732,907 50
Bonds outstanding, with interest to 1st January, 1853; viz:
Internal Improvement. \$608,000
Interest, 12 y'rs, 60 per cent..... 364,800

\$972,800 ½ = 486,400 00
Original W. & E. Canal 184,000
Interest..... 110,400

\$294,400 ½ = 147,200 00

Aggregate..... \$9,366,497 50

The report of the State Treasurer for the pre-

The road is in good running order. The rolling

A series of trial trips were made on the Philadelphia and Baltimore road, between Gray's Fer-

ry and the Susquehanna River,—and in making the round trip to the Susquehanna and back to Gray's Ferry, 125 miles, only consumed 4000 lbs. of coal.

Journal of Railroad Law. CONNECTING RAILROADS.

The termini of railroad lines are matters of public notoriety. Hence, in constructing the contracts which are made with these companies for the transportation of goods, they will be considered as contracting with reference to their established termini, and not otherwise. In the case of *Nutting vs. the Connecticut Railroad Company*, defendants were sued in the Supreme Court of Massachusetts as common carriers for two boxes contained in the following receipt.

Northampton, Mass., February 28, 1851.

Received of E. Nutting for transportation to New York, nine boxes planes marked R. & F., 21 Platt street, New York. Four boxes planes and handles marked G. F. Hewlet, 146 Bowery, New York, Fred. W. Clark, Agent." The defendants were common carriers to Springfield, Massachusetts. The thirteen boxes were carried to Springfield, and were safely delivered to the next company, whose line communicated with New York, and two of them was lost afterwards. The defendants received pay only for transportation over their own line. It was held by Judge Metcalf, that the defendants' obligation was to carry the boxes to Springfield, and there safely deliver them to be forwarded; and that the law would not hold them responsible for the failure of another Railroad company, unless by special contract; and the Court did not consider the above receipt as a special contract to carry the goods beyond Springfield. Judgment was accordingly rendered for defendants.

WHAT CONSTITUTES DELIVERY OF GOODS?

This was the inquiry in the late case of *Clark and others vs. Crawford and others*, decided in the Supreme Court of Illinois. The plaintiff claimed the value of a cargo of iron, which the defendants had agreed to transport from Pittsburgh to Chicago, and which was not received by the owners. It was proved, however, upon the trial that the iron was placed upon a wharf at Chicago, and that the consignees were duly notified of its arrival. It was held by the court that this was not sufficient, but that carriers must also see that the goods have been landed and taken away by some duly authorized party, and must, when the goods are not after due notice removed, have them properly warehoused. The foregoing decision is a peculiarly stringent one. In *Price vs. Powell*, the New York Court of Appeals, held two years ago, that a delivery of goods upon the wharf at the place to which they are consigned, does not discharge the carrier, unless notice be given to the consignee, and that after notice to the consignee the carrier remains liable until the consignee has had a reasonable time to remove the goods.

Should it prove to be impracticable to warehouse goods as may often be the case, especially if they are very bulky, the law would doubtless, in the spirit of this decision, exonerate the carrier from all further liability, when after due notice the consignee of the goods should neglect to remove them from a wharf, upon which, in the due course of business the carrier had deposited them.

In the case of *Gibson vs. Culner* 17 Wendell 305

the duties of the common carrier in regard to delivering goods was the subject of thorough discussion. It was in that case held to be the settled rule that actual delivery of the goods to the consignee was necessary in order to discharge the carrier, unless it was the course of the business to leave the goods at specified places, and then notice of the arrival and place of deposit comes in place of actual delivery.

It was held, however, that a notorious and uniform usage presumed to be known to the consignee of goods may dispense with the necessity of notice of the arrival of goods.

In Massachusetts, it was held in the case of *Chickering vs. Fowler* 4 Pickering Reports 37½ that in the absence of any special custom, a delivery at the wharf, which is the usual place of delivery, with notice to the consignee, is a delivery to the consignee.

A like rule has been laid down in Pennsylvania in *Cope vs. Cordova* 1 Rawles' Reports 203.

So in Louisiana it was held that notice of the arrival of goods must be brought home to the consignee.

And in Vermont, where a person undertook to carry boxes of lumber down the river to a certain cove, and being refused a place of deposit, there deposited them near by in as safe a place as he could find, and they afterwards floated away and were lost, he was held responsible because he did not continue to take care of the goods until the owner had been duly satisfied of their situation and had a reasonable time to remove them.

New London, Willimantic and Palmer Railroad.

The business of the New London, Willimantic and Palmer Railroad for the year ending Oct. 31, 1854, was as follows:

EARNINGS.	
From passengers.....	\$63,116 58
From freight.....	63,696 48
From mails, express, rents, and all other sources.....	10,247 09
Total.....	\$137,060 15

EXPENSES.	
For repairs of roads, bridges, &c....	\$11,539 78
For repairs of engines and cars.....	9,288 78
For salaries and wages.....	28,341 31
For fuel and oil.....	12,695 71
For losses and damages.....	481 89
For miscellaneous.....	3,008 28

Paid interest on Railroad Bonds, New London City Bonds, and floating debt.....	67,936 46
Total.....	\$133,343 16

The following is a comparative statement of the earnings and expenditures for three years past:

	Earnings.	Expenditures.
1851.....	\$114,410 78	\$123,268 32
1852.....	128,715 93	136,432 17
1853.....	137,060 15	133,343 16

The following is a general statement of the condition of the company on the 31st of October.

ASSETS.	
Construction account.....	\$1,527,827 65
Unpaid stock subscriptions.....	34,016 78
Sundry accounts.....	4,138 51
Norwich Junction track.....	5,443 33
Cash.....	3,019 66
Total.....	\$1,574,445 94

LIABILITIES.	
Capital stock.....	\$608,600 00
Interest scrip, and installments on stock.....	50,457 57
7 per cent. First Mortgage Bonds..	500,000 00
6 per cent. Second Mortgage Bonds	500,000 00
6 per cent. Income Bonds.....	65,000 00
6 per cent. New London Society Bonds.....	100,000 90
Sundry accounts.....	10,165 17
Bills payable.....	32,681 61
Receipts and expenditures.....	7,551 58

Total.....\$1,574 445 93

Henderson and Nashville Railroad.

At a meeting of the board of directors of the Henderson and Nashville Railroad Company held in Madisonville, on the 9th inst., it was deemed expedient by the board that a publication be made, acquainting the public, and particularly the stockholders, with the fact of important negotiations having been recently made in London, during a recent visit made by the Chief Engineer, Mr. Seymour, and myself, which it is hoped will be gratifying to the friends of the road.

A contract was made for six thousand tons of iron, (enough to lay a track of sixty miles,) for which we agree to pay ¾c in bonds of the company at par, (being 30 year 7 per cent. bonds,) and the remaining ¼c in cash, which may be regarded highly favorable, and showing that it is a project in which the English people have much confidence.

The delivery of the iron will commence during the month of February or March, and will be delivered in quantities as may be required, and as the grade of the road is completed, and made ready for its reception, until the whole be delivered.

We also arranged for a portion of cash, which will be held subject to my order during the next month, which will enable us (together with anticipated payments made by the stockholders,) to commence the work again in December; and we confidently expect and hope from that time the work will progress uninterruptedly.

E. G. SEBREE, Pres't.

H. & N. R. R. CO.

Nov. 15th, 1854.

Superior American Clocks.

The fame of American common clocks is world-wide, as they chime the hours to the Englishman on the banks of the Thames, and the Chinaman on the shores of the Yellow Sea. This has been so nearly a quarter of a century, because New England could make neater and cheaper clocks than all the world beside. Foreign clock makers, however, comforted themselves with the idea that however cheap we could make clocks, we were unable to make those of the first quality—accurate time keepers—and in this opinion they were rooted and grounded because we had to send to England for turret and other clocks of the highest character and best quality. But there is no necessity for doing this any longer, because as good clocks for keeping accurate time in church, hall, office, and mansion, are now manufactured by Messrs. Sherry & Byram, Sag Harbor, L. I., as can be obtained any where, either in England, Germany, Switzerland, or France.

We have used one of their clocks in our office during the past year, and can speak understandingly of its operative qualities. It is made with an improved compensating pendulum, and is a most accurate time-keeper. Messrs. Sherry & Byram have provided turret clocks for a number of churches, in various parts of our country, all of which, we understand, have given entire satisfaction. It always affords us pleasure to hear and know of improvements made in the mechanic arts by any of our countrymen.

It gives us pleasure to endorse the above from the *Scientific American*. We have had one of Messrs. SHERRY & BYRAM's clocks in this office during the last year and have found it an unerring

time-keeper, totally unaffected, so far as we have been able to observe, by changes in the weather. The compensating pendulum seems to have overcome all the usual variations to which timepieces have been subject in alterations from wet to dry, and heat to cold.

It seems to us, of the utmost importance that Railroad Companies should be supplied at their principal stations with accurate time-keepers; and we know of none we can recommend with confidence, in that respect but those of Messrs. **SHERREY & BYRAM**, Sag Harbor, L. I. Railroad men or others, in want of clocks, can inspect the one in this office whenever they choose to give us a call for that purpose.

Georgia Central Railroad--Dividend.

The Board of Directors for this company met at Savannah, on the 5th inst., and state that in consequence of the monied embarrassment now existing, instead of declaring a cash dividend for the past year, it is expedient to declare one of ten dollars per share on the General Stock, payable in hundred dollar shares of the company; and that the holders of Guaranteed Stock be paid their semi-annual dividend of four dollars per share; unless they shall choose to merge their stock into the general concern, when they should receive the usual dividend in stock. When fractional parts of shares are issued, certificates are to be issued to the holders, who will have the privilege of paying the difference before the first of June next, so as to make the shares complete.

The Directors state that the net annual earnings of the company are now over half a million on a stock of three millions and a half—over *fourteen per cent.* The Board have been in the habit of spending the surplus of the earnings on the road and to the payment of Bonds; and consequently they find themselves unable to pay cash dividends at present, unless at enormous sacrifices.

Fox River Valley Railroad.

Track-layers are now busy putting down the iron on the Fox River Valley Railroad.—The work has been very much retarded by the failures to get the iron which was bought early in the Spring. A sufficient amount, however, has been received, and is on the way from New York to this city, to finish the road to the Wisconsin line. About three miles of track are laid North of Elgin, and it is expected to reach Dundee next week; Algonquin about the 30th; Crystal Lake by the 10th of December, and McHenry by the 1st of January.

The people of the Fox River Valley are much in need of additional facilities for marketing of their large crops and obtaining their supplies.—The Galena Railroad does not afford accommodation for the business West of the Fox River, in its main line; so rapidly has it grown beyond the calculations of the directors of that corporation.—*Chicago Tribune.*

Hannibal and St. Joseph Railroad.

At the meeting of the Stockholders in the Hannibal and St. Joseph Railroad Company, the following gentlemen were elected Directors for the ensuing year, viz:

R. M. Stewart, of St. Joseph, Missouri; John Corby, of St. Joseph, Missouri; Z. G. Draper, of Hannibal, Missouri; Joshua Gentry, of Marion City, Missouri; R. B. Forbes, of Boston, Massachusetts; John E. Thayer, of Boston, Massachusetts; H. H. Hunnewell, of Boston, Massachusetts; Thomas B. Curtis, of Boston, Massachusetts; John M. Forbes, of Boston, Massachusetts.

New York and Erie Railroad.

We have little doubt that the new loan of this company will be taken. It is safe beyond cavil. The recent action of the Company must commend itself to all, and secure confidence in the disposition of the company to maintain inviolate the rights of their creditors. Such being the fact, the holders of the various other classes of bonds will, we are confident, lend a helping hand to relieve the company of an incubus, which weighs so heavily upon the market value of the securities they hold.

Nothing would help the market so much as the prompt payment of the Erie Income bonds due in February next. It would restore this company to its former place in the public confidence, and give to it its ancient *prestige*. Did reputation always correspond to real worth, we are confident the stocks and securities of this company would now stand better than at any prior time. If the Erie Company can successfully lead off in the present crisis, a restored confidence will immediately come to the aid of others, and we shall soon see a different state of affairs.

Tunnel under the Ohio River.

The *Louisville Journal* has an article upon the prospects and feasibility of the construction of a tunnel under the Ohio River at Louisville, Kentucky, and Jeffersonville, Indiana. A charter for this work was granted by the Kentucky Legislature, March 6, 1854; and the right of way given by the city of Louisville, and the work forever exempted from taxation for city purposes, on the 27th day of May, 1854. The Fort Wayne and Southern Railroad Company have accepted the charter and the release of the right of way; and propose making up the stock, and if possible to put the work under contract this fall or early in the spring. The tunnel will be a double track, adapted to the use of all the roads for the different gauges. It will be 28 feet wide in the clear, and 17 feet high, perpendicularly, from the centre of each track. The arching will be sixty feet less than two miles in length. The descending grades into the tunnel, at either end, will be only eighty feet per mile on a straight line. From the head of the grade on one side to the head of the grade on the opposite side of the river, will be two miles and a half. The tunnel will be constructed in the river by excavating a channel or pit in the rock and arching over with the material excavated—millstone rock of the best quality. The work has been surveyed, and the cost estimated at \$1,200,000. It is proposed to raise this sum by a subscription, no part of which is made payable until the whole sum is subscribed. Whenever all the stock is taken, then it becomes payable in four equal semi-annual instalments.

Lithography.

G. WEISSENBORN, Civil Engineer and draughtsman 113 Fulton St. up stairs; also gives his attention to the engraving of maps, and machinery on stone. Locomotives are neatly lithographed at this establishment on the most reasonable terms.—Orders are solicited. 50 tf

Railroad Iron.

500 TONS No. 1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

99 and 101 John St. 32 tf

Railroad Iron.

THE Undersigned, having made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton Works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchants Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWETT

February 15, 1855.

17 Burling Slip, New York.

Ontario, Simcoe & Huron R.R.

CANADA.

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 86 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day.—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kakolah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS.

—In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

CHAMPLAIN CANAL.

Sealed proposals will be received at the Canal Commissioner's Office, in the city of Albany, until the 20th day of December, 1854, at 9 o'clock A.M., for the following described work, to wit:—

Description of the work.	Penalty in bond.	When to be completed.
Three combined locks, towing path bridge and necessary section work to bring the same into use, located at Waterford.....	\$18,000..	April 1st, 1856.

ENLARGEMENT OF THE ERIE CANAL—

MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse, until the 21st day of December next, at 9 o'clock in the forenoon, for the following described work, to wit:—

Description of work.	Amount of penalty in bond.	Time of completion.
Section 157.....	\$1,200..	April 1st, 1855.
" 189.....	2,300..	" " 1857.
" 190.....	4,000..	" " "
" 191.....	4,700..	" " "
" 192.....	7,200..	" " "
" 193.....	8,600..	" " "
" 194.....	8,700..	" " "
Culverts on sections No. 189 to 197, inclusive...	2,800..	" " "
Road and farm bridge abutments on sections No. 189 to 193, inclusive.....	3,100..	" " "
Road and farm bridge abutments on sections No. 194 to 197, inclusive.....	2,800..	" " "
Putnam Brook waste weir on section No. 192.....	900..	" " "

ENLARGEMENT OF THE OSWEGO CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Fulton, until the 22d day of December next at 9 o'clock in the forenoon, for the following described work, to wit:—

Section	Work	Amount	Time
5	Liverpool Level	\$9,000..	April 15, 1857.
6	"	6,000..	" " "
7 & 8	"	8,000..	" " "
18	"	8,000..	" " "
19	Phoenix Level	7,000..	" " "
20	"	7,000..	" " "
21	"	6,000..	" " "
Culverts on sections 5 & 6		2,500..	" " "
" " " 18, 19,			
and 21.....		2,500..	" " "
Bridge at Phoenix.....		600..	July 1st, 1855.
Lengthening guard lock 2.		400..	April 15, "
Bridge at Oswego		1,000..	" " "

For Sale.

A STATIONARY Engine having cylinders 13 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
jul.14 29 tf.] or 74 Broadway, New York.

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and PASSENGER LOCOMOTIVES of different classes, with the most modern improvements,—

also MACHINISTS' TOOLS,

especially adapted to Railroad Repair Shops, and to the construction of machinery generally. These Tools are of the most approved construction and consist in part of Engine Lathes, Hand Lathes, Vertical Drilling Lathes, and Planers of various sizes and lengths, Compound Planers, Shaping Machines, Slotting Machines, Bolt and Nut Machines, Gear Cutting Engines, Chucks, Compound Slide Rests, Machines for boring Crank Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c. COTTON MACHINERY of all descriptions, BOILERS, SHAFTING and MILL WORK, CASTINGS, and all work usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Sup't, Lowell, Mass.
J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

**Boiler and Tank Rivets,
Nuts and Washers;**

All Sizes of
Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
164 Courtland st., N. Y.

NEW YORK AND ERIE RAILROAD LOAN. —The Committee appointed to report in regard to the financial affairs of the New York and Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed proposals, to be opened on the 10th of January next, for the purchase of \$4,000,000 7 per cent. Bonds, redeemable in twenty years, with interest, coupons payable 1st February and 1st August.

And that for the purpose of gradually reducing the debt of the Company, the New York and Erie Railroad Company pledge themselves in said Bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of Trustees, to be by them invested, as well as the accruing interest on the investments, in the Bonds of the New York and Erie Railroad Company of the new issue, as long as they can be purchased at or under par. And that whenever the said Bonds of the new issue cannot be purchased at or under par, then the said Trustees to invest the said monthly payments and the accruing interest in any Bonds of the New York and Erie Railroad Company which can be purchased at or under par.

And whenever it shall be impossible to purchase any of the Bonds of the New York and Erie Railroad Company at or under par, then the said Trustees shall invest the said monthly payments and all accruing interest in such Bonds of the New York and Erie Railroad Company as can be purchased at the lowest rate.

And all Bonds on being purchased by said Trustees shall be canceled by writing or printing on the face "Held by the Sinking Fund of the New York and Erie Railroad Company," but that the interest warrants on said cancelled Bonds shall be collected by said Trustees, as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest or the conversion of convertible Bonds into Stock of this Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in said Trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to the Company.

And the Committee would further recommend that the Board of Directors adopt the following resolutions:

Whereas, The period has arrived when it is expedient and necessary to close the construction account of this Company, to be reopened only when the imperative necessity of the increasing traffic on the road, and the state of the finances

of the Company will render it perfectly evident that it is proper and justifiable to reopen it, so as to increase the present capacity of the Road.— Therefore

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after reimbursing the Income Bonds due 1st February next, be charged to transportation expenses.

Resolved, That as often as the Bonds purchased by the Sinking Fund amount to 10 per cent. on the Capital Stock, this Company will, upon receiving due authority from the Legislature of this State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in the daily papers, so that the public have cognizance of the future policy of the Company.

(Signed.)

CHARLES MORAN.
SHEPHERD KNAPP.
WILLIAM E. DODGE.
NELSON ROBINSON.
GEORGE F. TALMAN.

Special
Finance
Committee.

NEW YORK, Oct., 21, 1854.

Sealed proposals will be received at the office of the NEW YORK AND ERIE RAILROAD COMPANY in the City of New York, until the 10th of January, 1855, for the purchase of \$4,000,000 of the bonds of the Company, bearing 7 per cent. interest payable semi-annually on the 1st day of February and August, redeemable in twenty years.

The NEW YORK AND ERIE RAILROAD COMPANY pledge themselves in said bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And whenever it shall be impossible to purchase any of the bonds of the NEW YORK AND ERIE RAILROAD COMPANY at or under par, then the said trustees shall invest the said monthly payments and the accruing interest, in such bonds of the NEW YORK AND ERIE RAILROAD COMPANY as can be purchased at the lowest rates. And all bonds when purchased by the said trustees shall be cancelled by writing or printing on their face: "Held by the Sinking Fund of the NEW YORK AND ERIE RAILROAD COMPANY;" but the coupons on such cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the NEW YORK AND ERIE RAILROAD COMPANY, and the accruing interests, or the conversion of convertible bonds into stock of the Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in such Trustees be closed, and all cancelled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay 10 per cent. in cash on the notice of the acceptance of their bids; 20 per cent. on the 20th of January; 30 per cent. 1st February; 20 per cent. 15th February, and the balance on the 1st of March.

The Income Bonds of the NEW YORK AND ERIE RAILROAD COMPANY will be received in part payment at par, and the accrued interest till day of surrender to the Company.

The Directors of the NEW YORK AND ERIE RAILROAD COMPANY, in offering the present loan to the public beg leave to state that it will be amply sufficient to pay the Income Bonds redeemable on the 1st February next, and the entire present floating debt of the Company, as well

as to complete all the unfinished work now under way.

By a resolution of the Board of Directors, all future outlays of every kind beyond the proceeds of the present loan, will be charged to expense account, and paid from the income of the Company, after payment of the interest on the funded debt, and the monthly payment to the Sinking Fund.

After the negotiation of the present loan and the redemption of the Income Bonds, the position of the Company will be—

Stock.....	\$10,024,000
Bonds of 1867, First Mortgage.....	3,000,000
Bonds of 1859, Second Mortgage.....	4,000,000
Bonds of 1883, Third Mortgage.....	6,000,000
Bonds of 1862, Convertible.....	3,500,000
Bonds of 1871, Convertible.....	4,251,000
Bonds of 1875, present loan.....	4,000,000

Total.....\$24,875,000

In the opinion of the Directors it is perfectly safe to estimate the gross earnings of the Road, for the coming year, at \$6,000,000, from which must be deducted:

Expenses 55 per cent.....\$3,300,000

Seven per cent. on debt \$24,-

851,000.....1,739,570

Sinking Fund.....420,000

\$5,459,57

Net revenue equal to over 5 per cent.

on stock applicable to cash dividends and contingencies.....540,430

The Directors of the Company are confident these estimates will be fully realized. The gross receipts since the Road has been in operation to Dunkirk, have been for passengers and freight alone—

1851 to 1852	\$3,047,748	INCREASE.
1852 to 1853	4,138,424	\$1,690,676, say 351 per ct.
1853 to 1854	5,122,666	934,242, say 231 per ct.

The business of the road depending mainly on the local traffic, must inevitably increase in the same ratio as the population of the Counties through which it passes. In the opinion of the Superintendent, Mr. McCollum, the road in its present position and with its present equipment, can earn \$8,000,000. If the future increase in the receipts be estimated at only 15 per cent. per annum, which is not much over one-half of the average increase of the past the above utmost capacity of the road will be tested in 1858.

As to the running expenses, as they were only 531 per cent. in 1853 and 1854, there is every probability that with rigid economy and an increase in the traffic, they can be reduced to 50 per cent., but they have been estimated at 55 per cent., so as to leave ample margin for contingencies.

The effect of the monthly purchases by the Trustees, of the Bonds of the present issue on their market value, cannot fail to be immediate, and will insure to the original purchasers a certain profit within a moderate time; for whilst the amount outstanding will decrease each month, the absorption by the Sinking Fund will constantly increase by the accruing interest on the Bonds in the hands of the Trustees. In 81 years the Sinking Fund will absorb \$4,768,053, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among our most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie-place.

HOMER RAMSDALL, President.

NATHANIEL MARSH, Secretary.

New York, Oct. 23, 1854.

SEPTIMUS NORRIS,

CIVIL MECHANICAL & CONSULTING ENGINEER
OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and lose by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.
E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

PHILADELPHIA RAILWAY AGENCY

AND
General Furnishing Depot
OF ALL ARTICLES REQUIRED BY
RAILROAD COMPANIES,
No. 80 South Fourth street,
PHILADELPHIA.

Railroad Chairs,
Railroad Spikes,
Car Wheels,
Car Axles,
Boiler and Tank Rivets,
Bolts, Nuts, Washers,
Car Lanterns and Lamps,
Conductors' Lanterns,

Engineers' Lanterns,
Locomotive Head Lights,
Car and Switch Locks,
Jack Screws, Vises,
Patent Oil Cans,
Steam Gauges,
Steam Whistles,
Spring Balances,
Car Findings &c., &c.

ALL orders promptly filled at manufacturers' prices and forwarded with despatch. Particular attention paid to contracting for Locomotives, Cars, Railroad Iron, &c.

The subscriber being Agent for several manufacturers of Machinery Tools is enabled to furnish Railroad Companies with Lathes, Planing Machines, Drills, &c., of the best quality at manufacturers' prices.—Orders solicited.

50 1y

THOS. M. CASH.

LOCOMOTIVE FOR SALE.

A NEW Engine built in the best manner and of the best materials is offered for sale at our Works at Paterson, New Jersey. The following is a brief description:

Cylinders—13 inches, with 22 inch stroke.

Drivers—four in number, 5 feet in diameter.

Gauge—4 feet 8½ inches.

Boiler—of best Penna. Iron with 120—1½ inch Tubes,

10½ feet long.

Fire box—30x40x45 inches.

Tank—to contain 1500 Gals.

This Engine was built for a road which is unable to pay for it and will be sold low.—Apply personally or by letter to
JAMES JACKSON, President,
New Jersey Locomotive Machine Co.,
Paterson, N. J.

50 4t

SEYMOUR, MORTON & CO.,

GENERAL RAILROAD AGENCY,

Office, Metropolitan Bank Building, No. 110 Broadway.

HAVE to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 30 years.
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of railroads in any part of the country, including furnishing corps of engineers and contractors, locomotive engines and cars, railroad bridges, McCallum's Patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Hammell's Patent Reclining Car Seat

for Night or Day Travelling.

THE subscriber, having been appointed sole agent for the sale of this Seat, begs to call the attention of Railroad Officers to the valuable improvement for comfort in Railroad Travelling. They can now be furnished at about the same cost as the ordinary car seat, and with the manufacturer's present arrangement, they occupy but little more space in the car.

THOS. M. CASH,

No. 80 South Fourth st., PHILADELPHIA.

ENGINEERS.

Atkinson, T. C.,
Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,
Chief Eng. Pittsburg and Connelville R.R. Co., Pittsburg, Pa.

Edward Boyle,
Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
Office 123 Chambers st.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,
Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M. O.,
Civil and Mining Engineer, Cumberland, Md.

C. Floyd-Jones.,
Division Engineer 3d and 12th Divisions,
ILLINOIS CENTRAL RAILROAD,
Vandalia, Ill.

Gay, Edward F.,
Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
Syracuse and Binghamton Railroad, Syracuse, N. Y.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,
New Orleans and Nashville R.R., Aberdeen, Miss.

Holcomb, F. P.
Chief Eng. Augusta and Waynesboro, and Savannah and P. & W. R.R.s,
Martha'sville, Macon Co., Ga.

S. W. Hill,
Mining Engineer and Surveyor, Eagle River,
Lake Superior.

Huger, T. P.,
Northeastern Railroad, Charleston, S. C.

D. Mitchell, Jr.,
Chief Engineer Pittsburg and Steubenville, and Chartiers Valley
Railroads, Pittsburg, Pa.

Samuel McElroy,
Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,
Sackets Harbor and Saratoga R. R., 24 William St., N. Y.

Miller, J. F.,
Buffalo and Conchocton Valley Railroad, Avon, N. Y.

Morris, Ellwood,
Engineer and Agent DAUPHIN & SUSQUEHANNA CO.,
Cold Spring, Lebanon Co., Pennsylvania.

Septimus Norris,
Civil and Mechanical Engineer, Philadelphia.

Saml. & G. H. Nott,
Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,
Civil Engineer, Office 78 South 4th st., Philadelphia.

Prichard, M. B.,
East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
Chief Engineer Alleghany Valley Railroad, Pittsburgh, Pa.

Shanly, Walter,
Chief Engineer Bytown and Prescott Railway,
Prescott, Canada.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Schlatter, Charles L.,
Civil Engineer, Ogdensburg, N. Y.

Straughan, J. R.,
Ohio and Indiana Railroad, Bucyrus, Ohio.

Steele, J. Dutton,
Pottstown, Pa.

Charles B. Stuart,
Civil Engineer, New York.

Edward W. Serrell,
Civil Engineer, 157 Broadway, New York.

P. J. Tournadre,
Chief Engineer Vicksburg, Shreveport and Texas R.R.,
Vicksburg, Miss.

Trautwine, John C.,
Civil Engineer and Architect, Philadelphia.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,
Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

Whipple, S.,
Civil Engineer and Bridge Builder, Albany, N. Y.

Wm. J. Young
HAS removed his Engineering and Surveying Instrument Manufactory to No. 83, North Seventh Street, Philadelphia.

BUSINESS CARDS.**Railroad Instruments.**

THEODOLITES, TRANSIT COMPASSES AND LEVELS
on a new principle, with Fraunhofer's Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by
E. & G. W. BLUNT,
New York, Dec. 1, 1851. No. 179 Water street.

James Herron, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.

PATENTEE OF THE
HERRON RAILWAY TRACK.
Models of this Track, on the most improved plan may be seen at the Engineer's office of the New York & Erie Railroad.

W. G. ATKINSON,
MINING ENGINEER, SURVEYOR AND DRAFTSMAN
CUMBERLAND, MARYLAND.

Will attend to business in his Profession in the Coal Region and vicinity.

REFERENCES:

Jerry Coates, Esq., New York.
Col. Wm. Young, do.
Jas. W. McCulloch, Esq., late U. S. Treas., Washington.
June 25, 1853.

To Engineers, Architects and Draughtsmen.

THE undersigned begs respectfully to inform Gentlemen in the above professions, that he has constantly on hand a great variety of instruments for Field and Office use.

JAS. PRENTICE,
Feb. 9, 1853. 1 Chamber street, New York.

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings, Private Dwellings, Stores and Factories, manufactured by the subscriber in great variety. Orders by Mail, or left at the Factory on Causeway street, will be promptly attended to.

HENRY N. HOOPER & CO.
Boston, March 23, 1850. 6m13

H. SAWYER

(of the late firm of SAWYER & HOBBY),
Manufacturer of Transits and Levels.

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

J. S. Sewall,
CIVIL ENGINEERS,
ST. PAUL MINNESOTA.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and Warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.
December 18, 1852. **WM. S. SAMFSON, Agent.**

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 51.]

SATURDAY, DECEMBER 23, 1854.

[WHOLE No. 975. VOL. XXVII.]

Mr. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

Sunday Trains on R. R.....	801
Journal of Railroad Law.....	802
Finances of Virginia.....	804
New York Central R. R.....	804
Baltimore and Ohio R. R.....	806
New York and New Haven R. R.....	807
Terre Haute and Richmond R. R.....	807
How shall our Railroads be worked?.....	808
Railways in Canada.....	809
Railroad Convention at Cleveland.....	810
Memphis and Ohio R. R.....	811
New York and Erie R. R.....	812
Buffalo Car Company.....	812
Cleveland, Columbus and Cincinnati R. R.....	813
Milwaukee and Mississippi R. R.....	813

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, December 23, 1854.

Sunday Trains on Railroads.

A divine injunction in reference to human conduct is but the expression of a law, or necessity of our nature. Experience proves that men will accomplish more in seven days, with one given to rest, than with the whole seven devoted to labor. At least one day in seven is required to repair the waste of six days of toil, and to allow the mind and body to recover a healthy and normal tone. The dedication of such portion of the time to rest, and to religious uses, is sanctioned by experience and by sound sense, as well as by Revelation.

In this country, in most of the States, owing to the good sense and the religious sentiment of our people, Sunday is a day of rest to our railroads as well as to labor. In none of the New England States are Sunday trains run. Several reach Boston early Sunday morning from New York, but none leave it, or any other New England city, on that day. Throughout all these States there is one day in seven, when even the locomotive reposes quietly in its stall, and the senseless machine pays its homage to a law ordained for the good of man alone. As we leave New England we find a greater laxity. Upon most of the leading roads

in New York, one or more Sunday trains are run, particularly upon the Harlem, Hudson River and Central. In the Western States, the New England custom generally prevails. We are not able to say how it is in the South; but we presume that only upon a few of them are Sunday trains run.

The apology everywhere offered is the mail service which our companies contract to perform. Shielded behind this excuse, they usually attach a train of passenger cars to the locomotive; and thus a portion of the great stream of travel is kept constantly in motion.

There is no doubt in our own minds that all Sunday trains are inexpedient and unprofitable. Except in a very few instances, they do not add a penny to the aggregate of receipts; while they do exert a direct and positive tendency to deteriorate the standard of service on every railroad, where they are allowed; from which a loss results, ten fold greater than all that is gained. In a country where the Sabbath is as universally observed, as in the United States, it cannot be desecrated without the loss of self-respect, and consequent demoralization of those who violate it. No man will persist, either from inclination or apparent necessity, in doing what, from conviction or tradition, he feels to be wrong, without reducing his moral nature to a level with his practice. It cannot be otherwise. There must be a harmony between the individual and his external relations. Put the best man to an immoral trade, and his mind soon reflects the character of his business. Let any man go on Sunday to the depot of a road that makes a practice of running Sunday trains, and he will find plenty of illustrations of our remark. He will find the employees of such road coarse, vulgar and profane. The quiet decorous order of the week day would be felt to be out of place on Sunday. Should an attempt be made to preserve that decorum due to the day, it would only make the matter worse; as it would render the profanation still more keenly seen and felt. To escape the sense of shame and sense of wrong experienced at the violation of the Sabbath, the day itself is degraded, and its sacredness denied, for the purpose of absolving those who desecrate it.

Such is the result that follows every violation of a known and acknowledged duty as is the keeping of the Sabbath day. The moment a railroad

company commences its violation, they put their employees to a school of vice. The very fact that labor on the Sabbath is considered disreputable, must degrade the person performing such labor in his own estimation. His self-respect being lost, his moral stamina is destroyed. A trader, or manufacturer who should keep an open store, or factory in full operation on Sunday, would lose credit and standing in the community. He would be regarded as wanting in moral sense, and in principle, and not to be trusted. Experience verifies the correctness of such judgment. The violators of the Sabbath either lack principle in the outset, or lose it in the process. Now the character of the employment does not change the result, and Sunday labor on a railroad exerts just as bad an influence, as where one works in his own business.

The observance of the Sabbath is a homage paid to our religious nature, and to the Divine command. It is a formal recognition of our duties to God and man; of the Divine attributes, and of our obligation to reverence and imitate them. A formal recognition, even, if it goes no further than cessation from toil, and the changing of sordid for cleanly apparel, is worth something. It brings man one step nearer to his ideal, both of pleasure and duty. It raises man above the machine. It secures self-respect. It recognizes his moral nature, and as before stated, by allowing him to recover his wasted energies, enables him to accomplish more for the rest he has enjoyed.

We think that a little reasoning upon this subject will convince every person that nothing is gained by Sunday labor, either on, or off a railroad. Certainly experience teaches the same result. Look at the roads that run frequent trains on the Lord's day, and see what a lax, slovenly and irresponsible system of management prevails. Take the Harlem road for instance. If, instead of keeping at work as usual, on Sunday, all the employees of the road were allowed to clean themselves of the accumulated dust of the week, to attend upon religious observances a portion of the day, and spend the balance of it in social and domestic intercourse, would not such employees soon grow to be a much better set of men, more respectable, and more respected; sober, and attentive to their duties? Would not the compa-

ny save more in the character of their employees, than is gained by working on Sunday? Would they not soon acquire the confidence of the public, which is now almost entirely forfeited? Would not there be fewer accidents on the road, and less plundering among the managers? We think there is but one answer to these questions. We know there is not. A railroad company can no more survive the self-respect of its employees, than can such employees. Both will fall together.

Railroad companies should not only not forget that their interest requires the proper observance of the Sabbath, but that they owe a duty to society to set a proper example. Those entrusted with the management of roads are usually among those who give tone to public opinion. They are responsible for the direction which this tone takes. Here is an imperative duty superadded to interest. Take for instance the directors of the Hudson River Road. Individually there is probably not a member of the Board that would allow a man in his employ to pursue his ordinary vocation on Sunday. He would be restrained both by a sense of duty and self-interest. Why then should he allow, indirectly, what he would not directly. On the Hudson River are thousand of men constantly employed to whom Sunday, like all other days, brings its round of labor and toil. The result is, and will be, as has been described. The road will lose ten fold more than it will gain. It is now a vast instrument of demoralization, and when a depth sufficiently low is reached, some terrible accident may be the result, which will recoil with terrific force on the company.

We have now nearly 18,000 miles of railroads in the United States. What a tremendous power all these roads can exert for good or evil. Shall it not be exerted on the side of right, especially when this exactly harmonizes with the interest of all concerned.

Journal of Railroad Law.

EIGHT WHEEL CAR SUIT FOR AN INFRINGEMENT OF A PATENT.

It will be recollected, that some four years or more since, a suit was brought by Ross Winans, claiming a patent under date of October 1st, 1834, for the 8-wheel car, against the Schenectady and Troy Railroad Company, for an infringement of said patent. The case was tried at Canandaigua, and a judgment obtained in favor of the Patentee. Some two years or more since, Mr. Winans brought another suit against Eaton, Gilbert & Co., car builders of Troy, and asked for an injunction against them to restrain them from manufacturing and selling eight-wheel cars. This application for an injunction induced the defendants to make a thorough resistance against the patent, and to show that the car which they manufactured and which was in general use on railroads, were entirely different from that patented, the case was argued a year ago last August at Cooperstown, before Judge NELSON, and the decision denying the injunction was given last summer. The plaintiff was represented by Spencer and Kernan, Utica; Chas. M. Keller, New York; I. H. B. Latrobe, Baltimore, and S. Blatchford, Auburn. For the defendants, W. A. Beach, Troy; W. W. Hubbell, Philadelphia, and Wm. Whitney, of Boston.

Judge NELSON denied the injunction, as will be seen by the following opinion.

PATENT FOR RAILROAD CARS.—MOTION FOR PRELIMINARY INJUNCTION.

U. S. Circuit Court.—Ross Winans vs. Orsamus Eaton and others.

Sept. 8th, 1854.

NELSON Circuit Judge.—This case should have been decided at an earlier day, but such has been the pressure of business in Court since the argument, I have been unable to devote that time to its consideration, which its difficulties and magnitude required. The papers are very voluminous, some of the questions involved depending upon complicated and contradicting evidence.

As this is a motion for a preliminary injunction, I shall not deem it necessary to go into the case at large, nor as fully, as if it stood for a final hearing; but shall content myself by stating briefly the grounds upon which I have arrived at the conclusion that the motion must be denied.

This patent has been before me, heretofore, in the case of Winans vs. the Schenectady and Troy Railroad Company, on a motion on the part of the defendants for a new trial. The case had been tried at law before his Honor, Judge Conklin, and the questions involved were the correctness of the rulings at the Circuit.

In deciding upon these questions, it became necessary to give a construction of the patent, which will be found in the opinion then delivered, and which I do not understand is a matter of dispute on this motion.

The patent is for a new and useful improvement in the construction of cars or carriages intended to travel on railroads which are particularly adapted to passenger cars; and, after stating the difficulties to be encountered in running these cars on the road at great speed, from curvatures and consequent friction between the flanges of the wheels, and rail, and from other obstructions, and impediments specified; and after describing the parts and manner of the construction of a car with a view to overcome these difficulties and impediments, the patentee closes by saying: I do not claim as my invention, the running of cars or carriages upon eight wheels, this having been previously done: not, however, in the manner and for the purposes herein described, but merely with a view of distributing the weight, carried more evenly upon a rail, or other roads, and for objects distinct in character from those which I have had in view, as herein before set forth; nor have the wheels when thus increased in number been so arranged and connected with each other, either by design or accident, as to accomplish this purpose.

What I claim, therefore, as my invention and for which I ask a patent, is the before described manner of arranging and connecting the eight wheels, which constitute the two bearing carriages, with a railroad car so as to accomplish the end proposed by the means set forth, or by others which are analogous, and dependent upon the same principles.

In the arrangement of this passenger car, the patentee constructs two bearing carriages each with four wheels, which sustain the body of the car, by placing one of them at or near each end of it: the two wheels on either side of the track are to be placed very near each other. The spaces apart between the flanges need be no greater than necessary to prevent contact. The car body rests

upon bolsters supported on each of the two bearing carriages, or four-wheeled trucks, the bolsters so constructed as to swivel or turn on each other like the two front bolsters of a common wagon: the trucks may be so placed within and under the ends of the car, as to bring all the wheels under it or without the end, so as to allow the body to be suspended between the two bearing carriages. The closeness of the fore and hind-wheels of the trucks taken in connection with the use of them, the trucks arranged as distant from each other as can be done consistently with the proper support of the car body is considered by the patentee as an important feature of the invention; as by the contiguity of the fore and hind-wheels of each truck, while the two trucks may be at a considerable distance apart, the lateral friction from the rubbing of the flanges against the rails is most effectually avoided; while at the same time, all the advantages attendant upon placing axles of a four-wheeled car far apart are obtained; for the two wheels on either side of the trucks may, from their proximity be considered as acting like a single wheel; and as the two trucks may be placed at any distance from each other, consistent with the required strength of the body of the car, all the advantages are obtained, that result from having two axles of a four-wheeled car at a distance from each other, while its inconveniences are avoided.

The two wheels on either side of the tracks are connected together by means of a very strong spring, the ends of which are bolted, or otherwise secured to the upper sides of the boxes which rest on the journals of the axles, the larger leaves of the spring placed downwards.

The bolsters extend across between the two pairs of wheels from the centre of one spring to that of the other, securely fastened to the tops of them. This is the car, substantially, as arranged and constructed by the patentee without going into all the details of the specification.

As we heard when the patent was formerly before us, the improvement claimed is the car itself arranged and constructed as described in the patent, and which we have above, in substance, set forth and the question now before us is the same as was before the jury in the former case, namely, whether or not cars or carriages for running on railroads, as a whole, like the one described in the patent, had been before known or in public use? And whether or not, the cars manufactured by the defendants are, in arrangement and construction substantially like it?

The case, in its present posture, does not call for a definitive determination of these questions, as that must be postponed till the final hearing. These questions are only important to be considered now, so far, as they may aid us in deciding upon the right of the complainant to have the defendants enjoined pending the litigation. For if there exists any reasonable doubt about the originality or novelty of the car, as arranged and constructed by the patentee, or about the substantial identity of the cars manufactured by the defendants, with the plaintiffs, then I am not at liberty to interpose and arrest the manufacture at this stage of the proceedings. The determination of that must be postponed till the case is matured and disposed of at the final hearing.

A good deal of proof has been furnished by the defendants in this case bearing directly upon

the questions above stated, not before the Court and Jury in the case against the S. & T. R. R. Co. The most material is that relating to what is called in the proceedings the "Quincy Car."

We have a description of this car, from Gridley Bryant, the inventor, and constructor of it. He is an engineer, and in 1826 superintended the building of a railroad leading from the Quincy quarries, in Massachusetts to the landing at Milton, a distance of between three and four miles. This is said to be the first railroad built in the United States. Bryant states, that the eight wheeled car on this road was constructed in the summer of 1829, and has been used on it from that time to the present; that the objects of the construction were to carry a large load on the eight wheels without injury to the road; to turn the curves freely, descend the inclined plane, and run on the road carrying the stone as smoothly and safely as possible. It consisted of two four-wheel trucks securely held by centre pivots or king bolts, about ten feet apart which passed through the bolsters of a rigid body or platform framing, and the centres of the trucks. The body with its bolsters thus secured, by the vertical king bolts, had side bearings on curved plates on the trucks, and the truck swivelled under them to conform to the curves and switches or turnouts of the road, while the body connecting the trucks, sustained, and carried the load smoothly and safely. That the trucks consisted of rigid rectangular wheel frames with the double cross bolsters and held the bearing points of the wheels on the rail the same distance apart, as the gauge of the track, which was five feet. He further observes, that this car contains a combination of the two four-wheel trucks, rigid wheel frames, with a permanent body to carry the load by means of vertical king bolts, allowing the two trucks to swivel, to conform to the curves of the road; the same, in principle of construction and operation as the eight-wheeled cars now in general use on railroads in the United States.

Bryant continued in the service as superintendent and engineer of the road till 1836 at which time two of these eight-wheel cars were in use including the one originally constructed. This witness is fully confirmed by three others, each of whom was engaged upon the road at the time spoken of by him and since.

The railroad has a steep inclined plane on which the cars are raised and lowered by means of an endless chain, and has several sharp curves and turnouts. One of the heavy curves that encircle the hill of the quarry is said to be about two hundred feet radius.

Several experts have been examined in relation to the arrangement and constructing of these "Quincy Cars," and a decided preponderance in numbers, and among them persons of the highest skill and of the greatest experience in their profession, concur in saying that it embodies the principles, arrangement and construction of the cars in general use upon railroads, which it is admitted are the kind manufactured by the defendants. The evidence furnished on behalf of the defendants, in resisting the motion upon this branch of the defence is very full and strong; and as the case stands, overcomes the contrary proofs given in support of the bill.

In addition to this "Quincy Car" the defendants

have furnished a model, and drawings of the eight-wheel steam carriage devised and constructed by Horatio Allen, and put in operation in February, 1832, on the South Carolina Railroad. The drawings were made in the winter of 1830 and 1831. Four of these carriages were running on the road before the close of the year 1833.

This car was therefore devised and completed in working order by Allen prior to the patent of Winans, and indeed prior to the perfection of his improvement preparatory to obtaining the patent. As in the case of the Quincy Car, the decided preponderance of the evidence is, that this steam carriage embraces all the elements, arrangement and organization, to be found in the cars manufactured by the defendants.

I do not find that this evidence was before the Court and Jury in the formal trial upon this patent; although it may not be regarded (looking at the particular construction and purpose of this steam carriage) as bearing so directly upon the novelty of the Winans Car, or speaking perhaps more accurately, as showing the principles and arrangements of the defendants' cars to have been discovered, and applied before the date of the Winans improvement; it is undoubtedly entitled to a good deal of consideration; and as the case now stands sufficient, at least in connection with the Quincy Car, to forbid the granting of the injunction.

The defendants have also given in evidence a model of a carriage for railways and roads described by W. & E. W. Chapman, in their patent granted in England in 1812. The specification is published in the 24. vol. of The Repertory of Arts, &c., under date of February, 1814, with drawings. Fig. 8, say the patentees, shows a carriage of six wheels for the engine which may rest, equally or nearly so, on each of its wheels, and move freely round the curves or past the angles of a railway: 1. 1. the fore pair of wheels, are as usual on railways fixed to the body of the carriage; 2. 2 and 3. 3, the other two pair, are fixed on axles (parallel to each other) to a separate frame, over which the body of the carriage should be so poised as that two-thirds of the weight should lie over the central point of the four wheels, where the pivot 4 is placed, and the remaining third over the axles (1. 1). The two thirds weight of the carriage should rest on conical wheels or rollers, bearing upon the curved plates *e. g.* so as to admit the ledges of the wheels or those of the way, to guide them on its curves, or past its angles, by forcing the transom or frame to turn on the pivot, and thus arrange the wheels to the course of the way, similarly, to the carriage of a coal wagon. *and the parties add: if the weight of the locomotive engine should require eight wheels, it is only requisite to institute in place of the axis (axles) 1. 1. a transom. such as described, laying the weight equally upon both and then similarly to two coal wagons attached together, the whole four pair of wheels will arrange themselves to the curves of the railway.*

The weight of the evidence of the experts who have been examined in respect to the Chapman Car is, that the elements and arrangements as described in the specification and delineated in the drawing, comprise all the substantial elements and arrangements to be found in the cars of the defendants; and a critical examination of the description and of the drawing certainly tends to

confirm rather than weaken the inference of these witnesses. This Chapman Car is probably the origin of the Quincy Car, the Horatio Allen Car and of all that class now in use upon the railroads of this country; and was devised by the Chapmans, not, simply to equalize the greater burden attained by the multiplication of the wheels, and to receive the stress upon the rail; but also by the arrangement of the four pair of wheels, so that each of the two pair should be fixed to separate frames (the axles parallel to each other,) and the burden resting upon the central points of the four wheels, and turning upon a pivot or swiveling to permit the trucks to accommodate themselves to the curves and angles of the road, and cause them to move more freely and smoothly round these.

This description and drawing of the Chapman Car as given in the vol. of the Repertory of Arts, were before the Court and Jury in the former trial, but as the novelty and infringement of the plaintiff's patent were left as questions of fact to the Jury, the subject was not a matter of particular examination on the motion for a new trial.

There are many other parts of this case which, were this a final hearing, it would be necessary to notice, but in the present stage of it, not important; as, for the reasons given, we think, upon the well settled principles forming applications for a preliminary injunction this motion must be denied.

RAILROAD BRIDGES.

In our issue of May 14th, 1853, we published a statement of Judge McLean's decision concerning the bridge across Sandusky Bay, whose construction was designed by the *Junction Railroad Company* in connection with the *Port Clinton Railroad Company*. The Judge having been called upon to issue an injunction against the companies, refused so to do, upon the ground that the charter of the Port Clinton Company authorized them to build a bridge over the Bay above mentioned, provided that it should not by so doing obstruct navigation, and on the further ground that the testimony upon the question of obstruction was very nearly balanced.

Next arose the case of the *Penrose Ferry Bridge Company* who were constructing a bridge across the Schuylkill within the corporation limits of Philadelphia. An application was made to the U. S. Circuit Court for the Eastern District of Pennsylvania for an injunction against the completion of the said bridge, as interfering with the revenue of the United States, and with the free navigation of the Schuylkill. In this case there occurred a division of opinion between the Circuit and District Judge, the former condemning and the latter approving of the bridge in question.— But the decision of this question by the Supreme Court of the United States in the case of the *Wheeling Bridge* would seem to be sufficiently explicit. We understand that Court to have declared that although the right of navigating a river or other body of water is paramount to any private privileges in regard to the same, yet a State may authorize the construction of a bridge whenever navigation is not thereby impeded.

The question has also of late been subjected to a thorough examination in the U. S. Circuit Court of Indiana in the case of *Jolly and others against the Terre Haute Drawbridge Company*.

The following principles received the sanction of the court.

- 1st. In relation to States earned out of the North Western Territory, the provision of the ordinance of 1787 declaring navigable streams to be public highways, still exists.
- 2nd. The courts of the Union having jurisdiction of the parties in a civil suit are competent to administer the legal remedy for an injury sustained by reason of an unlawful obstruction of a navigable stream without any express legislation by Congress, giving the remedy and prescribing the mode of its enforcement.
- 3rd. The National jurisdiction extends over navigable rivers &c., does not deprive the States of the power of exercising such rights or authority as they may deem expedient, subject to the power granted by the Federal Constitution to Congress in regard to the same subject, which must when duly put forth be paramount to that of States.
- 4th. A bridge of sufficient elevation and a proper draw is not necessarily an impediment to navigation.
- 5th. The inquiry in this case is whether the bridge with the draw constructed by the defendants at Terre Haute is a material obstruction to the navigation of Wabash river? If not its construction was duly authorized.

THE DELIVERY OF GOODS ON WHARVES.

We would annex the following recent decision of the Supreme court of Pennsylvania as a sequel to our remarks of last week concerning the subject above mentioned.

"If a carrier places goods on a wharf, and gives such description of them to the consignee as would enable him with reasonable diligence to find and identify them, and the consignee accordingly does send for the goods, this is a good delivery. Scott vs. Providence.

Virginia Finances.

In order that our readers may know the manner of doing business, in connection with the subject of the payment of the interest on the State debt, as well as reducing the principal, we insert the following sections of the law now in force.—The Board of Public works has the power to borrow money for purposes of internal improvement; but, as will be seen by reference to the law, "the Commissioners of the Sinking Fund" alone, have the management, preservation and disbursement of the fund set apart for the payment of interest on the public debt, as also the redemption of the principal as it becomes due:

From Act Passed March 26, 1853.

1. Be it enacted by the General Assembly, that there shall be and is hereby appropriated annually from the public treasury, commencing with the year 1853, out of the accruing revenues of the commonwealth, the sum of \$338,028 68, that sum being 7 per cent. on \$11,971,838 30, the ascertained debt of the Commonwealth on the 1st day of January 1852. The sum so set apart shall be called the "Sinking Fund" and shall be applied to the payment of the interest on the State Debt and the principal of such part as may be redeemable; and if no part of the said debt be redeemable, then the residue of the Sinking Fund, after the payment of such interest, shall be invested in the bonds or certificates of the Commonwealth, or of the United States, or of some of the States of the Union, and applied to the payment of said debt as it shall become redeemable.

2. Whenever, after the said first of January, 1852, a debt shall be contracted by the Commonwealth, there shall be set apart, in like manner, annually for thirty-four years, a sum exceeding by 1 per cent. the aggregate amount of the annual interest agreed to be paid thereon at the time of its contraction, which sum shall be part of the sinking fund, and shall be applied in the manner herein before directed.

3. If at any time the Legislature shall direct a sale of the stocks held by the Commonwealth in internal improvement and other companies, the proceeds of such sale, if made before the payment of the public debt, shall continue a part of the sinking fund, and be applied in like manner. The sinking fund, and its accruing interest, shall not be otherwise appropriated than is herein directed, except in time of war, insurrection, and invasion.

4. It shall be the duty of the Auditor of Public Accounts, upon the receipt of statements of the amount of the public debt hereinafter required to be furnished him by the Second Auditor, to pay into the Treasury of the Commonwealth, on or before the 1st day of January, 1853, and annually thereafter, out of the accruing revenues, such portion of the sum set apart for the sinking fund provided by this act, as shall be applied to the redemption of the State debt existing on the 1st of January, 1852. He shall, in like manner, pay into the Treasury, to the credit of the said fund, on or before the 1st day of January, 1853, and 1st day of July, 1853, and on the same days of each successive year, the amount of the semi-annual interest on said debt which shall be due and payable at each respective date.

5. It shall also be his duty, in like manner, to pay into the Treasury, on or before the 1st day of January, 1853, and annually for 33 years thereafter, out of the accruing revenues of the State, to the credit of the sinking fund, one per centum on the aggregate amount of debt contracted between the 1st day of January, 1852, and said day; and also to pay, in like manner, one per centum annually for thirty-four years on the aggregate amount of debt which shall be contracted in each or any subsequent year. He shall pay, in like manner, into the Treasury, to the credit of the said fund, on or before the 1st day of January, and the 1st day of July, 1853, and on the same days in each successive year thereafter, the amount of the semi-annual interest which shall be due and payable on the aggregate amount of such additional debts at those days respectively: provided, however, that the amount of the interest payable on that part of the debt created by the issue of coupon bonds, shall be set apart and paid into the Treasury to the credit of said fund, thirty days in advance of the respective semi-annual periods on which it shall become due.

6. For the purpose of managing, preserving and applying the sinking fund, created by this act, the Auditor of Public Accounts, Register and Secretary of the Commonwealth, for the time being, are hereby constituted a corporate body under the style of "The Commissioners of the Sinking Fund."

7. It shall be their duty to apply the moneys appropriated out of the said fund to the payment of the interests and redemption of the principal of the State debt at the respective periods prescribed in the fourth and fifth sections of this act, for the payment of the sinking fund into the treasury by the Auditor of Public Accounts, and to invest any part of the appropriations for the latter purpose, which cannot be so applied to the purchase of public stock, agreeably to the provisions of the second and third sections of this act.

8. The said Commissioners, at their discretion, may apply the part of the sinking fund set apart for the redemption of the principal of the debt, to the payment, in the first place of such bonds and certificates as the State is bound to redeem at fixed periods, provided such bonds and certificates shall be redeemable by the State before the arrival of such fixed periods.

New York Central Railroad.

REPORT

Of the New York Central Railroad Company to the State Engineer and Surveyor, under the Act Chapter 140, Laws of New York of 1850, being for the Year ending September 30th, 1854.

Capital Stock as by Charter.—The capital stock fixed by the Consolidation Agreement, dated the 17th day of May, 1853, including the Convertible Bonds of the former companies is

	\$23,065,600 00
Amount of capital paid in at last report.....	22,213,983 81
Total amount of capital stock now paid in, including the outstanding convertible bonds above referred to.....	23,067,415 00
Funded debt, as per last report...	11,564,033 62
Total amount now, of funded debt, as follows:	
Debt certificates (or premium bonds) agreed to be issued to stockholders under the 15th article of the consolidation agreement, interest at 6 per cent*.....	\$8,894,500 00
Debts of the old companies assumed under the 5th article of the consolidation agreement, reported last year at \$1,861,823 62, and now reduced (with interest ranging from 5 to 7 per cent) to.....	\$1,363,000 00
Deduct the amount of the two Sinking Funds in the hands of the Comptroller, created under Acts of the Legislature, passed in 1840, for the purpose of paying State Stock issued in aid of the construction of the Auburn and Rochester Railroad....	73,148 31
Tonawanda Railroad Sinking Fund.....	27,821 46
Amount since paid by this company to the Auburn and Rochester Fund.....	4,000 00
	\$1,263,030 23
Bonds of the Buffalo and Niagara Falls Railroad Company, assumed by this Company, (interest at 7 per cent).....	55,000 00
Bonds to the stockholders of that company as provided for by the Agreement, by way of lease, between the two companies, (interest at 6 per cent).....	110,800 00
Bonds given for Great Western (Canada) and Buffalo and State Line Railroad stock, purchased under the 9th article of the consolidation agreement, (interest at 6 per cent).....	817,000 00
Bonds at 6 per cent., issued for purchase of real estate, (\$197,000,) and including \$21,000 not yet adjusted.....	218,000 00
Bonds and Mortgages (some existing before consolidation) assumed and given for part consideration of real estate purchased, interest at 7 per cent, with one exception, which is at 6 per cent....	208,109 81
(It is claimed that \$4,282 50 of the amount in the last item, should be paid by one of the old companies).	
Amount received for 7 per ct. convertible bonds of the \$3,000,000 issue of 1854, disposed of up to 30th September, same year.....	380,681 00
	\$11,947,121 04

The company pays monthly, or as nearly so as it can conveniently be done, all the expenses of

maintaining and operating its road and conducting its business, and therefore has no floating debt.

It may be proper to state, however, that during the year contracts were made for a large number of passenger cars, which were paid for on delivery from time to time, in part by acceptances of the company, principally at six months. The whole amount of these acceptances outstanding on 30th September, 1854, was \$110,700, which has been reduced before the verification of this report to \$78,000.

Average rate per annum of interest on funded debt, 6 67-1000 per cent.

COST OF ROAD AND EQUIPMENT.

	As per last report.	To present time.
For graduation and masonry...	\$6,125,422 46	\$6,548,610 31
For bridges.....	647,900 80	719,673 93
For superstructure including iron..	8,146,372 18	9,388,456 21
For passenger and freight stations, buildings and fixtures.....	674,575 96	860,302 78
For engine and car houses, machine shops, machinery and fixtures.....	482,433 21	568,876 50
For land, land damages and fences.....	2,676,951 86	2,501,060 62
For locomotives & fixtures, and snow plows....	1,458,649 46	1,904,931 95
For passenger and baggage cars...	475,482 16	636,262 53
For freight and other cars.....	825,004 65	1,210,104 19
For engineering and agencies...	531,736 56	569,095 30
Total.....	\$22,044,529 25	\$25,907,374 41

CHARACTERISTICS OF THE ROAD

Length of road:	Miles.
Albany to Buffalo direct.....	297 3/4
Additional lines:	
Troy to Schenectady.....	21
Syracuse to Rochester via Auburn and Geneva.....	104
Rochester to Buffalo via Lockport.....	81
Lockport to the suspension bridge.....	19
Batavia to Attica, part of the former line to Buffalo, the route having been changed, but this portion retained as a side line...	11
	533 3/4

Leased lines:

The Rochester and Lake Ontario road running from Rochester to Charlotte, at the mouth of the Genesee river, leased by the late Rochester, Lockport, and Niagara Falls Railroad Co., and assumed under the Consolidation Agreement.....	8 1/2
The Buffalo and Niagara Falls, and the Lewiston Railroads running from Buffalo via Niagara Falls to Lewiston, on the Niagara river near Lake Ontario.....	31
But as this route, for 10 1/2 miles, from Buffalo to Tonawanda, is on the same line with the road from Lockport to Buffalo, deduct.....	10 1/2
	20 1/2

Total, miles road.....	562 3/4
Length of double track incl'g sidings.....	276 3/4 mls.
Length of Branches, owned by company laid.....	19 1/2
Length of double track laid on same.....	none
Weight of rail pr yd. on main track.....	56 75 lbs.
No. of engine houses and shops.....	42
No of engines.....	175
Rated as } Psngr. 1st class 187; do, 2d & 8-wheel emigrant. 55.....	242
Cars } Ba'g &c., 65; freight 1702..	1767

DOINGS OF THE YEAR IN TRANSPORTATION.

Miles run by passenger trains.....	2,117,088
Miles run by freight trains.....	1,200,240
Rate of fare per mile charged to passengers, in respective classes.....	1 to 2 cts.
No. of passengers, all classes, carried in cars.....	2,556,874
No of miles travelled by passengers or No. of passengers carried 1 mile	163,874,473
No. of tons, of 2000 pounds of freight carried in cars.....	549,805
Total movement of freight, or No. of tons carried 1 mile.....	81,168,080
Average rate of speed adopted by ordinary passenger trains, including stops (miles per hour).....	25 m. pr. hr.
Rate of speed of same when in motion.....	32
Average rate of speed adopted by express trains, including stops.....	35
Rate of speed of same when in motion.....	40
Average rate of speed adopted by freight trains, including stops.....	14
Rate of speed of same when in motion.....	18
Average weight in tons of passenger trains, exclusive of passengers and baggage.....	97 292-2000
Average weight in tons of freight trains, exclusive of freight.....	157 748-2000
The amount of freight in tons:	
The product of the forest.....	45,530
The product of animals.....	115,417
Vegetable food.....	156,204
Other agricultural products.....	10,935
Manufactures.....	52,244
Merchandise.....	94,643
Other articles.....	74,882
Total.....	549,805

Statement Showing the Operations of the Company for the past year.

	AMOUNT.	ALLOTTED TO
EXPENSES OF MAINTAINING ROAD.		
Repairs of road-bed and railway, including cost of iron.....	\$663,515 12	Pass'gr Transp'tn. \$417,065 21
Depreciation of way.....		Freight Transp'tn. \$236,449 91
Cost of iron used in repairs.....	45,986 77	
Repairs of buildings.....	23,093 20	
Repairs of fences and gates.....	114,092 65	
Taxes on real estate.....		
Totals.....	\$839,687 74	\$653,515 12
EXPENSES OF REPAIRS OF MACHINERY.		
Repairs of engines and tenders.....	\$270,662 62	\$172,749 65
Depreciation of do.....		
Repairs of passenger and baggage cars.....	119,142 20	119,142 20
Depreciation of do.....		
Repairs of freight cars.....	181,502 68	
Depreciation of do.....		
Repairs of tools and machinery in shops.....	26,994 67	17,018 60
Incidental expenses, including oil, fuel, clerks, etc.....	60,769 42	38,782 15
Totals.....	\$659,091 59	\$347,692 60
		\$311,388 99

	AMOUNT.	ALLOTTED TO
EXPENSES OF OPERATING THE ROAD.		
Office expenses, stationery, &c.....	\$13,421 69	Pass'gr Transp'tn. \$7,700 79
Agents and clerks.....	130,081 78	Freight Transp'tn. \$5,720 80
Labor, loading and unloading freight.....	106,204 84	
Porters, watchmen and switch tenders.....	52,367 97	
Wood and water station attendance.....	128,889 37	
Conductors, baggage and brakemen.....	140,280 16	
Engine men and firemen.....	510,181 04	
Fuel, cost and labor preparing.....	65,361 36	
Oil and waste for engines and tenders.....	22,100 05	
do do for freight cars.....	39,142 31	
do do for passenger and baggage cars.....	38,142 90	
Loss and damage of goods and baggage.....	35,400 05	
Damages for injuries to persons.....		
Damages to property, including damages by fire, and cattle killed on road.....	12,800 89	
General superintendence.....	16,383 88	
Contingencies.....	171,386 37	
Totals.....	\$1,589,311 90	\$904,321 58

EARNINGS, CASH RECEIPTS AND PAYMENTS.

1st. Earnings:	
From passengers.....	\$3,151,513 89
From freight.....	2,479,820 66
From other sources.....	286,999 95
	\$5,918,334 50
2d. Receipts:	
From passengers.....	Same as Earnings.
From freight.....	
From other sources.....	
3d. Payments other than for construction:	
For transportation expenses.....	3,088,041 23
For interest.....	\$656,513 10
For sinking fund for debt certificates, (premium bonds,).....	111,059 59
	767,572 89
Dividends.....	1,125,505 75

(A dividend of 4 per cent. on the capital stock of this company, declared from earnings to its August, 1854, has not yet been paid.)

Surplus fund. (We have no account of this description, except the several sinking funds above mentioned.)

The number of persons injured in life during the year, are forty-four. Of these injured in life or limb, three were passengers. One of them, by his own inadvertence, fell from a car while the train was in motion, and the other two, in violation of a rule of the company, were on the platform of the car at the time of the accident. Of the employees of the company, seventeen were injured in life; five while on the track, for want of caution on their part; five by slip or mis-step, falling under a car; three from collisions; and three were thrown from a hand-car. The others injured in life, twenty-four in number, were neither passengers nor employees, but a class of persons of whom so many are found standing and walking at improper times and places on the track of the road. Twenty-two of the deceased are of this class. They unfortunately came to their death by being on the track while trains were passing, when common prudence

should have kept them from it. Two lost their lives by climbing on the bumpers between cars, to catch a ride unobserved. Two of the above deceased, and two of the seriously injured, were intoxicated. The whole number seriously injured were twenty-three. Of these, nine were passengers, nine employees, and five of the class mentioned, as being neither employees nor passengers.

State of New York, City and County of Albany, ss.—Erastus Corning, President of the New York Central Railroad Company, and Chauncey Vibbard, General Superintendent of said railroad, being duly sworn, each for himself, deposes and says, that the foregoing report is true, according to the best of their knowledge, information and belief.

ERASTUS CORNING.
C. VIBBARD.

Sworn before me, this 13th day }
of December, 1854. }
J. STERNBERG, Commissioner of Deeds.

*(The premium on the amount of convertible bonds above stated, not yet presented for conversion, is included in the above. \$159,600, in amount of these certificates, have been purchased for the sinking fund, provided for their payment by the 16th article of the consolidation agreement.

† The amount thus paid by this company is not at present represented by any funded debt.

Baltimore and Ohio Railroad.

The twenty-eighth annual Report of this Company rendered up to 30th September last, shows the gross revenue of the road (Main Stem) for the past year, to have been, \$3,645,909 43; being an increase of \$1,612,189 63 over that of 1853. Of this sum less than one-sixth had been received from passengers, and only about one-twentieth from through travel. The want of regular connections hitherto at the western terminus has been particularly felt in the passenger business of the road; the Central Ohio Line not having been opened till recently, and the navigation of the Ohio River having been so uncertain that almost all of the western bound travel took other routes. Though the Company have been 28 years in existence, the last was the first year in which the road was open through to the Ohio River. Efforts had been made to connect with the Cleveland and Pittsburgh Line; and by the opening of the Ohio Central it is confidently expected that another year will show a great reduction on the disparity of the different kinds of business now done.

The principal financial operation for the year was the negotiation of a loan of five million dollars from the city of Baltimore, for the funding of a portion of the Company's floating debt, and the construction of a second track as far as the Coal Mines—218 miles—the single one being found wholly insufficient for that purpose. After considerable delays, both in the City Council and the State Legislature, the loan was obtained, on the understanding that \$500,000 of it were to be kept as a sinking fund, to be annually increased; \$2,000,000 to go to the funding of the debt; and the remaining \$2,500,000 to the construction of the second track. In consequence of the state of the money market, however, the Company has been able to realize, up to date of Report, only \$1,287,370 89 from the sale of these bonds. Consequently, not only has the double track not proceeded as rapidly as was anticipated, but the Directors have had to use the net income of the

road for the year, to meet other obligations that had come to maturity. Regret is expressed that the stockholders should be disappointed in a dividend not being declared, it being impossible to make one in the circumstances in which they were placed.

The Receipts of the past year have been as follows:

From Passengers (main stem).....	\$569,091 51
From Freight & Mails (main stem).....	3,076,517 92
	<u>\$3,645,609 43</u>

The Expenses for the same period were:

For Transport'n (main stem).....	\$872,805 51
For Repairs of all kinds (main stem).....	1,214,940 50
For General Expenses Losses, &c., (main stem).....	85,712 89
	<u>2,178,458 90</u>

Net Revenue.....\$1,472,150 53

Per centage of running expenses 55¾.

To which are to be added:

Extra amount of materials on hand over last year.....	\$147,247 21
Dividend from Stock in Washington Br'ch.....	81,344 00
Rent of Depot, &c., chargeable to do....	10,000 00
	<u>238,591 21</u>

\$1,710,741 74

From which deduct:

Interest on Bonds and Floating Debt.....	739,385 69
Ground Rents.....	25,998 84
Loss on sale of Bonds No. 6.....	121,758 85
	<u>887,143 38</u>

Profit and loss for the year..\$823,598 36

LIABILITIES OF THE COMPANY.

Stock owned by Individuals.....	\$5,115,700 00
Do. by city of Baltimore.....	3,798,200 00
Do. by city of Wheeling.....	500,000 00
Do. by State of Maryland.....	685,500 00
Scrip not funded.....	19,502 00
Preferred Stock.....	3,000,000 00
	<u>\$13,118,902 00</u>

Funded Debt.....	\$7,596,419 61
Bills Payable.....	2,129,769 36
Floating Debt.....	134,077 79
Profit and Loss.....	1,902,247 00
	<u>11,762,513 76</u>

Total.....\$24,881,415 76

ASSETS.

Cost of Road.....	\$18,184,888 77
Rolling power.....	2,975,427 40
Real Estate.....	1,058,533 72
Central Ohio R. R.....	\$200,000
N. W. Va. R. R.....	450,000
	<u>650,000 00</u>
Stock in Washington Branch R. R. in Pittsburgh and Connellsville R. R.....	1,016,800 00
Bonds of City of Baltimore.....	17,500 00
Sinking Funds.....	317,677 93
Unsold Bonds.....	30,547 55
Material on hand.....	40,000 00
Debts, Bills Receivable, &c.....	318,894 51
Cash on hand.....	175,635 03
	<u>95,510 85</u>

\$24,881,415 76

WASHINGTON BRANCH.

Receipts from passengers.....	\$278,302 13
Receipts from Freight and Mails.....	90,927 50
	<u>\$369,229 63</u>
Expenses for Transportation.....	\$82,659 25
Do. for Repairs.....	90,035 46
General Expenses, Losses, &c.....	8,675 94
	<u>181,370 65</u>

Balance.....\$187,858 98

Per centage of Working Expenses 49 1-10th per cent.

From above is to be deducted State Tax.....62,877 53

Leaving net Balance.....\$124,981 45

LIABILITIES OF DO.

Stock.....	\$1,650,000 00
Annuity.....	25,000 00
Unclaimed Dues.....	15 10
Profit and Loss.....	104,306 14
	<u>\$1,779,321 24</u>

ASSETS.

Road, Real Estate, and Equipments.....	\$1,650,000 00
Outstanding Dues.....	95,811 02
Bills Receivable.....	33,510 22
	<u>1,779,321 24</u>

The following is a summary of the principal articles of freight carried on both roads during the year.

Coal carried eastwardly.....	463,423 Tons.
" " westwardly.....	49,490 "
Live stock.....	18,776 "

of which there were 119,699 hogs; 31,631 sheep; 10,017 horned cattle; and 3,523 horses and mules. No. of barrels of Flour carried on both roads, 752,249.

The total tonnage of freight carried East for the year was 661,597 tons, which included, besides the articles above specified 21,876 hhds. tobacco; 29,152 tons provisions; 12,883 do. iron ore; and 9,707 tons lard and butter.

The total amount of freight carried West was 95,410 tons which are principally made up of dry goods, groceries, grain, pig iron, &c.

Number of passengers carried one mile, 28,024, 143.

Number of tons of freight carried one mile, 161, 192,958.

Particular allusion is made in the Report to the Coal trade. Over the main line the quantity transported last year exceeded by 50 per cent. that in 1853. The revenue from this single article amounted to \$1,134,628; although the trade was confined to nine months of the year, in consequence of the miners' strike in the early part of the season. But for this, it is supposed that the quantity would have been at least 550,000 tons, besides that transported for the use of the company. The demand for coal from the Maryland Mines, is increasing very rapidly, and the Directors say that if they had sufficient accommodation, at least fifty per cent. more power than they can appropriate, might be employed in carrying that article. Last spring an advance was made on the rates of transporting coal, but it does not appear to have lessened the demand in any perceptible degree. Some changes towards a higher rate were made on live stock, and with a similar result.

The condition of the road appears to be much better than formerly. Fifty-one miles of "string"

have been changed to cross-tie track, leaving but twenty-one miles yet to be changed. This is expected to be completed by the first of January, next, and will contribute greatly to the safety of the road.

The rolling stock consists of

Number of Locomotives of all kind.....	207
Passenger Cars.....	114
Freight and Coal Cars.....	3,492
Snow Ploughs.....	17

of which there have been received during the year 40 locomotives, 16 passenger cars, and 293 freight and coal cars.

The following is a detailed statement of the EXPENSES OF TRANSPORTATION on the main stem.

For Agents and Clerks.....	\$47,103 34
Tonnage Conductors and Brakemen.....	121,697 20
For Passenger do.....	22,874 28
For Enginemen.....	126,304 97
For Firemen.....	63,305 13
For Tonnage Teamsters.....	\$13,254 58
For Passenger do.....	7,450 39
	20,704 97
For Maintenance of Stock and Harness	34,790 67
For Loading and Unloading Cars.....	66,788 57
For Preparing Fuel and Filling Tenders.....	37,257 90
For Oil.....	\$76,121 59
For Tallow.....	6,831 19
	82,952 78
For Waste.....	11,393 43
For Cord-Wood.....	78,973 40
For Coal.....	68,842 15
For Gas and Candles.....	4,286 59
For Stationery, Printing, and Advertising.....	7,128 63
For Ethereal Oil.....	1,008 58
For Telegraphing.....	2,806 58
For Cleaning and Getting out Engines.....	47,089 13
For Sawing and Measuring Wood.....	13,187 05
For Miscellaneous.....	14,312 16
	\$872,805 51

The other expenses have been:

Repairs of Railway.....	\$579,240 96
Bridges.....	64,179 30
Depots.....	18,380 98
Water Stations.....	19,194 42
Watching Bridges and Pumping Water	15,712 99
Repairs of Locomotives.....	290,611 85
Passenger Cars.....	41,875 90
Freight.....	179,275 90
Stationary Machinery.....	22,278 37
Losses by Accidents.....	27,178 12
Salaries, Rent, Fees, &c.....	42,821 88
	\$1,300,653 39

The Report speaks in flattering terms of the agents and employees of the road, commending them for their diligence and faithfulness.

New York and New Haven Railroad

The better opinion seems to be that the New York and New Haven Railroad will have to assume the over issue of their stock; that is, they will have to refund the money fraudulently received by Mr. Schnyler—for we do not accept Judge Hoffman's dictum, that the fraudulent stock constitutes the possessor of it, a stockholder. If the company are held, it will be on the ground of "money had and received."

If the liability of the company should take this form, the effect it is to have upon their bonds become an important consideration. These bonds are not secured by a mortgage. It is competent, therefore, for the company to prefer other claims to them. A judgment creditor for money paid for the fraudulent stock might also get a preference, the bondholders having no cause of action

(provided their interest be paid), till the maturity of their bonds.

Under such a state of facts, what is the duty of the company?—to allow the rights of bondholders to be periled, either by a new mortgage, or by the claims of subsequent creditors: or, to carry out what was certainly the original understanding between the company and its bondholders, that the latter had a positive security in the value of the road, and in its freedom from liabilities? It was with this understanding that the bonds were sold. Now, should not the company continue this understanding, by executing to the bondholders a mortgage upon the road, even at this late day? If equity is to be done in the premises, is there any question as to the duty of the stockholders?

We throw out these suggestions for what they are worth. In meeting the present crisis, it is proper that everything affecting the rights of all parties interested in the road should be considered; especially the equities between the holders of the fraudulent stock, and the bondholders.

Terre Haute and Richmond Railroad.

President, S. Crawford; Vice President, E. T. Peck; Superintendent, S. Heustis; Secretary, Charles Wood; Treasurer, John Scott; Directors, D. Deming, C. Rose, A. McGregor, W. D. Griswold, C. Warren, W. H. Thornburgh, and John Crawford.

Principal and Transfer Offices, Terre Haute, Indiana.

Close of Financial year, Dec. 31st.

The act of Incorporation was passed January 6th, 1847. By it they were empowered to construct a railroad from "some point on the western line of the State of Indiana, through Terre Haute, Greencastle and Indianapolis, to Richmond, in the county of Wayne." The authorized capital was \$800,000 (to be increased if the directors saw fit) in fifty dollar shares. The usual privileges are granted to the company, and the ordinary powers to their officers. The road was required to be commenced within five, and finished in fifteen years. The rates of toll were left to the option of the company; only, when the aggregate amount of dividends shall have amounted to the full amount invested, and be paying annually 10 per cent. thereon, the Legislature have the right so to regulate the fares, that not more than 15 per cent. dividend shall be declared. The commissioners of counties through which the road passes, have the right, within five years, of subscribing on behalf of their counties, to the stock. The corporation are permitted, by contract, to intersect with any other road. To the State are reserved the rights of transporting troops over the line gratuitously in time of war, and also to purchase the concern after 25 years, at a fair valuation, should the Legislature so decide. The company are prohibited from engaging in trade of any kind, beyond their legitimate business, under any pretence whatever. The Directors are responsible for any debts contracted beyond the stock subscribed. These privileges are all conferred in the original act; no amendments of any consequence having been asked for, except a few to facilitate the collection of subscriptions, and punish parties willingly injuring the road, &c., &c.

The first estimated cost of the road was \$1,185,492.

On the 20th December, 1848, the first division of 32 miles from Terre Haute to Greencastle, was put under contract. The second division of 20 miles from Indianapolis was begun December 20th, 1849. The third division also of 20 miles was commenced May 10th, 1850. The line was opened throughout on February 16th, 1852, for freight and passengers.

The pattern of rail used is the T kind weighing 60lb. to the yard. The cost of the road, September 30th, 1852, was \$1,311,672; in 1853, \$1,414,284; and in 1854, \$1,443,692; besides \$25,641, being one-fifth the cost of Union track and depot at Indianapolis, Total \$1,469,333 or \$20,341 per mile.

The following is a statement of the Gross and Net Receipts, Current Expenses, Rates of Dividend, &c., for the last three years.

	Gross Receipts.	Current Expenses.	Net Receipts.	Dividend.
1852..	\$105,943.87	\$31,497.82	\$74,446.05	4
1853..	177,995.97	66,331.37	111,664.60	7½
1854..	*163,753.41	60,610.05	103,143.36	†5
	Passengers.	Freight.	Miscellaneous.	
1852....	\$64,707.26	\$36,463.54	\$4,773.07	
1853....	109,130.90	58,244.70	10,600.31	
1854....	99,598.20	54,672.34	9,482.85	

Total probable receipts for the year \$245,000.

Dividend 10 per cent. for the year.

*Receipts or nine months.

†Dividend for six months of 1854.

The amount of their Capital Stock, as stated above, was \$800,000, with permission to increase the same to any amount necessary. All the subscription received from corporate bodies, was \$50,000 from Vigo County, for which the Commissioners issued County Bonds at 6 per cent. for that amount.

On the 1st Jan. 1850, the Receipts were..\$103,385
 " " 1851, " " 235,312
 " " 1852, " " 362,262
 " " 1853, " " 632,387
 " " 1854, " " 738,650
 30th Sept. " " 917,000

The company originally issued \$600,000 seven per cent. Convertible Bonds, payable 1st March, 1866, and secured by mortgage on the road, and the personal property of the stockholders. These were taken by the "Farmers' Loan and Trust Company" of New York, as Trustees. The interest was made payable semi-annually, on March 1st and September 1st, at the office of the F. L. & T. C. in N. Y. Of the above, \$137,000 have been converted into stock, within the present year; leaving \$463,000 outstanding, at 30th September last. An issue of six per cent. convertibles to the amount of \$63,000, was also made by the company on the 1st January, 1850, and payable in five years, with interest semi-annually. Of these there had been surrendered and converted into stock, up to 30th September last, \$37,400, leaving \$25,700 payable 1st January, 1855.

The amount of Floating debt at 1st January, last, was \$74,632.

The following Dividends have been paid by the company.

Jan'y 1, 1853, 4 pr ct. on \$532,387 10=	\$25,294 24
July 1, " 3½ " 734,585 00=	25,710 49
Jan'y 1, 1854 4 " 738,650 00=	29,546 00
July 1, " 5 " 893,100 00=	44,655 00

Amount of earnings expended in construction, \$61,695. No Preference Stock has been created by the company.

No part of the road is constructed with *double track*. The length of the line is 73 miles; length of *sidings*, 8 miles; gauge 4 feet 8½, ballasting from 12 to 18 inches. The road is in good order, and well equipped. The Depots, Engine Houses, Shops, Wood Houses and Water Stations are all in good condition. The Rolling Stock consists of

14 Locomotives valued at..	\$75,000 00
12 Passenger, Mail and	
Baggage Cars.....	22,000 00
190 Freight Cars.....	110,000 00
Gravel and other Cars....	4,000 00
	<hr/> \$211,000 00

Besides wheels and axles for 25 more cars to be constructed as the demands of the business require.

ITEMS FROM CONSTRUCTION ACCOUNT.

Engineering.....	\$17,914 67
Grubbing, Grading, and Bridging.....	369,122 97
Nails, Spikes, Chains, Cross-Ties, and	
Laying Tracks.....	480,390 33
Ballasting.....	56,896 59
Fencing.....	4,865 17
Contingencies.....	21,646 37
Right of Way.....	6,983 91
Real Estate.....	13,117 12
Buildings and Furniture.....	67,195 15
Equipment.....	230,749 31
Interest and Discount on Bonds.....	158,220 66
Stationary Machinery.....	17,089 84

\$1,443,691 99

To which is to be added one-fifth interest in the Union Depot at Indianapolis..... 25,640 78

Making a total of.....\$1,469,332 77
The number of *through* passengers carried in 1853, was.....32,155
Do. of *way* do.....56,666

Total.....88,821
Receipts from *through* passengers.....\$62,001 37
" " *way* ".....47,129 59

" " Freight.....\$109,130 96
" " Mail and Express.....58,244 70
" " ".....10,600 31

Miles run by Trains (Passenger).....\$177,975 97
Do. (Freight).....50,308
Do. (Gravel, &c.).....47,020
.....32,139

129,467

COPY OF BALANCE SHEET.

Terre Haute and Richmond Railroad Co.

Dr.
Construction.....\$1,414,284 50
Union Depot, &c.....21,241 45

\$1,435,525 96
Bills Receivable.....9,504 20
Mail Transportation.....1,825 00
Due from other Roads.....4,091 06
Vigo Co. Bonds.....11,400 00
Cash on hand.....8,240 83

\$1,470,587 04

Cr.
Capital stock.....\$738,650 00
Seven per cent. Bonds.....*600,000 00
Six per cent. do.....*28,600 00
Certificates of Interest on Stock outstanding.....484 86
Bills Payable.....*38,774 20
Dividends unpaid.....30,410 63
Sundries.....4,962 32
Surplus.....28,705 03

\$1,470,587 04

* Statement as made at 1st Jan'y, 1854. These amounts have been considerably changed since that date.

Drawings of Machinery.

We invite attention to the advertisement in this number for a situation as draughtsman, by one who, we have reason to believe, is thoroughly acquainted with the business.

As times are somewhat dull just now, manufacturing establishments will naturally turn their attention to experiments of improvements in machinery, and getting out new patterns ready for the return of the flood tide which must, ere long, roll back upon them, overwhelming them with business to the exclusion of all projects for improvements.

American Railroad Journal.

Saturday, December 23, 1854.

How are Railroads to be Managed?

In all enterprizes requiring the co-operation of a large number of persons, and involving complicated operations, an unity of interest, and of purpose, is essential to success. Take an establishment for the manufacture of cotton cloth. Here, every kind of service is paid by the *piece*. The compensation is always proportioned to the amount and value of the labor performed. The interest of the operative and the principal is thus brought into exact harmony, and both labor together to the same result. This mutuality of interest becomes a principle, or rule of conduct, that actuates the whole establishment, securing industry, faithfulness, vigilance, and harmony on the part of every member from the highest to the lowest.

Success in similar enterprizes is hardly possible except under similar conditions.

Our roads are economically *built*, because the principle of mutual interest and co-operation prevails in their construction. The aid of a large number of contractors is secured, who are paid by the *piece* at a reasonable profit. Competition always protects a company against exorbitant prices. The contractor makes his money rather by what he *saves*, than what he gets; and as long training and experience have taught him the art of accomplishing the greatest possible amount of work with the least outlay, our roads which are well managed, and where there is no lack of means, are built at a very low cost.

But as soon as a road is completed, that mode of conducting elaborate operations, which is considered essential to success in all other enterprizes, is abandoned. It becomes an important consideration, therefore, whether railroads can be successfully conducted in any other manner, and whether there be any obstacles in operating them, upon the principle of mutual interest and co-operation.

It is well understood that to succeed in the ordinary branches of manufacturing, not a penny can be lost. This is the reason why every employee of a company is paid according to the *value* of his labor. Such person, therefore, performs the greatest possible amount of labor, as the means of increasing his wages in an equal degree. But were a person paid by the *day*, then, in ordinary cases, his great aim in the end would be to perform as little service as possible for his wages. In the one case, *success* is the easy and certain re-

sult. In the other, *failure*, equally certain. Now railroads are conducted upon a principle which, as we have shown, would prove fatal to success in other enterprizes. But railroad companies are liable to suffer much more than any other interest from ignoring the principle of mutual co-operation. In a cotton manufactory, it is easy to place every workman under the eye of an experienced superintendent. If the former commits a mistake, he only, as a general rule, involves the value of his own labor; and that for a very short time. On a railroad, on the other hand, a vast number of men must be employed who have to be left to themselves, and to whom an overseer does not supply the lack of *principle*. A vast consequence often hangs upon the act of the humblest person employed on the road. The slightest carelessness of the *switch-tender* may precipitate an immense amount of property, or a great number of valuable lives to instant destruction. The want of training or carefulness on the part of the engine driver may be followed by equally disastrous results. The power to do mischief, or the waste and destruction resulting from carelessness or incompetency, is tenfold greater on a railroad than anywhere else. There is, consequently, tenfold greater need of the proper and only corrective, an *interest on the part of a sufficient number of employees on a railroad in the results of their labors*.

It may be asked, if railroads are conducted upon principles radically *false*, why so many of them have proved so successful. One reason is, that till competition brings down the rates, companies charge a sum sufficient to cover their losses; and further, in the early stages of the operations of a road, the causes described do not manifest themselves in their full force. The early administration, as a general rule, is characterized by a greater degree of integrity and faithfulness than its subsequent administration. Hence a road often starts off with flattering evidence of success, which afterwards becomes involved in difficulty from faultless, or incompetent management. In England the value of railroad property has steadily deteriorated. Has not the tendency which produced such results there, manifested itself in this country? Look at the numerous railroads entering Boston. The profits of these roads culminated in 1847, nearly 8 years ago, though the gross receipts have steadily increased since that date. What right have we to suppose that similar results will not show themselves in other parts of the country, as soon as its roads shall have a history? Have we a right to suppose that railroads can succeed, only by being conducted upon the principles acknowledged to be essential to success in all similar enterprizes? Have we any right to expect for them an immunity from the laws that control similar cases? Is not such an exception impossible in any department of industry, particularly in railroads, which are most liable of all to suffer from the causes named?

In order to see what would be gained by the plan proposed, we will take as an illustration, the New York and Erie Railroad. We assume, what we believe to be the fact, that the road, according to the ordinary standard, is well managed. But even in this road there must be enormous leaks which no prudence, foresight or capacity of the superintendent can stop. The extent of his duties renders a personal supervision of the greater

part of the operations of the road impossible. He can only be felt through *subordinates*. His great office and duty is to secure harmony of action between the different parts of the vast machinery under his charge. But the harmony which restraint imposes is always at the expense of a certain portion of the efficient power of the agent, while that springing from the unity of interest and of purpose is not only more perfect in its kind, but vastly increases the power of the individual. The one develops; the other destroys his *morale*.

To secure the value and effective co-operation of the employees on a road, their *interests* must be made to harmonize with their *duties*. The principle of action springing from a mutuality of interest must animate every person employed. As a road is now conducted, the whole force on it is in a chaotic state, in which the *centrifugal* force, which leads a man to regard his own comfort and advantage, is quite as strong as the *centripetal*, which should lead him to prefer to his own, the advantage of the company that employs him. We do not instance the above company as an exception, (for we believe it to be well managed under the present system,) but as the rule.

Suppose the Erie Company were to lease their road for a period of five years, say, at 50 per cent. of its receipts, to a private company composed of ten men, all of them as competent in their respective departments to be assigned them as is the present superintendent. To one, would be allotted the superintendence of repairs of track; to another, of machinery; to a third, the passenger traffic; to a fourth, the freight; to a fifth, the reception and disposition of freight, &c., &c.; each of the departments to be also subdivided, with a proper interest to various subordinates. Suppose for instance, that in addition to their ordinary salaries, a premium of \$500 be offered to every engineer who should, during the year, run a given number of miles at a *minimum* cost; (taking fuel, wear and tear, and accidents, &c., into consideration); \$400 to such as should come up to another limit; \$300 to those that came within the *third*, &c., &c. Does any one doubt that a vast saving would be effected? Suppose similar rewards were offered for meritorious conduct in other departments, which rewards in fact would be a part of the saving effected in each; is there any question that such a system of *partnership* would reduce expenses 33 per cent. below their present amount? We have no doubt of it. We have no doubt such would be the conviction of every man experienced in railroad affairs. No man who will reflect upon the saving to be effected by making the pay of the employee dependent upon the value of the service he performs, can come to any other conclusion.

There is probably no branch of industry or enterprise where there is so much incompetency to the duties assigned them, as among employees on railroads. The reason is obvious. As a general rule, Directors have no acquaintance with the practical working of railroads. They are, consequently, not judges of the qualifications of their employees. Such employees, as before shown, have not the proper stimulants for leading them to qualify themselves for their respective callings. They have fixed compensations, which are neither diminished nor increased by the value of the service they may perform. The great stimulus to

improvement is wanting. If a road is well managed, it may be cwing, perhaps, to the qualities of one individual, the Superintendent. When he leaves the road, anarchy, mismanagement, and failure may be the results. A competent person does not always appear to fill the place vacated. Hence the uncertainty which is felt to prevail in the value of railroad investments. Now suppose all the roads in the Union were worked by *contract* in the manner proposed. Is it not plain that every employee upon them would have his eye on the best roads in the country, and make the control of such road the height of his ambition? Any person employed on a railroad would have a constant stimulus to improve himself, according to his capacity. Were the road let to a private co'y, frequent vacancies would, of course, occur in such company, to be filled by the most meritorious employee on it.

Such a stimulus would have the effect to fit men to fill any vacancy in the managing direction. One change might lead to a dozen other promotions, so that every employee would be in the direct line of preference. With such inducements, no further care would be required to qualify men for the discharge of their duty; as the strongest possible motive would certainly be presented.

We do not believe there is any insurmountable obstacle in realizing of the plan suggested. There might, in some companies, be some apparent difficulties in the way; but these would arise rather from the magnitude of the undertaking than anything else. So far as the *meremanagement* is concerned, this could be carried on by parties working for themselves, as well as for the Railroad company. Before a road is leased, it should, if possible, be placed in good running order, with a sufficient equipment. The condition of both should be definitely ascertained by competent parties, as security that the road would be kept up; ascertain per centage might be reserved by the company sufficient to cover all risks. Other details could be arranged with equal facility. We are confident that all the apparent difficulties would be easily resolved, upon proper investigation and inquiry.

By the leasing of a road a vast saving would be effected, not only in the manner described, but in obtaining a better ordered system of finances, to which the Directors would have full time to devote themselves—an advantage certainly worthy of consideration.

We think that the plan proposed would have a decided tendency to check the over-construction of Railroads. Where parties could not be found who would contract at the outset to pay one-half of the earnings of the company, this would be conclusive, and taken as good evidence against expediency of its construction.

We forbear working out in the present number the details of the plan suggested. These we reserve to another occasion. We solicit attention to the subject. In the discussion of it, we wish every person to ask himself whether railroads can succeed, unless they are subjected to the same rules and conditions acknowledged to be necessary to success in all similar undertakings? Further, whether such rules and conditions are not much more necessary to the success of Railroads, than in any other operations.

We shall pursue the discussion of this important subject.

Railways in Canada.

The following is a schedule of the several companies incorporated for the construction of railways in Canada, from the date of the first charter (25th of February 1832,) to the close of the session of 1852.

Name of Company Incorporated.	Amount Capital.	No. of miles un-der cont.	No. of miles comp.
Champlain & St. Lawrence	\$200,000	—	16
Branch lines of do.....	300,000	—	52
Cobourg.....	1,600,000	chart'r exp'd	—
Great Western & branches	10,000,000	65	240
Hamilton and Port Dover.	2,000,000	40	—
Erie and Ontario.....	600,000	—	17½
Toronto and Lake Huron..	2,000,000	not com'ced	—
Niagara and Detroit.....	2,000,000	chart'r exp'd	—
Huron and Ontario.....	1,400,000	chart'r exp'd	—
Quebec and Province Line	—	chart'r exp'd	—
London and Devonport...	200,000	chart'r exp'd	—
Canada Union.....	400,000	not com'ced	—
Upper and Lower Ottawa.	120,000	chart'r exp'd	—
Eastern Townships.....	600,000	chart'r exp'd	—
St. Lawrence and Atlantic	—	See G. Trunk	—
Montreal and New York..	3,460,000	—	49
Branch of 120 miles....	—	not com'ced	—
Montreal and Kingston...	4,000,000	not com'ced	—
Wolfe Island, Kingston and Toronto.....	4,000,000	chart'r exp'd	—
Peterboro' and Port Hope.	1,000,000	109	—
Hamilton and Toronto...	1,800,000	45	—
Branch.....	—	32	—
St. Lawrence and Industry	48,000	—	13
Woodstock and Lake Erie.	2,000,000	75	—
Bytown and Britannia....	40,000	chart'r exp'd	—
Carillon and Greenville...	240,000	—	12
Canada, New Brunswick, and Nova Scotia.....	8,000,000	not com'ced	—
Montreal and Province Line Junction.....	300,000	not com'ced	—
Toronto and Goderich....	3,000,000	cht'r rep'd	—
Montreal & Verrill's Junction.	400,000	68	—
Ontario, Simcoe & Huron.	2,000,000	4½	92½
Branch.....	1,000,000	60	—
St. Lawrence and Ottawa...	—	not com'ced	—
Industry and Rawdon...	36,000	—	10
Quebec and Richmond....	—	See G. Trunk	—
Quebec and St. Andrews.	2,000,000	not com'ced	—
Bytown and Prescott....	6,000,000	—	63
Kingston and Toronto...	3,000,000	not com'ced	—
Toronto and Guelph....	—	(Included in G. Trunk)	—
Extension of do.....	—	—	—
Wolfe Island.....	200,000	not com'ced	—
Grand Trunk of Canada...	16,000,000	—	—
Increased by amalgamation of companies to...	38,000,000	720	392
Grand Trunk of Can. East. (Included in G. Trunk.)	—	—	—
Cobourg and Petersburg...	—	—	25
Galt and Guelph.....	560,000	16	—
Grand Junction.....	—	(Included in G. Trunk.)	—
Buffalo, Brantford and Goderich.....	4,000,000	78	80
North Shore Railway....	2,400,000	145	—
London and Port Sarnia...	2,000,000	60	—
Montreal and Bytown....	2,400,000	120	—
Megantic Junction.....	400,000	not com'ced	—
Port Whitby and Lake Huron.....	—	not com'ced	—
Brockville and Ottawa...	2,000,000	130	—
Stanstead, Shefford and Chambly.....	3,000,000	95	—
London and Port-Stanley.	600,000	25	—
Vandreuil.....	1,000,000	34	—
Cutaraqui and Peterboro..	1,500,000	not com'ced	—
Port Dalhousie and Thorold.....	300,000	5	4
Bytown and Pembroke...	1,600,000	not com'ced	—
Perth and Kemptville....	600,000	not com'ced	—
Prince Edward.....	1,400,000	not com'ced	—

Total number of charters granted to railroad companies, 56; number of companies whose charters have expired from *non user*, 10; number of companies which have not as yet commenced laying down their roads, 14; number of roads now in the course of construction in the province, 32. Be-

longing to the latter class, 1,193 miles have been completed, and 2,022 are more or less advanced, besides a vast number of miles of road which have not yet been commenced.

Railroad Convention at Cleveland.

A meeting of the Representatives from the principal railroads between the sea board and the Mississippi, and north of the Ohio river, was held at Cleveland, on the 28th November. Among the roads represented were:

Boston and Worcester,
Western (Mass.),
New York Central,
" " and Erie,
Pennsylvania,
Baltimore and Ohio,
Philadelphia, Wilmington and Baltimore,
Ohio and Pennsylvania,
Ohio Central,
Cleveland, Columbus and Cincinnati,
Ohio and Mississippi,
Steubenville and Indiana,
Michigan Central,
" Southern, &c., &c.

During the past season a series of meetings has been held in New York, Philadelphia, Buffalo, &c., to regulate in common various matters connected with the railroad interests of the country; such as the employment of runners; free passes; through tickets, and rates of fare for Passenger, Freight, and Mail Transportation. On the organization of the convention, a committee of one from each road represented was appointed, who reported the following Resolutions, which were adopted by the meeting.

Resolved, That on and after the 1st of December next, the several lines here represented will discontinue the employment of runners and solicitors of passengers, and will discountenance the employment of all such by railroad and steamboat lines; and that no commission shall be allowed for procuring passengers, either directly or indirectly.

Resolved, That no office for the sale of tickets be allowed other than the ticket offices at the depots of the several companies, except at Buffalo, St. Louis, Chicago, New York, Boston, Rochester, Pittsburg, Cincinnati, Cleveland, Columbus, Philadelphia, Louisville, Baltimore, Washington City and Wheeling.

Resolved, That no free pass will hereafter be issued or renewed to any shipper or forwarder of freight, as such.

Resolved, That no return pass will be issued to any owner or driver of stock, nor will any such owner or driver be passed free on any other train than that which conveys his stock.

Resolved, That in the judgment of this convention, no general pass ought to be issued, except to the President, Superintendent, principal ticket, or passenger and freight agent, and lost baggage master.

Resolved, That a special pass issued upon one road, shall not be regarded as entitling the holder to a pass on any other road, though a connecting line.

Resolved, That in the opinion of this convention, the whole system of free passes, except as above provided for, ought to be abolished as early and speedily as possible.

Resolved, That each company be recommended

to get up coupon tickets for sale in its several ticket offices; that each coupon ticket shall bear the signature of the Superintendent or the general ticket agent of the road issuing such ticket; and the year and month in which it is issued shall be plainly written, printed, or stamped on its face, and that each coupon of a set shall bear the initials of each railroad of the entire set, in such manner as to designate the particular route over which such coupons are sold.

The resolutions regarding emigrants are too long for insertion entire. Below we give the substance of such as were adopted.

1st. The four great lines leading from the East with their connections and branches, to make such arrangements as will secure to passengers and their baggage a passage over their lines at moderate and uniform rates.

2d and 3d. That all the passengers ticketed or baggage engaged in the cities of New York and Boston or elsewhere to go to places west or south of Suspension Bridge, Buffalo, Dunkirk, Pittsburg or Wheeling, shall be consigned and directed either to the Great Western, Buffalo and Brantford, Lake Shore, Ohio and Pennsylvania, Central Ohio, and Cleveland and Pittsburg roads; or to the steamboats running in connection with some of the lines represented; and that the several companies to which they are thus forwarded will not take any ticket, nor receive any order from any company or person other than those issued by the four great lines together with the Hudson River, the Western Railroad of Mass., and the people's line of steamers; also that they (the Western Companies) as far as in their power, will discountenance all efforts of runners and bookers from the pre-engagement of such passengers and their luggage.

4th. That the fare on emigrant trains from New York or Boston shall be—for passengers to Chicago, \$11; to Cincinnati, \$10; for all freight over 80 lbs. at the rate of $2\frac{1}{2}$ cents. per lb. to Chicago, & $2\frac{1}{4}$ cents. to Cincinnati. Of these rates the New York Central and New York and Erie companies, with their connections at New York and Boston, shall receive five-elevenths for each passenger and five elevenths per 100 lbs. of baggage to Chicago, and five tenths for each passenger and 100 lbs. of baggage to Cincinnati. To the four leading Eastern roads, there is to be allowed one tenth, beside the above, for their extra trouble and expense in procuring and ticketing passengers through. The fares are to be similar from Philadelphia and Baltimore.

5th. No runner shall be employed, nor inducement held out, to influence passengers coming from Canada or elsewhere and going west, to take any particular route, except by special agreement between the lines interested.

6th. That it is the duty of the Legislatures of Massachusetts, New York, Pennsylvania and Maryland, to protect such travellers from the extortions and deceptions now practiced upon them; that laws licensing runners or bookers should be repealed; and that it should be made a punishable offence for any party to receive any greater rates for passengers or freight than may be established by the lines.

7th. That the companies will use all their influence with their several Legislatures to procure acts in favor of the above measures.

8th. That each company selling coupon tickets shall report monthly to the several companies composing the lines over which the tickets are sold; and that settlement for such ticket sales be made directly with them.

Resolved, That no emigrant tickets other than those agreed upon in this convention, shall be received by any of the companies here represented, after 1st January, 1855.

Resolved, That the emigrant business between Boston, New York and Chicago, shall be divided equally between the North and South Shore Lines.

Resolved, That the fare for first class passengers be twenty two dollars, and the fare for emigrant passengers be eleven dollars, between New York and Chicago.

Resolved, That the rates of fare for first class passengers by either of the four lines, New York Central, New York and Erie, Pennsylvania, and Baltimore and Ohio, shall be as follows:

From New York to			
Sandusky.....	\$14 65	Belleville.....	\$16 50
Cleveland.....	13 00	Dayton, via Xenia	18 00
Detroit.....	15 00	" via Galion..	18 00
Chicago.....	22 00	" via Sandusky	18 00
Indianapolis.....	20 00	Toledo.....	16 00
Cincinnati.....	18 50	Louisville, U. S.	
Columbus.....	16 40	Line.....	20 50
Shelby.....	14 75	" Ohio & Miss.	21 00
Xenia.....	17 70	" Indianapolis	21 00

WHEREAS, Railroad Companies are frequently imposed upon by persons denominating themselves inventors, who claim to have obtained Patent rights for improvements which have been issued by the Patent Office without due consideration;

AND WHEREAS, Renewals of Patents are frequently made which are illegal and unjust.

THEREFORE, *Resolved*, That a Committee of three be appointed whose duty it shall be to oppose the extension of the class of patents above referred to, and furnish railroad companies with information necessary to their protection.

Resolved, That the compensation of such agents and the cost of all claims in reference to which the companies here represented have a general interest, shall be paid by each company, in proportion to the length of its road.

The tolls on freight are to remain the same as were adopted by the St. Nicholas meeting, other Western roads arranging their tariffs so as to correspond with those adopted by the lines running from the seaboard. The companies will not guarantee to transport freight from New York to Buffalo, Suspension Bridge, or Dunkirk, in less than six days; Cleveland, eight days; Detroit, nine days; Cincinnati and Indianapolis, ten days; and Chicago in less than twelve days. They can contract to deliver freight beyond the points mentioned, but not at a less rate than those agreed on. Nor are these rates to be altered without consent of all parties interested, except by calling a convention for that purpose. Way fares are not to exceed through. Employees violating these regulations to be instantly discharged. No company is to be at liberty to withdraw from this agreement without a written intimation to the other companies, besides giving at least 30 days' notice to that effect. Perhaps, the most important feature in the concern is the fact that a permanent organization of the companies there represented was, by a resolution to that effect, deemed expedient and

proper, to be called "The General Railroad Association of the Eastern, Middle and Western States." For this purpose, the officers of that convention were to continue to hold their appointments until others should be appointed to fill their places, and that semi-annual meetings should be held in future,—the next meeting having been appointed, on the second Tuesday of March, 1855.

An Address to the Public was read by Mr. Haupt which was accepted. The document sets forth the evil effects of competition among railroad companies; the rights of such to a fair remuneration on their investments; the unexpected amount of expenditure on wear and tear; the immense advantages to the country of which they have already been in drawing out its resources, opening regions hitherto inaccessible to all other modes of conveyance, and in the fact that, in addition to the saving of time, the cost of travel by railroad is but a fraction of what it formerly was. The Address is well written, and its arguments must tell on the travelling community.

It is in fact remarkable how *passively*, we had almost said, the people in these times have submitted to the higher rates imposed by the different companies. The almost entire absence of resistance to such a measure shows that with the community, regularity and safety are by far paramount to the mere difference of a few shillings on the fare. When, through negligence or other cause, accidents have occurred, the community are excited and every body feels more or less insecurity in travelling, from the consideration that it is uncertain who the next victims are to be. The fact that companies first fixed their own tariffs, and were then allowed to raise them to such points as they saw fit, without any thing like an earnest protest on the part of the people, certainly calls for the sentiment of gratitude on the part of railroad corporations, and increased vigilance in promoting the safety and comfort of those who sustain them.

Memphis and Ohio Railroad.

This company have made a report of their operations to 1st October last. Their original charter granted 4th February, 1852, authorized them to construct a road from Memphis to Nashville, and granted aid from the State to the extent of \$8,000 per mile for its construction, if 30 miles were finished in four years. As the route proposed was considered objectionable by the stockholders, an amendment was obtained from the Legislature by which the name of the road was changed from the "Memphis and Nashville" to the "Memphis and Ohio Railroad;" and State aid was obtained to the extent of \$10,000 per mile; besides \$300,000 extra for the bridging of the Big Hatchie, Tennessee and Cumberland rivers. The terms of the grant were, that sufficient stock should be subscribed from other sources to make the road ready for the iron, and that for the space of 30 miles, the rails should be actually laid, before they became entitled to the benefit of the State subscription.

The surveys of the road began in November, 1853; the design being that it should proceed by Trenton, where it intersects the Mobile and Ohio Railroad, to Paris, whence a line had already been projected by Clarksville and Bowling Green, to Louisville and Cincinnati. The entire distance to Paris is 135 miles. Owing to the difficulty of

making contracts with the farmers and others along the line, as originally designed, the work was delayed till June last, when an arrangement was made for the grading, finishing and equipment of ninety miles of the road, with Messrs. Harris, Black & Co. "The contractors are to construct a first class road in all its details; to finish and equip it with the necessary amount of locomotives and tenders, passenger and freight cars, water-tanks, turn-tables, sidings &c., all of which are to be of a superior order."

The first division, 30 miles long, is to be finished by the 1st July, 1855; the second division 20 miles, by the 1st October following; and the third 40 miles long, is to be ready by the 1st May, 1856. The sum to be paid the contractors is

	Per mile.	Total—90 miles.
Cash.....	\$2,500	\$225,000
State bonds.....	10,000	900,000
County and city bonds and stock.....	12,500	1,125,000

Total.....\$25,000 \$2,250,000

To meet these payments there have been subscribed to the stock by private individuals, including the contractors.....\$867,500
Stock by county of Shelby.....300,000
Stock by city of Memphis.....100,000
Stock by State of Tenn.....900,000

\$2,167,500

leaving a deficit of \$82,500, to which are to be added, engineering expenses, salaries, land damages, depot grounds, &c., making the whole amount to nearly \$300,000.

Between Trenton and Paris, a distance of 45 miles, the amount of subscription had not been received at date of report. From two counties only had returns been made, which amounted to \$120,000. The total subscriptions then received from all sources, independent of the State, were.....\$1,387,000

At an estimated cost of \$8,000 per mile for grading, the amount for 135 miles would be.....1,080,000

Consequently the company are entitled to the State grant for the whole distance, 135 miles, at \$10,000 per mile. 1,350,000

Which added to other subscriptions makes a total of.....2,737,000

At the rates payable by present contract, the cost of the whole line would be.....\$3,375,000

To which add extra expenditure for engineering salaries, &c.; 135 miles at \$2,500 per mile.....337,500

Total cost.....\$3,712,500

leaving a deficiency of.....\$975,500

or \$7,000 per mile. The President and Directors hope that by an appeal to those directly interested in the promotion of the enterprise, the necessary amount will be raised, so as to preserve the company from incurring any serious amount of debt for the construction of the road.

Of the condition of the country through which the line passes, and the consequent local business, the Secretary says:—"In the whole South-West I know of no road of equal length, that penetrates a country so well watered, so fertile, so rapidly increasing in population and wealth, and therefore so well calculated to sustain a great work like this, when built."... "These twelve counties

(through which it runs) embrace one-eighth of the territory of the whole State, and most of them are but recently settled. From 1840 to 1850, their population had increased 45 per cent."...

"The taxable wealth of these counties has increased nearly 75 per cent. during the past five years, and it now amounts to sixty millions of dollars"...

"They contained in 1850, a population of 200,000, or one-fifth of the whole State; and if the increase, since 1850, has been proportioned to that of the 10 years preceeding, their population is now at least 250,000."... "The lands produced, in 1850, one-sixth of the wheat, nearly one-fifth of the corn, more than one-half of the cotton, one-third of the tobacco, one fourth of the sweet potatoes, and one-third of the peas and beans raised in the whole State that year."

The following is an estimate of the annual business of the road. The figures are taken from a comparison with those of the Memphis and Charleston road, although the advantages, as to wealth and population are greatly against the latter.

Passengers 160,000, @ \$2.....\$320,000
Freight " ".....225,000
Mail Services " ".....15,000

\$560,000

Deducting one half for Expenses.....280,000

Leaves a net revenue of.....\$280,000
or over 8 per cent. on the estimated cost of the road.

The *through* travel is expected to be extensive. At Trenton, it will connect with the Mobile and Ohio road, and as this line is being rapidly pushed through to Cairo, passengers coming down the Northern lines will find the Memphis and Ohio road part of the most direct route to New Orleans. To the West, a line has been projected through Little Rock to the borders of Texas, and thence across the State to the Rocky Mountains. On the South, a line to Grenada connects Memphis with the Mississippi Central and the New Orleans, Jackson and Great Northern roads. But the most important connection will be on the Northeast with the Louisville and Cincinnati routes. The importance of such a line, cutting off the angle formed by the junction of the Ohio and Mississippi rivers, rendering travel safe, expeditious and cheap, will appear from the following facts taken from the Report,—

"Of the 4,290,000 persons carried on the Western rivers in 1852, 3,470,000 were carried on the waters of the Ohio and its tributaries alone."...

"In 1852, there were upwards of 3,200 landings made at Memphis, by steamers passing up and down the river. Of this number, nearly 1,400 were made by boats from Louisville, Cincinnati, and the cities above them."... "Averaging each boat at 100 passengers, the total number annually passing by Memphis, is 140,000 persons."

"Of these it may safely be assumed that 100,000 persons will take the cars and go through to Louisville in 12 hours, rather than be on the Ohio for from (three) to ten days."... "At three cents per mile, these alone would pay on the whole road to Louisville a dividend of ten per cent. on cost."... "With the completion of this road, we should be within 15 hours of Cincinnati, and 48 of New York."

The Receipts and Expenditures of the road up to 30th Sept. had been—

Received on First Installment.....	\$13,495 50
Received on Second Installment.....	1,310 00
Received on Third Installment.....	100 00
Amount obtained by Loans	9,040 06
	<hr/> \$23,945 56
Disbursed on account Engineering to July 1st....	16,573 30
Disbursed on account Engineering since July 1st to date.....	4,375 00
Disbursed on account Salaries since July 1st to date.....	2,087 45
Disbursed on account Office and other Expenses.....	909 81
	<hr/> 23,945 56

In reference to the character of the road when finished, it is stated that the line is uncommonly direct, the tangents are long, varying from 3 to 12 miles in length, united by easy curves of one to two miles radius; the least radius of curvature being over half a mile. Eighty six per cent. of the whole line is *straight*; sixty per cent. of the whole direction is *level*; and only fourteen per cent. is on the maximum grade of 50 feet per mile.

[From the Circular of Moran & Brothers.]

New York and Erie Railroad Loan.

The first and most important point to establish in regard to the new Loan of the New York and Erie Railroad Company is, whether the Company can fulfil the engagements it makes. This seems perfectly settled by the past history of the Company, as reported by the Investigating Committee, and by the estimates put forth by the Company. The latter, in our opinion, underestimates the gross receipts, and exaggerates the expenses. The results obtained last year were, in spite of

1. The break at Erie,
2. Freshets in May, which interrupted the transportation of freight for more than two weeks.
3. The Engineers' strike in June,
4. The cholera during the summer,
5. The mercantile and monetary embarrassments this autumn,
6. Fares of only,
 - \$7 50 to Buffalo now raised to.....\$9 00
 - 8 40 to Dunkirk now raised to.... 9 90
 - 4 00 for emigrants now raised to.. 5 50

Rates of freight fully ten per cent. under present rates,

The gross receipts of the road were:

In 1851-2.....	\$3,318,725	Increase.
In 1852-3.....	4,318,962	\$1,000,237
In 1853-4 (partly estim'd)	5,341,363	1,022,401

If the increase in the receipts the past year, at the low prices then charged, and under all the unfavorable circumstances above enumerated, was \$1,000,000, is it not safe to estimate the increase during the coming year at the same amount? This would make the gross receipts \$6,341,363, instead of \$6,000,000, as estimated by the Company. The mere rise of fifteen per cent. on the charges for freight and passengers, if there be no increase in the traffic, would carry the receipts to \$6,142,567.

In regard to the expenses of the working the road, they were last year 52½ per cent. on the gross receipts. The company, in their estimate for the coming year, place them at 55 per cent. Now as 55 per cent on \$7 50 last year's fare to Buffalo is only 46 per cent. on \$9—the present rate of fare—it is probable that 50 per cent will prove to be ample for the coming year—the more so as the present Superintendent, who has only been in charge of the road during five months of the past fiscal year, has introduced great economy in the expenses of running the road. The running material is better attended to, and the wear and tear is, therefore, greatly reduced. Accidents on the road are now very rare; thus avoiding the losses formerly occa-

sioned by collisions and other accidents. Old materials are used or sold. A greater amount of labor is obtained from the employees of the road without increase in the remuneration. The present Superintendent, having occupied subordinate situations on the road during the past seven years, is perfectly competent to correct any and every abuse which has heretofore existed. While great economy and order have thus been introduced in the working of the road, a still greater reduction in expenses has been obtained by reducing the speed of all the trains. The express trains, which formerly ran 35 miles per hour, will only run hereafter at an average speed of 26 miles.—The rule admitted by engineers is, that the wear and tear of a road and its equipments vary in proportion to the square of the speed at which the trains are run. Therefore, 29 miles per hour will be as 6.76, while 35 miles per hour is as 12.25.—The reduction in the speed of 9 miles per hour, therefore, reduces the wear and tear 45 per cent.

With all these facts in mind, we believe the following estimate will be amply realized:

Gross receipts.....	\$6,300,000
Expenses 50 per cent., which is equal to 60 per cent. on former rates charged last year.....	3,150,000
Net income.....	\$3,150,000
Deduct 7 per cent. on debt..	\$1,789,570
Sinking Fund.....	420,000
	<hr/> \$2,159,570

Net income applicable to cash dividends and contingencies..... \$990,430

With such a margin beyond all the engagements taken by the Company, can any one believe, for a moment, that the interest on the debt and the payments to the Sinking Fund can ever fail to be promptly met?

The earnings of the road must continue to increase yearly for a long time to come, for not only must the future increase of population and productions of the Western States add greatly each year to the traffic on the Erie Road, but there must also be a rapid and important yearly increase in the local traffic; for it is only within a few years that the counties through which the road passes have had access to a market for their products, and consequently the local traffic is, as yet only in its infancy.

The Sinking Fund of the New York and Erie Railroad Company will absorb in the twelve months after the negotiation of the loan, if the bonds are purchased

at par.....	\$420,000
Plus six months' interest on said amount, about.....	15,000

In the first year.....	\$435,000
Second year.....	420,000
Plus 6 months interest on....	\$420,000 }
Plus 12 months interest on... 435,000 }	45,000

In two years.....\$900,000

The effect of the monthly purchases of the new bonds by the Sinking Fund, must be to cause them to be firmly held at a profit from the very day of their negotiation, for all but needy sellers will wait for a rise before they sell, and those desirous of selling will only offer them when the purchases of the Sinking Fund are made. The needy sellers will probably not more than suffice for the purchases of the Sinking Fund, particularly if, as there is every probability, the money markets next year should everywhere become easy, and interest fall to moderate rates. The steadiness which all this will produce in the market value of the new bonds, will soon attract the attention of persons who have temporary investments to make and these bonds will, no doubt, soon obtain a preference from this class of capitalists over every other investment offering in this market. This will further improve their market value, so that it appears certain to us that the original takers of the new loan will realize a profit on them within a moderate time. Should the entire loan be

taken in Europe, the holders could at once establish the price at par, and the Company would be forced to take them at this price; and should the holders refuse to sell at par, the Company will then be forced to purchase the bonds of 1862 and 1871, which would, in that event, soon rise to par. If the present holders of the 1862 and 1871 bonds were to take the new loan, they would soon see their old bonds rise to par as well as the new ones. No loan has ever been offered anywhere on which a profit was so certain to be realised, as the Loan of the New York and Erie Railroad Company.

As the Company has decided to close Construction Account for the present, there is no danger that the pecuniary embarrassment of the past can ever again occur.

Buffalo Car Company.

This company, which carries on the business formerly established by Messrs. TOWNSEND & COIR at Buffalo, N. Y. is organized under the general manufacturing law of this State, with a capital of \$50,000 which can be increased as the business may require.

The *Buffalo Republic* of the 16th inst. says of the works of this company, that they are situated on Scajaquadies creek, lower Black Rock, and about four miles from the centre of the city.—There are three large brick and two temporary wooden buildings, connected with the Buffalo and Niagara Falls and the Buffalo and Lockport Railroads in front by tracks running through the buildings, and in the rear having a water front on Scajaquadies Creek. It is contemplated to erect, during the coming season a large brick paint shop on the ground occupied by the wooden buildings. In the rear of the paint shops is the setting up shop, a spacious building 60 x 132 feet, with three large doorways, through each of which the three tracks laid down in this building and the paint shops run out on to switches connecting with the two railroads in front. Every portion of the car, wood and iron, is of course completed before it reaches this department. Here the finished material takes the distinctive form of a car, and leaves the building for the finishing touch of the painter.

In the rear of this is the wood shop, a building two stories high, 100 by 50 feet, the first floor of which is fitted for the coarser kinds of wood work. Here are two large timber planers for planing whole pieces of timber, several planing machines, rip saws, with double carriages, circular saws, tenon saws, morticing and boring machines, &c.—Above this is a room of the same dimensions, fitted for the finer kinds of wood work.

In the rear of the wood shop is the blacksmith shop, 50 by 60 feet, containing six forges, all of which are fanned by a large fan blower.

On the North side of these two buildings, and running parallel with them, is the machine shop and foundry. The machine shop 100 by 50 feet, two stories high, is a counterpart of the wood shop. In this shop the axles are turned to fit the wheels, and the wheels are bored to fit the axles. This lower room is filled with a number of valuable machines, such as lathes, drills, screw cutters, machines for boring wheels, pressing them on the axles and the like.

Back of the machine shop, and divided from it by a brick wall, is the foundry, 40 by 80 feet, containing two large cupolas for melting iron for the wheels and other castings. A huge revolving crane is erected in the middle of the room, by

which means heavy articles can be moved in any direction.

The cupolas are fed from a building in the rear of the foundry, into which they open and which is furnished with every convenience for weighing and conveying into them the coal and crude metal.

We now come to the motive power, which perhaps should have been considered first, as this is the heart by which means all the machinery in its various throbbings is propelled. This consists of a beautiful upright engine, modelled and made by the company, of seventy horse power, (although forty horsepower is all that will ordinarily be needed) situated in a building between the wood and machine shops, which also contains the boiler.—The water for the boiler and buildings is supplied by a cistern filled from the creek by means of a steam pump.

There is ample room for all purposes of storage in the rear of the works, where there are sheds for coal and sand which is brought by way of the creek, and landed on the dock attached to the premises. Altogether this is one of the most complete establishments in the country, having a capacity for the construction of three cars per day, and reflects great credit on the originator, D. J. Townsend, Esq., to whom we are indebted for the organization and successful completion of this valuable manufacturing establishment in our city.

Cleveland, Columbus and Cincinnati Railroad.

In the blank of dividends the present half year, there is one bright spot—the Cleveland, Columbus and Cincinnati Railroad—which has just declared a semi annual dividend of five per cent. payable on the 20th January next.

The earnings of this road for the past year have been (December estimated).....\$1,211,100
Expenses.....605,550

Net earnings.....605,550

Equal to 14 per ct. upon cost of.....\$4,300,000
The dividends paid by the above road for the past year have been the following;

In July 4 per cent. in cash.
" " 4 " " in stock.
" Jan. 5 " " in cash.
Or 13 in all.

The following statement will show the cost, earnings, per centage of gross and net earnings of the above road.

Year.	Cost.	Gross Earnings.	Per centage of Gross Earnings.	Net Earnings.
1851.....	\$3,025,888	\$466,317	15½	9¾
1852 : ..	3,426,897	777,798	22¾	14
1853... ..	3,924,518	1,119,019	28	14
1854... ..	4,300,000	1,211,100	28	14

Milwaukee and Mississippi Road. From the Milwaukee Sentinel.

The receipts of the Milwaukee and Mississippi Railroad for November are as follows:

Passengers.....	\$14,176 80
Freight.....	40,650 58
Total.....	\$34,827 53

The comparison with November, as well as September and October of last year, is as follows:

	1853.	1854.
September.....	\$35,297 43	\$60,253 64
October.....	41,597 24	76,776 64
November.....	27,050 17	54,827 38

Total three months\$103,944 84 \$191,857 61
Showing that the receipts have been nearly doubled since last year.

It will be seen below that the aggregate receipts so far for 1854 are \$435,186 01. The total estimate for the year was \$400,000, and as the receipts for December, estimated at \$34,884 77, will doubtless reach at least \$50,000, there will be a total sum for the year largely in excess of the estimate.

The following table presents the receipts for each month, so far:

	Passengers.	Freight.	Total.
January.....	\$6,376	\$16,847	\$23,224
February.....	6,009	20,182	56,192
March.....	6,877	13,896	20,773
April.....	7,692	10,629	18,321
May.....	14,379	27,400	41,785
June.....	17,310	27,941	45,252
July.....	16,090	19,464	35,555
August.....	13,105	19,218	32,324
September.....	16,223	43,930	60,253
October.....	20,175	56,600	76,776
November.....	14,176	40,650	54,827
Total for 11 mos\$138,416	\$296,769	\$435,186	

OFFICE OF THE CLEVELAND, COLUM. & CIN. R.R. Co. }
CLEVELAND, December 13, 1854.

DIVIDEND NOTICE.—A Cash Dividend of Five per cent. on the capital stock of this company from the net earnings of the Road for the six months, ending 31st inst., has been declared, payable in conformity with the by-laws of the Company, on the 20th day of January next.

Stockholders registered on the New York books will be paid at the Office of Messrs. Winslow, Lanier & Co., No. 52 Wall st.

Transfer books will close from the evening of the 31st inst. to the 10th of January, inclusive.—By order of the Board of Directors.

T. P. HANDY, Treasurer

A Good Machine Draftsman.

WELL acquainted with the arrangements and details of locomotives, wishes a situation in a Locomotive Works or Railroad Shop. Has given considerable attention to the burning of Anthracite Coal, and can produce undoubted testimonials as to character and qualifications. For further information address Box No. 1116 Philadelphia P. O. 51 2t

BUFFALO CAR COMPANY.

THIS Company having now completed their extensive Car Works are filling orders for the construction of PASSENGER BOX, BAGGAGE PLATFORM and CATTLE CARS of the most approved style and finish. The works have connections with the various lines of railway east and west, which gives them all required facilities for the delivery of cars in every direction.

Orders are respectfully solicited, address to the
BUFFALO CAR COMPANY,
Office 37 Pearl st., Buffalo, N. Y.

51 tr

Lithography.

G. WEISSENBORN, Civil Engineer and draughtsman 113 Fulton St. up stairs; also gives his attention to the engraving of maps, and machinery on stone. Locomotives are neatly lithographed at this establishment on the most reasonable terms.—Orders are solicited. 50 tr

Railroad Iron.

500 TONS No. 1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

99 and 101 John st.

N. B.—The above Iron constantly imported. 32 tr

Railroad Iron.

THE Undersigned, having made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton Works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers, and Wire Rods; Rivets and Merchants Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWETT

February 16, 1855.

17 Burling Slip, New York.

Ontario, Simcoe & Huron R.R. CANADA.

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day.—On the opening of the navigation a Steamer will ply on Lake Simcoe in connection with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kalookah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS.—In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

CHAMPLAIN CANAL.

Sealed proposals will be received at the Canal Commissioner's Office, in the city of Albany, until the 20th day of December, 1854, at 9 o'clock A.M., for the following described work, to wit:—

Penalty When to be in bond. completed.

Description of the work.
Three combined locks, towing path bridge and necessary section work to bring the same into use, located at Waterford.....\$18,000.. April 1st, 1856.

ENLARGEMENT OF THE ERIE CANAL—MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse, until the 21st day of December next, at 9 o'clock in the forenoon, for the following described work, to wit:—

Description of work.	Amount of penalty in bond.	Time of completion.
Section 157.....	\$1,200..	April 1st, 1855.
" 189.....	2,300..	" " 1857.
" 190.....	4,000..	" " "
" 191.....	4,700..	" " "
" 192.....	7,200..	" " "
" 193.....	8,600..	" " "
" 194.....	8,700..	" " "

Culverts on sections No. 189 to 197, inclusive... 2,800.. " " "

Road and farm bridge abutments on sections No. 189 to 193, inclusive... 3,100.. " " "

Road and farm bridge abutments on sections No. 194 to 197, inclusive... 2,300.. " " "

Putnam Brook waste weir on section No. 192.... 900.. " " "

ENLARGEMENT OF THE OSWEGO CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Fulton, until the 22d day of December next at 9 o'clock in the forenoon, for the following described work, to wit:—

Section 5	Liverpool	\$9,000.. April 15, 1857.
" 6	Level.	6,000.. " " "
" 7 & 8	Level.	8,000.. " " "
" 18	Level.	8,000.. " " "
" 19	Phoenix	7,000.. " " "
" 20	Level.	7,000.. " " "
" 21	Level.	6,000.. " " "
Culverts on sections 5 & 6		2,500.. " " "
and 21.....		18, 19, 2,500.. " " "

Bridge at Phoenix..... 600.. July 1st, 1855.

Lengthening guard lock 2. 400.. April 15, "

Bridge at Oswego..... 1,000.. " " "

ENLARGEMENT OF THE CAYUGA AND SENECA CANAL.

Sealed proposals will be received at the Engineer's Office, in the village of Albion, until Wednesday, the 27th day of December next at 9 o'clock A. M., for the following described work, to wit:—

Section 232 with penalty in bond of.....	\$3,700
" 233 " " ".....	5,400
" 234 " " ".....	7,600
" 235 " " ".....	4,500
" 236 " " ".....	5,400
" 237 " " ".....	4,600
" 238 " " ".....	6,500
" 239 " " ".....	8,300
" 241 " " ".....	6,100
" 242 " " ".....	4,300
" 243 " " ".....	3,800
" 244 " " ".....	2,000
" 285 " " ".....	8,000
" 286 " " ".....	7,000
" 287 " " ".....	6,000
" 290 " " ".....	9,200
" 291 " " ".....	8,100
" 292 " " ".....	8,000
" 293 " " ".....	7,500
" 294 " " ".....	8,400
" 295 " " ".....	6,200
" 296 " " ".....	7,300
" 297 " " ".....	6,500
" 298 " " ".....	6,700
" 310 " " ".....	3,000
" 311 " " ".....	6,700
" 312 " " ".....	6,800
" 313 " " ".....	10,000
" 314 " " ".....	7,300
" 315 " " ".....	8,500

Culverts on Sections 232 to 244.....	2,300
" " 285 to 298.....	8,000
" " 310 to 315.....	5,000

Mud Creek Aqueduct.....	5,500
Bridge Abutments on Sections 232 to 244.....	5,700
" " 285 to 298.....	7,000
" " 311 to 315.....	3,100

Waste Weir on Section 313.....	500
--------------------------------	-----

Section 232 to 244, both inclusive, with the Culverts and Bridge Abutments on said Sections, to be completed by April 1st, 1857. The remainder of said work to be completed by the 1st day of April, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborers' wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent. of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the Canal Commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to them, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the time specified for the several lettings.

Dated at ALBANY, November 29th, 1854.

HENRY FITZHUGH,
FREDERICK FOLLET,
CORNELIUS GARDINIER, } Canal Comm'rs.
JAMES M. COOK, Comptroller.
JOHN T. CLARK, State Eng. and Surveyor.

New York and Erie R. R.

On and after Monday, Nov. 20th, and until further notice
PASSENGER TRAINS
will leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 7 a.m. for Buffalo.
DUNKIRK EXPRESS, at 7 a.m. for Dunkirk.
MAIL, at 8 1/2 a.m. for Dunkirk and Buffalo, and intermediate stations.—Passengers by this train will remain over night at any Station between Binghamton and Corning, and proceed the next morning.

ROCKLAND PASSENGER, at 2 1/2 p.m. (from foot of Chambers Street) via Piermont, for Suffern and intermediate stations.

WAY PASSENGER, at 4 p.m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5 p.m. for Dunkirk and Buffalo.

EMIGRANT, at 6 p.m., for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 5 p.m.

These Express Trains connect at Elmira, with the Elmira & Niagara Falls Railroad, for Niagara Falls, at Buffalo and Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

47 tf. D. C. McCALLUM, General Sup't.

Locomotives for Sale.

THE Subscriber offers for sale the following Locomotives and Tenders, suited for a 5 feet gauge.

One very superior 18 ton Passenger Engine. Driving Wheels, 5 1/2 feet diameter with 8 wheel tender.

One very superior 16 ton Freight Engine. Driving Wheels, 4 feet diameter with 8 wheel Tender.

The above machines are from one of the best shops in the country, built and finished in the best manner, and can be delivered in ten days from receipt of order. To any company in want of such machines, these are recommended.

For Price, terms, &c., apply to THOS. M. CASH,
Philadelphia Railway Agency,
No. 80 South Fourth st.
PHILADELPHIA.

Notice to Contractors.

EUROPEAN & NORTH AMERICAN R. R.

NEW BRUNSWICK.

Contract for Sleepers or Cross Ties.

WANTED 100,000 Hachmetae or Cedar Sleepers to be delivered in equal proportions at the Port of St. John and the Bend of the Petitcodiac River on or before 1st of August next.

The Ties to be sound and straight, nine feet long, ten inches by six inches, with a hewn surface top and bottom of not less than eight inches.

Parties desirous of tendering for the above or any portion of them are requested to send in their prices to the undersigned at his office, St. John, on or before the 25th December, 1854.

W. E. ROSE.

St. John, Nov., 1854.

47 tf.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,

M. of M., Baltimore and Ohio R. R. Co.,

at BRIDGES & BRO.,

64 Courtland st., New York.

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE SOUTH AND WEST.

Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$15 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	16 00

An extra charge will be made for meals and state rooms on board the boats.

S. L. SPAFFORD,

General Sup't.

Faggotted Car and Engine Axles

FORGED BY RANSTEAD, DEARBORN & CO., BOSTON, Mass.

These Axles are drawn from the faggot entirely by the hammer, and are all warranted.

Welded Wrought Iron Tubes.

THE subscribers having lately added to their Cumberland Nail and Iron Works an establishment for making Wrought Iron Tubes, are now prepared to supply the trade with tubes two to twelve feet in length, furnished with screws and ferrules on their ends, of the following sizes—inside diameter,

3/4, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 3, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6, 6 1/2, 7, 7 1/2, 8, 8 1/2, 9, 9 1/2, 10, 10 1/2, 11, 11 1/2, 12, 12 1/2, 13, 13 1/2, 14, 14 1/2, 15, 15 1/2, 16, 16 1/2, 17, 17 1/2, 18, 18 1/2, 19, 19 1/2, 20, 20 1/2, 21, 21 1/2, 22, 22 1/2, 23, 23 1/2, 24, 24 1/2, 25, 25 1/2, 26, 26 1/2, 27, 27 1/2, 28, 28 1/2, 29, 29 1/2, 30, 30 1/2, 31, 31 1/2, 32, 32 1/2, 33, 33 1/2, 34, 34 1/2, 35, 35 1/2, 36, 36 1/2, 37, 37 1/2, 38, 38 1/2, 39, 39 1/2, 40, 40 1/2, 41, 41 1/2, 42, 42 1/2, 43, 43 1/2, 44, 44 1/2, 45, 45 1/2, 46, 46 1/2, 47, 47 1/2, 48, 48 1/2, 49, 49 1/2, 50, 50 1/2, 51, 51 1/2, 52, 52 1/2, 53, 53 1/2, 54, 54 1/2, 55, 55 1/2, 56, 56 1/2, 57, 57 1/2, 58, 58 1/2, 59, 59 1/2, 60, 60 1/2, 61, 61 1/2, 62, 62 1/2, 63, 63 1/2, 64, 64 1/2, 65, 65 1/2, 66, 66 1/2, 67, 67 1/2, 68, 68 1/2, 69, 69 1/2, 70, 70 1/2, 71, 71 1/2, 72, 72 1/2, 73, 73 1/2, 74, 74 1/2, 75, 75 1/2, 76, 76 1/2, 77, 77 1/2, 78, 78 1/2, 79, 79 1/2, 80, 80 1/2, 81, 81 1/2, 82, 82 1/2, 83, 83 1/2, 84, 84 1/2, 85, 85 1/2, 86, 86 1/2, 87, 87 1/2, 88, 88 1/2, 89, 89 1/2, 90, 90 1/2, 91, 91 1/2, 92, 92 1/2, 93, 93 1/2, 94, 94 1/2, 95, 95 1/2, 96, 96 1/2, 97, 97 1/2, 98, 98 1/2, 99, 99 1/2, 100, 100 1/2, 101, 101 1/2, 102, 102 1/2, 103, 103 1/2, 104, 104 1/2, 105, 105 1/2, 106, 106 1/2, 107, 107 1/2, 108, 108 1/2, 109, 109 1/2, 110, 110 1/2, 111, 111 1/2, 112, 112 1/2, 113, 113 1/2, 114, 114 1/2, 115, 115 1/2, 116, 116 1/2, 117, 117 1/2, 118, 118 1/2, 119, 119 1/2, 120, 120 1/2, 121, 121 1/2, 122, 122 1/2, 123, 123 1/2, 124, 124 1/2, 125, 125 1/2, 126, 126 1/2, 127, 127 1/2, 128, 128 1/2, 129, 129 1/2, 130, 130 1/2, 131, 131 1/2, 132, 132 1/2, 133, 133 1/2, 134, 134 1/2, 135, 135 1/2, 136, 136 1/2, 137, 137 1/2, 138, 138 1/2, 139, 139 1/2, 140, 140 1/2, 141, 141 1/2, 142, 142 1/2, 143, 143 1/2, 144, 144 1/2, 145, 145 1/2, 146, 146 1/2, 147, 147 1/2, 148, 148 1/2, 149, 149 1/2, 150, 150 1/2, 151, 151 1/2, 152, 152 1/2, 153, 153 1/2, 154, 154 1/2, 155, 155 1/2, 156, 156 1/2, 157, 157 1/2, 158, 158 1/2, 159, 159 1/2, 160, 160 1/2, 161, 161 1/2, 162, 162 1/2, 163, 163 1/2, 164, 164 1/2, 165, 165 1/2, 166, 166 1/2, 167, 167 1/2, 168, 168 1/2, 169, 169 1/2, 170, 170 1/2, 171, 171 1/2, 172, 172 1/2, 173, 173 1/2, 174, 174 1/2, 175, 175 1/2, 176, 176 1/2, 177, 177 1/2, 178, 178 1/2, 179, 179 1/2, 180, 180 1/2, 181, 181 1/2, 182, 182 1/2, 183, 183 1/2, 184, 184 1/2, 185, 185 1/2, 186, 186 1/2, 187, 187 1/2, 188, 188 1/2, 189, 189 1/2, 190, 190 1/2, 191, 191 1/2, 192, 192 1/2, 193, 193 1/2, 194, 194 1/2, 195, 195 1/2, 196, 196 1/2, 197, 197 1/2, 198, 198 1/2, 199, 199 1/2, 200, 200 1/2, 201, 201 1/2, 202, 202 1/2, 203, 203 1/2, 204, 204 1/2, 205, 205 1/2, 206, 206 1/2, 207, 207 1/2, 208, 208 1/2, 209, 209 1/2, 210, 210 1/2, 211, 211 1/2, 212, 212 1/2, 213, 213 1/2, 214, 214 1/2, 215, 215 1/2, 216, 216 1/2, 217, 217 1/2, 218, 218 1/2, 219, 219 1/2, 220, 220 1/2, 221, 221 1/2, 222, 222 1/2, 223, 223 1/2, 224, 224 1/2, 225, 225 1/2, 226, 226 1/2, 227, 227 1/2, 228, 228 1/2, 229, 229 1/2, 230, 230 1/2, 231, 231 1/2, 232, 232 1/2, 233, 233 1/2, 234, 234 1/2, 235, 235 1/2, 236, 236 1/2, 237, 237 1/2, 238, 238 1/2, 239, 239 1/2, 240, 240 1/2, 241, 241 1/2, 242, 242 1/2, 243, 243 1/2, 244, 244 1/2, 245, 245 1/2, 246, 246 1/2, 247, 247 1/2, 248, 248 1/2, 249, 249 1/2, 250, 250 1/2, 251, 251 1/2, 252, 252 1/2, 253, 253 1/2, 254, 254 1/2, 255, 255 1/2, 256, 256 1/2, 257, 257 1/2, 258, 258 1/2, 259, 259 1/2, 260, 260 1/2, 261, 261 1/2, 262, 262 1/2, 263, 263 1/2, 264, 264 1/2, 265, 265 1/2, 266, 266 1/2, 267, 267 1/2, 268, 268 1/2, 269, 269 1/2, 270, 270 1/2, 271, 271 1/2, 272, 272 1/2, 273, 273 1/2, 274, 274 1/2, 275, 275 1/2, 276, 276 1/2, 277, 277 1/2, 278, 278 1/2, 279, 279 1/2, 280, 280 1/2, 281, 281 1/2, 282, 282 1/2, 283, 283 1/2, 284, 284 1/2, 285, 285 1/2, 286, 286 1/2, 287, 287 1/2, 288, 288 1/2, 289, 289 1/2, 290, 290 1/2, 291, 291 1/2, 292, 292 1/2, 293, 293 1/2, 294, 294 1/2, 295, 295 1/2, 296, 296 1/2, 297, 297 1/2, 298, 298 1/2, 299, 299 1/2, 300, 300 1/2, 301, 301 1/2, 302, 302 1/2, 303, 303 1/2, 304, 304 1/2, 305, 305 1/2, 306, 306 1/2, 307, 307 1/2, 308, 308 1/2, 309, 309 1/2, 310, 310 1/2, 311, 311 1/2, 312, 312 1/2, 313, 313 1/2, 314, 314 1/2, 315, 315 1/2, 316, 316 1/2, 317, 317 1/2, 318, 318 1/2, 319, 319 1/2, 320, 320 1/2, 321, 321 1/2, 322, 322 1/2, 323, 323 1/2, 324, 324 1/2, 325, 325 1/2, 326, 326 1/2, 327, 327 1/2, 328, 328 1/2, 329, 329 1/2, 330, 330 1/2, 331, 331 1/2, 332, 332 1/2, 333, 333 1/2, 334, 334 1/2, 335, 335 1/2, 336, 336 1/2, 337, 337 1/2, 338, 338 1/2, 339, 339 1/2, 340, 340 1/2, 341, 341 1/2, 342, 342 1/2, 343, 343 1/2, 344, 344 1/2, 345, 345 1/2, 346, 346 1/2, 347, 347 1/2, 348, 348 1/2, 349, 349 1/2, 350, 350 1/2, 351, 351 1/2, 352, 352 1/2, 353, 353 1/2, 354, 354 1/2, 355, 355 1/2, 356, 356 1/2, 357, 357 1/2, 358, 358 1/2, 359, 359 1/2, 360, 360 1/2, 361, 361 1/2, 362, 362 1/2, 363, 363 1/2, 364, 364 1/2, 365, 365 1/2, 366, 366 1/2, 367, 367 1/2, 368, 368 1/2, 369, 369 1/2, 370, 370 1/2, 371, 371 1/2, 372, 372 1/2, 373, 373 1/2, 374, 374 1/2, 375, 375 1/2, 376, 376 1/2, 377, 377 1/2, 378, 378 1/2, 379, 379 1/2, 380, 380 1/2, 381, 381 1/2, 382, 382 1/2, 383, 383 1/2, 384, 384 1/2, 385, 385 1/2, 386, 386 1/2, 387, 387 1/2, 388, 388 1/2, 389, 389 1/2, 390, 390 1/2, 391, 391 1/2, 392, 392 1/2, 393, 393 1/2, 394, 394 1/2, 395, 395 1/2, 396, 396 1/2, 397, 397 1/2, 398, 398 1/2, 399, 399 1/2, 400, 400 1/2, 401, 401 1/2, 402, 402 1/2, 403, 403 1/2, 404, 404 1/2, 405, 405 1/2, 406, 406 1/2, 407, 407 1/2, 408, 408 1/2, 409, 409 1/2, 410, 410 1/2, 411, 411 1/2, 412, 412 1/2, 413, 413 1/2, 414, 414 1/2, 415, 415 1/2, 416, 416 1/2, 417, 417 1/2, 418, 418 1/2, 419, 419 1/2, 420, 420 1/2, 421, 421 1/2, 422, 422 1/2, 423, 423 1/2, 424, 424 1/2, 425, 425 1/2, 426, 426 1/2, 427, 427 1/2, 428, 428 1/2, 429, 429 1/2, 430, 430 1/2, 431, 431 1/2, 432, 432 1/2, 433, 433 1/2, 434, 434 1/2, 435, 435 1/2, 436, 436 1/2, 437, 437 1/2, 438, 438 1/2, 439, 439 1/2, 440, 440 1/2, 441, 441 1/2, 442, 442 1/2, 443, 443 1/2, 444, 444 1/2, 445, 445 1/2, 446, 446 1/2, 447, 447 1/2, 448, 448 1/2, 449, 449 1/2, 450, 450 1/2, 451, 451 1/2, 452, 452 1/2, 453, 453 1/2, 454, 454 1/2, 455, 455 1/2, 456, 456 1/2, 457, 457 1/2, 458, 458 1/2, 459, 459 1/2, 460, 460 1/2, 461, 461 1/2, 462, 462 1/2, 463, 463 1/2, 464, 464 1/2, 465, 465 1/2, 466, 466 1/2, 467, 467 1/2, 468, 468 1/2, 469, 469 1/2, 470, 470 1/2, 471, 471 1/2, 472, 472 1/2, 473, 473 1/2, 474, 474 1/2, 475, 475 1/2, 476, 4

For Sale.

A STATIONARY Engine having cylinders 18 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New York.

Jul. 14 29 tf.]

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and PASSENGER LOCOMOTIVES of different classes, with the most modern improvements.

also MACHINISTS' TOOLS,

especially adapted to Railroad Repair Shops, and to the construction of machinery generally. These Tools are of the most approved construction and consist in part of Engine Lathes, Hand Lathes, Vertical Drilling Lathes, and Planers of various sizes and lengths, Compound Planers, Shaping Machines, Slotting Machines, Bolt and Nut Machines, Gear Cutting Engines, Chucks, Compound Slide Rests, Machines for boring Crank Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c.

COTTON MACHINERY of all descriptions, BOILERS, SHAFTING and MILL WORK, CASTINGS, and all work usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Supt., Lowell, Mass.
J. T. STEVENSON, Treasurer, 5 Tremont St. Boston.

Boiler and Tank Rivets, Nuts and Washers; All Sizes of Bolts and Bolt Ends

for Sale by
BRIDGES & BROTHER,
64 Courtland St., N. Y.

NEW YORK AND ERIE RAILROAD LOAN.

The Committee appointed to report in regard to the financial affairs of the New York and Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed proposals, to be opened on the 10th of January next, for the purchase of \$4,000,000 7 per cent. Bonds, redeemable in twenty years, with interest, coupons payable 1st February and 1st August.

And that for the purpose of gradually reducing the debt of the Company, the New York and Erie Railroad Company pledge themselves in said Bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of Trustees, to be by them invested, as well as the accruing interest on the investments, in the Bonds of the New York and Erie Railroad Company of the new issue, as long as they can be purchased at or under par. And that whenever the said Bonds of the new issue cannot be purchased at or under par, then the said Trustees to invest the said monthly payments and the accruing interest in any Bonds of the New York and Erie Railroad Company which can be purchased at or under par.

And whenever it shall be impossible to purchase any of the Bonds of the New York and Erie Railroad Company at or under par, then the said Trustees shall invest the said monthly payments and all accruing interest in such Bonds of the New York and Erie Railroad Company as can be purchased at the lowest rate.

And all Bonds on being purchased by said Trustees shall be canceled by writing or printing on the face "Held by the Sinking Fund of the New York and Erie Railroad Company," but that the interest warrants on said cancelled Bonds shall be collected by said Trustees, as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest or the conversion of convertible Bonds into Stock of this Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in said Trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to the Company.

And the Committee would further recommend that the Board of Directors adopt the following resolutions:

Whereas, The period has arrived when it is expedient and necessary to close the construction account of this Company, to be reopened only when the imperative necessity of the increasing traffic on the road, and the state of the finances

of the Company will render it perfectly evident that it is proper and justifiable to reopen it, so as to increase the present capacity of the Road.— Therefore

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after reimbursing the Income Bonds due 1st February next, be charged to transportation expenses.

Resolved, That as often as the Bonds purchased by the Sinking Fund amount to 10 per cent. on the Capital Stock, this Company will, upon receiving due authority from the Legislature of this State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in the daily papers, so that the public have cognizance of the future policy of the Company.

(Signed.)

CHARLES MORAN.
SHEPHERD KNAPP.
WILLIAM E. DODGE.
NELSON ROBINSON.
GEORGE F. TALMAN.

Special
Finance
Committee.

NEW YORK, Oct., 21, 1854.

Sealed proposals will be received at the office of the NEW YORK AND ERIE RAILROAD COMPANY in the City of New York, until the 10th of January, 1855, for the purchase of \$4,000,000 of the bonds of the Company, bearing 7 per cent. interest payable semi-annually on the 1st day of February and August, redeemable in twenty years.

The NEW YORK AND ERIE RAILROAD COMPANY pledge themselves in said bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And whenever it shall be impossible to purchase any of the bonds of the NEW YORK AND ERIE RAILROAD COMPANY at or under par, then the said trustees shall invest the said monthly payments and the accruing interest, in such bonds of the NEW YORK AND ERIE RAILROAD COMPANY as can be purchased at the lowest rates. And all bonds when purchased by the said trustees shall be cancelled by writing or printing on their face: "Held by the Sinking Fund of the NEW YORK AND ERIE RAILROAD COMPANY;" but the coupons on such cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the NEW YORK AND ERIE RAILROAD COMPANY, and the accruing interests, or the conversion of convertible bonds into stock of the Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in such Trustees be closed, and all cancelled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay 10 per cent. in cash on the notice of the acceptance of their bids; 20 per cent. on the 20th of January; 30 per cent. 1st February; 20 per cent. 15th February, and the balance on the 1st of March.

The Income Bonds of the NEW YORK AND ERIE RAILROAD COMPANY will be received in part payment at par, and the accrued interest till day of surrender to the Company.

The Directors of the NEW YORK AND ERIE RAILROAD COMPANY, in offering the present loan to the public beg leave to state that it will be amply sufficient to pay the Income Bonds redeemable on the 1st February next, and the entire present floating debt of the Company, as well

as to complete all the unfinished work now under way.

By a resolution of the Board of Directors, all future outlays of every kind beyond the proceeds of the present loan, will be charged to expense account, and paid from the income of the Company, after payment of the interest on the funded debt, and the monthly payment to the Sinking Fund.

After the negotiation of the present loan and the redemption of the Income Bonds, the position of the Company will be—

Stock	.....	\$10,024,000
Bonds of 1867, First Mortgage	.....	3,000,000
Bonds of 1859, Second Mortgage	.....	4,000,000
Bonds of 1883, Third Mortgage	.....	6,000,000
Bonds of 1862, Convertible	.....	3,500,000
Bonds of 1871, Convertible	.....	4,351,000
Bonds of 1875, present loan	.....	4,000,000

Total.....\$24,875,000

In the opinion of the Directors it is perfectly safe to estimate the gross earnings of the Road, for the coming year, at \$6,000,000, from which must be deducted:

Expenses 55 per cent.....	\$3,300,000
Seven per cent on debt \$24,-	
851,000.....	1,789,570
Sinking Fund.....	420,000
	\$5,469,570

Net revenue equal to over 5 per cent on stock applicable to cash dividends and contingencies.....540,430

The Directors of the Company are confident these estimates will be fully realized. The gross receipts since the Road has been in operation to Dunkirk, have been for passengers and freight alone—

1851 to 1852 \$3,047,748 INCREASE.

1852 to 1853 4,138,424 \$1,690,676, say 55 1/2 per cent.

1853 to 1854 5,122,666 934,242, say 23 1/2 per cent.

The business of the road depending mainly on the local traffic, must inevitably increase in the same ratio as the population of the Counties through which it passes. In the opinion of the Superintendent, Mr. McCollum, the road in its present position and with its present equipment, can earn \$8,000,000. If the future increase in the receipts be estimated at only 15 per cent. per annum, which is not much over one-half of the average increase of the past the above utmost capacity of the road will be tested in 1858.

As to the running expenses, as they were only 53 1/2 per cent. in 1853 and 1854, there is every probability that with rigid economy and an increase in the traffic, they can be reduced to 50 per cent., but they have been estimated at 55 per cent., so as to leave ample margin for contingencies.

The effect of the monthly purchases by the Trustees, of the Bonds of the present issue on their market value, cannot fail to be immediate, and will insure to the original purchasers a certain profit within a moderate time; for whilst the amount outstanding will decrease each month, the absorption by the Sinking Fund will constantly increase by the accruing interest on the Bonds in the hands of the Trustees. In 8 1/2 years the Sinking Fund will absorb \$4,768,053, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among our most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie-place.

HOMER RAMSDELL, President.

NATHANIEL MARSH, Secretary.

New York, Oct. 23, 1854.

SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER
OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.
E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

PHILADELPHIA RAILWAY AGENCY

General Furnishing Depot
OF ALL ARTICLES REQUIRED BY
RAILROAD COMPANIES,
No. 80 South Fourth street,
PHILADELPHIA.

Railroad Chairs,
Railroad Spikes,
Car Wheels,
Car Axles,
Boiler and Tank Rivets,
Bolts, Nuts, Washers,
Car Lanterns and Lamps,
Conductors' Lanterns,

Engineers' Lanterns,
Locomotive Head Lights,
Car and Switch Locks,
Jack Screws, Vises,
Patent Oil Cans,
Steam Gauges,
Steam Whistles,
Spring Balances,

Car Findings &c., &c.,

ALL orders promptly filled at manufacturers' prices and forwarded with despatch. Particular attention paid to constructing for Locomotives, Cars, Railroad Iron, &c.

The subscriber being Agent for several manufacturers of Machinists' Tools is enabled to furnish Railroad Companies with Lathes, Planing Machines, Drills, &c., of the best quality at manufacturers' prices.—Orders solicited

50 ly

THOS. M. CASH.

LOCOMOTIVE FOR SALE.

A NEW Engine built in the best manner and of the best materials is offered for sale at our Works at Paterson, New Jersey. The following is a brief description:

Cylinders—13 inches, with 22 inch stroke.
Drivers—four in number, 5 feet in diameter.
Gauge—4 feet 8½ inches.
Boiler—of best Penna. Iron with 120—1½ inch Tubes, 10½ feet long.
Fire box—36x40x48 inches.
Tank—to contain 1500 Gals.

This Engine was built for a road which is unable to pay for it and will be sold low.—Apply personally or by letter to

JAMES JACKSON, President,
NEW JERSEY LOCOMOTIVE MACHINE CO.,
Paterson, N. J.

50 4t

SEYMOUR, MORTON & CO.,

GENERAL RAILROAD AGENCY,

Office, Metropolitan Bank Building, No. 110 Broadway.

HAVE to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities: LOUISVILLE CITY BONDS, at 39 years.
OHIO AND MISSISSIPPI R. R. STOCK, drawing interest
MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. STOCK.
SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.
LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of railroads in any part of the country, including furnishing corps of engineers and contractors, locomotive engines and cars, railroad bridges, McCallum's Patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Hammell's Patent Reclining Car Seat

for Night or Day Travelling.

THE subscriber, having been appointed sole agent for the sale of this Seat, begs to call the attention of Railroad Officers to this valuable improvement for comfort in Railroad Travelling. They can now be furnished at about the same cost as the ordinary car seat, and with the manufacturer's present arrangement, they occupy but little more space in the car.

49 6ms

THOS. M. CASH,
No. 80 South Fourth st., PHILADELPHIA.

ENGINEERS.

Atkinson, T. C.,
Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,
Chief Eng. Pittsburg and Connellsville R.R. Co., Pittsburg, Pa.

Edward Boyle,
Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
Office 123 Chambers st.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,
Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M. O.,
Civil and Mining Engineer, Cumberland, Md.

C. Floyd-Jones.,
Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Gay, Edward F.,
Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
Syracuse and Binghamton Railroad, Syracuse, N. Y.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,
New Orleans and Nashville R.R., Aberdeen, Miss.

Holcomb, F. P.
Chief Eng. Augusta and Waynesboro, and Savannah & P. & N. C. Railroads, Marietta, Ga.

S. W. Hill,
Mining Engineer and Surveyor, Eagle River,
Lake Superior.

Huger, T. P.,
Northeastern Railroad, Charleston, S. C.

D. Mitchell, Jr.,
Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley Railroads, Pittsburg, Pa.

Samuel McElroy,
Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,
Sackets Harbor and Saratoga R. R., 24 William St., N. Y.

Miller, J. F.,
Buffalo and Conhocton Valley Railroad, Avon, N. Y.

Morris, Ellwood,
Engineer and Agent DAUPHIN & SUSQUEHANNA CO.,
Cold Spring, Lebanon Co., Pennsylvania.

Septimus Norris,
Civil and Mechanical Engineer, Philadelphia.

Saml. & G. H. Nott,
Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,
Civil Engineer, Office 73 South 4th st., Philadelphia.

Prichard, M. B.,
East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
Chief Engineer Alleghany Valley Railroad, Pittsburg, Pa.

Shanly, Walter,
Chief Engineer Bytown and Prescott Railway,
Prescott, Canada.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburg, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Schlatter, Charles L.,
Civil Engineer, Ogdensburgh, N. Y.

Straughan, J. R.,
Ohio and Indiana Railroad, Bucyrus, Ohio.

Steele, J. Dutton,
Pottstown, Pa.

Charles B. Stuart,
Civil Engineer, New York.

Edward W. Serrell,
Civil Engineer, 157 Broadway, New York.

P. J. Tournadre,
Chief Engineer Vicksburg, Shreveport and Texas R.R.,
Vicksburg, Miss.

Trautwine, John C.,
Civil Engineer and Architect, Philadelphia.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,
Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

Whipple, S.,
Civil Engineer and Bridge Builder, Albany, N. Y.

Wm. J. Young
HAS removed his Engineering and Surveying Instrument Manufactory to No. 33, North Seventh Street, Philadelphia.

BUSINESS CARDS.**Railroad Instruments.**

THEODOLITES, TRANSIT COMPASSES AND LEVELS on a new principle, with Fraunhofer's Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by
E. & G. W. BLUNT,
New York, Dec. 1, 1851. No. 179 Water street.

James Herron, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.

PATENTEE OF THE
HERRON RAILWAY TRACK
Models of this Track, on the most improved plan may be seen at the Engineer's office of the New York & Erie Railroad.

W. G. ATKINSON,
MINING ENGINEER, SURVEYOR AND DRAFTSMAN
CUMBERLAND, MARYLAND.

Will attend to business in his Profession in the Coal Region and vicinity.

REFERENCES:

Jerry Conies, Esq., New York.
Col. Wm. Young, do.
Jas. W. McCulloh, Esq., late U. S. Treas., Washington.
June 25, 1853.

To Engineers, Architects and Draughtsmen.

THE undersigned begs respectfully to inform Gentlemen in the above professions, that he has constantly on hand a great variety of instruments for Field and Office use.

JAS. PRENTICE,
Feb. 9, 1853. 1 Chamber street, New York.

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings, Private Dwellings, Stores and Factories, manufactured by the subscriber in great variety. Orders by Mail, or left at the Factory on Causeway street, will be promptly attended to.
HENRY N. HOOPER & CO.
Boston, March 23, 1850. 6m13

H. SAWYER

(of the late firm of SAWYER & HOBBY,
Manufacturer of Transits and Levels,

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

J. S. Sewall,
CIVIL ENGINEER,
ST. PAUL MINNESOTA.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 63 Kilby street, Boston.
December 13, 1852. WM. S. SAMPSON, Agent.

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

ESTABLISHED IN 1831.

PUBLISHED WEEKLY BY J. H. SCHULTZ & CO., AT NO. 9 SPRUCE ST., NEW-YORK, AT FIVE DOLLARS PER ANNUM IN ADVANCE.

SECOND QUARTO SERIES, VOL. X., No. 52.]

SATURDAY, DECEMBER 30, 1864.

[WHOLE No. 976, VOL. XXVII.]

Mr. FREDRICK ALGAR, No. 11 Clements Lane, Lombard Street, LONDON, is the authorised European Agent for the Journal.

PRINCIPAL CONTENTS.

New York Central Railroad.....	823, 817
Rights and Liabilities of Stock and Bond-holders in Railroads.....	818
Vicksburg, Shreveport and Texas R. R.....	823, 818
Fort Wayne and Chicago Railroads.....	826, 820
Georgia Central Railroad.....	822
Sunbury and Erie Railroad.....	822
Philadelphia, Germantown and Norristown Railroad.....	823
Terre Haute and Alton Railroad.....	828
Nashville and North Western Railroad.....	826
Indianapolis and Cincinnati Railroad.....	827
Cincinnati, Logansport and Chicago Railroad.....	827
Public Debts of European States.....	827
Alabama and Florida Railroad.....	828
New York Canals.....	828
Finances of Boston.....	828
Racine and Mississippi Railroad.....	828
Belleville and Illinoistown Railroad.....	829
Exports of Chicago.....	829

American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, December 30, 1864.

New York Central Railroad.

We gave, last week the report, under date of 30th September last, of this Company to the Legislature. The results as stated are satisfactory. The net earnings for the year have been \$2,801,162; or a fraction over 8 per cent. on a present total cost of \$35,014,536. The amount paid for interest, and to the sinking fund, is \$767,572; leaving as applicable to dividends 2,033,592; equal to nearly 9 per cent. on a stock capital of \$23,067,415.

The funded debt is to be increased \$2,619,319, by the sale of the balance of the 7 per cent. three million loan. The total capital will then reach \$37,683,855.

The late board make no other report to the stockholders. They give no insight into the management of the road. The stockholders have no other means of knowing whether the road has been conducted in a faithful or unfaithful, competent or incompetent manner. This is all wrong. We have no doubt that the road is well managed;

neither do we believe there is any ground for the insinuations that are constantly being thrown out against the directors. But where there is concealment, suspicions will be aroused, and here are always evil-minded persons to give circulation to them. The directors owed it to themselves to silence the insinuations which are thrown out, more freely than ever in the absence of any proper report. They owe it to the public to set a different example. It is not the report of the investigating committee that is wanted. Such a committee can do little more than to certify to the correctness of the company's books. No one really supposes that such a committee will find much to do. What the stockholders want is a report, showing whether the road has, and is having a competent management; for what objects the large and unexpected increase of capital has been found necessary; what arrangements and connections have been formed with other roads; and whether the company have been subjected to any extraordinary charges or expenses, in the shape of steamboats, &c., &c., which might be abated. Certainly the directors ought to have given full and detailed statements of the application of every penny for the past year. It may be that such statements would disclose mistakes and abuses, that would in this manner be pointed out, and corrected; but, which in the multiplicity of their duties, escape the attention of the directors.

The convention of stockholders, at their annual meeting, appointed a committee of investigation, who will report at their convenience. The appointment of such a committee, though very proper, and though it should not be considered as an implication that the directors are chargeable with misconduct, is an unusual step on the part of our companies, and consequently in the present case, is evidence that dissatisfaction exists. We believe the report will vindicate the directors, but they would have escaped the insinuations thrown out by making public all their acts. They should have given no occasion for the appointment of such committee, and should have left nothing for it to do, if appointed. By proper action on their part, they would have shielded themselves from aspersions, and secured toward the road and its management a higher degree of public confidence than exists.

Erie Railroad.

The new loan of this company is being gradually subscribed, a sufficient sum having been secured to render the taking of the whole amount certain.

We think the friends of the Erie Railroad have a right to be particularly satisfied with the position it holds in public estimation. We all know the different phases it has gone through,—first of unlimited confidence, then of an almost equal degree of distrust; neither extreme being based upon any well grounded connection at the time. The enormous amount invested in it at least forced the public to investigate its merits, which have resulted in a firm belief of its value, and, we are happy to say, of the excellence of its management; for, upon careful inquiring of the best of sources of information, we find such to the universal opinion. Now, while the public took the previous loans of the company upon trust, they are taking the present one upon a conviction, resulting from a thorough examination of the merits of the road. We do not say that one reason for taking the loan is not a desire to sustain the road; for much better bargains can be made by those having money than by taking the loan at the rates offered, and many are subscribers to it, who would prefer to use their means in other ways. These facts are the best evidence in favor of the road, as the public, in such times as the present, would certainly not come to its aid, did not both the work and the management deserve to be sustained. Did the value and the market price of its securities always go together, the latter would never have ranged so high as at the present instant. The earnings of the road are entirely satisfactory, and are fully up to the most sanguine expectations. The management has undergone a thorough, searching and intelligent reform; a reform which seeks to grasp no more than it can hold, to make secure whatever is gained, before another step is taken. There is hardly such a thing as a hasty reform. It is only revolution.

We willingly add our testimony to that of the public. It is disinterested at least, which should render it no less valuable. We hold that nothing which has not merit should be sustained. Our test of expediency is the result in money. Where

this cannot be figured out, we are for letting everything go. All ideal standards are too uncertain to be trusted. Did we consider it demonstrated that the Erie Railroad could pay only on a cost equal to the amount of the three first mortgages, we would not advocate the raising of a penny to make a further experiment to see if something could not be saved for the stock, and unsecured bondholders. But there is enough for all, if the finances of the company can only be put in a proper position.

We wish to impress upon the public, the fact that the success of the Erie Railroad depends upon its *management*. It must always be secure of an abundant business at remunerative rates. This fact we consider as settled.

Rights and Liabilities of Stock and Bondholders in Railways.

Having been requested by a Foreign House to answer the following queries in reference to the rights and liabilities of stock and bondholders in railroads, we print our answers, thinking they may be of interest to other parties:

1st. Are the stockholders in a railroad responsible for more than the amount of their shares, in case of the failure, or ill success of the road?

2nd. Are the bondholders entitled to more than the mortgage guarantees to them; and in case the property conveyed be insufficient, can they collect the balance of the stockholders individually?

3rd. Is there any law in any of the States, where, in case there be no mortgage, the bondholders could sue the stockholders individually?

ANSWERS.

1st. The stockholders of a railroad are not, as a general rule, liable for more than the amount of shares held by them. The extent of the liability is fixed by the statutes of the several States. The State of Ohio is the only one where this liability is increased beyond the amount of stock originally taken. By the new Constitution of that State, Stockholders in all companies organized under it are made liable for a further sum, equal to the amount of stock subscribed.

2nd. Mortgagees, in the event of their obtaining a judgment against a company, may levy upon *corporate* property where they can find it, and may satisfy their claims thereby, without resorting to the property mortgaged to them. It is optional with them whether they will satisfy their claims out of that which is mortgaged, or other property. They may take the former, apply the proceeds, and collect. If they can find property, the balance of the company.

3rd. In no case that we are aware of, are stockholders liable directly to the creditors of a company. If they are, it must be by some special statute. The liability of the stockholder to a company is in the nature of the *contract* to pay a certain sum of money, the consideration for which are the shares issued. The company can enforce this contract, but mere creditors cannot. Their claim is against *corporate* property alone. It may be that creditors could collect the amount of *unpaid* subscriptions, but this would depend upon the rights secured under the mortgage. If the franchise be conveyed, and the creditors, by judgment of law, obtain possession of the company's property, in such case the courts might allow them to collect the amounts due on outstanding stock sub-

scriptions. But rights so remote and contingent are worth but little, and would seldom be enforced, even where they existed.

Vicksburgh, Shreveport & Texas Railroad.

Vicksburgh, Miss., November 20th, 1854.

Editor of the American R. R. Journal.

Never having read in your valuable Railroad Journal anything, but a general notice of our Vicksburgh, Shreveport and Texas Railroad, I beg leave to lay before you a more particular account of its position and prospects, and likewise some views and estimates of its importance.

According to the Report of the President and Directors in October last, the means of the Company are as follows:

Private subscriptions.....	\$575,000
Parochial or corporate do.....	380,000
State do.....	800,000
	<hr/> \$1,755,000

The State stock is payable rateably, as the parish and private subscriptions are paid in, in the proportion of one dollar to four.

The payments by private and tax stockholders amounted on the 1st October to \$40,000, and the State issues her Bonds for \$10,000, payable in 40 years, interest at 6 per cent. payable semi-annually. These Bonds must be sold at or above par, and if above, the excess goes into the Treasury of the State.

The capital of the Company is \$1,000,000. Hence if the private and corporate subscriptions amounted to \$3,200,000, the State would pay the whole \$800,000; otherwise the State is to pay only as above mentioned.

With this commencement, the Directors placed under contract in June last 50 miles of the road in three sections, two of twenty and one of ten miles, at \$10,000 per mile for the two larger, and \$9,500 per mile for the less, the contractors to complete the whole work, except the furnishing of iron. One of the contractors, the one on the section next to the Mississippi River, has placed 200 laborers on the work, and it is rapidly progressing.

If a strong contracting company could be induced to take the residue (145 miles), and receive the State Bonds and the subscription list in payment, the Company would be willing to issue its own Bonds for any deficiency, bearing a fair interest, with the privilege of converting those Bonds into stock within a specified time, the interest to be paid semi-annually; and the principal, out of the first profits. Of course, a first lien upon the whole road, would attach to those Bonds, to secure their payment. Or if the contracting company would subscribe the balance of the stock at once, to be paid in construction, the whole amount of State subscription would be paid to them, as the work progresses, as well as the whole amount of other subscriptions now secured, or which may hereafter be secured from individuals or corporations.

With a prompt exertion and a vigorous prosecution of the work, under able and experienced contractors, the private stock can be largely augmented.

To enable a contracting company to judge of the prospects of success, and of a full and fair remuneration, I beg leave to present the following considerations.

Our road commences on the West bank of the Mississippi River, opposite to Vicksburgh, and runs through the parish of Madison about 38 miles, Carroll 18 miles, Morehouse 16 miles, Ouachita 30 miles, Jackson 25 miles, Bienville 30 miles, Bossier 18 miles and Caddo 20 miles, in all 195 miles.

The parishes of Franklin, Caldwell, Union and Clairborne, lie contiguous to the route, and will be equally benefitted by the improvement.

These 12 parishes compose the best cotton region of the State of Louisiana. Its value has been but recently begun to be properly appreciated, and it is already being rapidly improved and populated.

These parishes in 1852 contained a population of 30,000 whites and 46,099 blacks. They produced 140,000 bales of cotton and 1,803,661 bushels of corn, on 222,553 acres cultivated in cotton and 167,329 acres in corn. That year was unfavorable for crops, in consequence of continued drought.

The parishes of Madison and Carroll are the most densely settled, lying on the Mississippi River. Madison cultivated 38,164 acres in cotton, and produced 38,189 bales. Carroll cultivated 37,251 acres in cotton and produced 38,239 bales; beside each raised an abundance of corn, stock, &c. Both Madison and Carroll are subject to overflow to a greater extent than any other parishes along the route.

Now, what is the capacity for production and population in these 12 parishes?

By the constitution each parish must contain an area of 25 miles square. These contain more, but say 25 miles square, and they contain 4,800,000 acres of land. To enable you to judge accurately how much of this is or will be arable, I would direct attention to the Levee system of the State, by which the overflowed lands are drained and to be reclaimed.

The General Government transferred to the State near ten million acres of swamp land for the purpose of draining the country, and of keeping the waters of the Mississippi and other overflowing rivers within banks, by embankments or levees on the margins.

The State has taken charge of this munificent grant, and is engaged in draining and reclaiming the country. The result will be that nearly the whole of this rich alluvial region will be rendered suitable for culture. When reclaimed it will produce from 1½ to 2 bales of cotton per acre.

It is not contended that the whole can be reclaimed, but much the greater part say two-thirds.

Perhaps one million of the 4,800,000 acres in North Louisiana, is swamp land; and at least one-half of that can and will be perfectly reclaimed for cultivation. By swamp, I do not mean marshy or boggy land, but merely such alluvial land, as is occasionally, not annually even, overflowed by the waters of the Mississippi, Ouachita and Red Rivers.

There are at least 3,800,000 acres free from inundation, nine-tenths of which is arable; and if one half of the swamp land in the 12 Parishes be reclaimed, it leaves 4,300,000 acres for regular cultivation. Its fertility and salubrity will invite population, as soon as outlets to market are established.

What are the constituent elements of value of land in any region of country? First, fertility of soil or capacity to produce; second, salubrity of climate, essential to happiness in agricultural life; and finally facilities to market, giving incentives to agricultural labor, and securing general prosperity.

The two first are possessed by North Louisiana, in an eminent degree; and our railroad will extend to that region the last, which will render it the most desirable portion of the South.

Let me remark, that portions of our swamp which cannot be reduced to culture, are covered with *Cypress Brakes* affording the finest timber in the world, and these Brakes are so dispersed as to give to all sections an abundance for plantation purposes and for shipment. Indeed so valuable are those brakes beginning to be considered, that speculators are entering such as are not already secured, for future supplies of lumber. Many of them are now estimated at ten dollars per acre, especially where they exist on deep sloughs, through which the trees can be floated to mills and to market.

Now, sir, if this be not an overdrawn picture, what portion of the 4,800,000 acres may be reasonably estimated for culture?

With my knowledge of the country, I have no hesitation in saying that one-half of the whole is susceptible of cultivation. But say that one million is devoted to cotton, and one million to corn; and say that the average product will be $\frac{3}{4}$ bale of cotton and 20 bushels of corn per acre. This will give us 750,000 bales of cotton and 20,000,000 bushels of corn.

At \$35 per bale, the cotton will bring \$26,250,000; and at 50 cents a bushel, the corn will bring ten millions of dollars.

Think of it! a country 195 miles in length and fifty in width, capable of producing, when fairly developed, cotton and corn to the value of \$36,250,000 annually.

If this region can produce as stated, will any man of sense doubt that it will be made to do so whenever a first class Railroad shall be constructed through it, so as to allow perpetual, easy and cheap travel and transportation? I take it for granted that such a country will soon contain a population, bearing a rational relevancy to the remunerative results of labor.

I will compare these estimates for the future, with the facts of the present.

In 1852, 140,000 bales at \$35 per bale, gives \$4,900,000 against \$750,000 bales, worth \$26,250,000 also 1,803,661 bushels of corn at 50 cents per bushel, worth \$901,830 against 20,000,000 bushels, worth ten millions of dollars, also 389,883 acres, cultivated in cotton, against 2,000,000 of acres.

These are not over estimates for the future.—There are in fact 10,000 square miles in the 12 Parishes, consequently 6,400,000 acres, whereas I estimated only 7,500 square miles, or 4,800,000 acres. The land that will be cultivated in cotton will produce a bale per acre, whereas I estimated only $\frac{3}{4}$ of a bale.

If this country shall ever contain a population correspondent with such production, you may readily calculate the business for our road, when I make known a few other facts.

The present outlets to market are the Red River,

er, Ouachita, Boeef, Macon and Tensas. But there is no navigation in these streams before the 1st of January. From that period to about the 1st of July, they contain sufficient water for steamers of a small class.

The whole crop of corn is ready for market, before the 1st of January, consequently a very large portion, would pass over our road to the Mississippi during the months of September, October, November and December; and that portion which will not run to the Mississippi, will pass over a part of the road to Red River, Ouachita, &c., except from the immediate vicinity of those smaller streams.

The reasons for shipping on the road, before navigation is open, in the smaller rivers, are obvious.

1st. The early market is better than the late—frequently to the extent of one or two cents per pound, or from four to eight dollars per bale, a difference amply sufficient and more, to pay the extra Railroad transportation.

2nd. Interest on the amount of crop, ready for market is saved to the producer, from the time it is ready, to the time of shipment by water and of sale; usually three or four months.

3rd. Interest on planter's indebtedness in New Orleans and elsewhere, is saved to producer, by early shipments, sales and payments.

4th. Cotton stored at shipping points, waiting for navigation, cannot obtain insurance, hence a great risk of loss by fire &c.

These are sufficient reasons for a prudent man, to send off his cotton by railroad to the Mississippi, as fast as it is ready; even though he pays a small sum more for transportation.

Hence I contend that $\frac{2}{3}$ of the whole crop of N. Louisiana will pass over our road; and from the day of its completion we may safely estimate, that 250,000 or 300,000 bales will be transported at one dollar per bale. And this amount will increase with every year because of the increase of production.

The vast cane brakes which cover the high lands of our swamp region, afford the finest range for cattle. I may say it costs nothing to raise cattle, but the salt to keep them gentle. Stock will be carried from the Interior and Texas to the Mississippi, on the road. In the North, stock trains are reckoned very profitable to railroads. Why may we not expect to transport beeves from our region to New Orleans by our road and steamers, and there come in competition with the stock raisers of Ohio and Kentucky, where it costs money to raise beeves, and money to ship them by steamers fifteen hundred miles to market; and where stock raisers have become the most wealthy and respectable of agriculturists?

To raise cattle shops, with us, does not take a hand from the cotton fields.

Let us examine the prospects of our road from travel. We are on the direct line of emigration, to North Louisiana, South Arkansas and Texas. These emigrants cross the Mississippi at many points between Memphis and New Orleans. Those that cross at Vicksburgh alone would enable the road to do a good business. But if it were once finished to Texas, it would draw all to Vicksburgh and therefore it may become the great thorough-

fare of emigrants, because it is the most central for all, especially those from the Carolinas, Georgia, Alabama, South Tennessee and Mississippi.

This tide of emigration will continue until North Louisiana, South Arkansas and Texas are filled up, and then the ordinary intercourse between the great and then populous States West of the Mississippi and the older States East of the Mississippi, will ensure perpetual, profitable business.

The probable profits of our road may be estimated as follows:

250,000 bales cotton at \$1	\$250,000
Bagging, rope, dry goods and groceries,	
Western produce, &c.	100,000
Emigrants to Texas alone, 75,000 at \$6 each	450,000
Emigrants to North Louisiana and Arkansas, 25,000 at \$3 each	75,000
Stock, surplus of plantations, &c.	10,000
Transportation of Mails	10,000
Ordinary travel, 25,000 persons at \$4 each	100,000
Total	\$995,000
Deduct one-half, viz.	497,500

leaving a net income of \$497,500 per annum.

The cost of our road cannot exceed \$3,500,000, the interest on which at 6 per cent. is \$210,000, so that after paying interest, there is left \$287,500 to distribute, sink debts if any, &c.

But will the expenses amount to one-half of the gross receipts? If one-third will answer, then after paying interest on the cost, we have left \$453,333 for annual distribution. In eight years' operations, the road would pay for itself; even if the business did not increase.

So far, I have estimated only the local business of North Louisiana, Arkansas and Texas, and as to Texas and Arkansas, only in the item of emigration. Yet the cotton of Eastern Texas and of South Arkansas, may be added to our probable business. The Texas cotton will pass over a part of it to the Red River at Shreveport, and some of the cotton of Arkansas will find its way to Vicksburgh en route for New Orleans.

The travel of East Texas and South Arkansas, during the Fall, may be placed to our account. These regions are rapidly increasing in population and importance; and when it is recollected that there is no conveyance for persons or produce, except by a tedious journey on horseback or by ox wagons, and that the planters are cut off from personal interviews with their factors and merchants in New Orleans, during the whole autumn, the value of the railroad to them will exhibit the importance of their customs to the company.

Our road, you are aware, runs nearly East and West, on or near the line of north latitude $32^{\circ} 30'$, about forty miles South of the Arkansas State Line. The Pacific Railroad through Texas lies on the same latitude and forms a continuation of our work. Now if this latter enterprise shall be eventually consummated, it is most obvious, that the income of ours will be augmented in a wonderful degree.

Then if the Vicksburgh and Jackson road shall be extended Eastward to Montgomery, Alabama, and there connect with the Alabama, Georgia and South Carolina system of roads, it will be difficult to compute the value of investments in the Vicksburgh, Shreveport and Texas Road. There is not room for a rational doubt that these works will be

carried out. If so, there will be railroad communication from the cities of Charleston and Savannah on the Atlantic coasts to the Rio Grande at El Paso, a distance of about 1,600 miles, leaving only about 700 miles through New Mexico, Sonora and California, to be accomplished by the General Government, to consummate the great enterprise of the age.

I know of no public work so worthy of the attention of enterprising contractors and capitalists, as this of ours, and therefore I have taken the liberty of presenting these views and estimates to your favorable consideration.

Your enlightened devotion to the cause of public improvement entitles you to the esteem of your fellow citizens in all portions of the Republic, and therefore, as a citizen and humble co-laborer, I beg leave to subscribe myself,

Your friend

N. D. COLEMAN.

Fort Wayne and Chicago Railroad.

REPORT OF THE CHIEF ENGINEER.

The entire road, with the track laid and prepared for through business, with partial ballasting, is estimated to cost \$2,688,448, including right of way and depot grounds, with commissions, exchange, insurance, and all other expenses connected with the purchase and delivery of iron rails. With full equipment, depot buildings, ballasting and fencing, it is estimated to cost \$3,143,448, averaging \$21,384 per mile. (See estimates in detail appended.)

The right of way for the whole route has been arranged, as far west as the vicinity of Chicago, and, with one exception inconsiderable in amount, has been paid for. Thence to our proposed depot grounds, near the heart of the city, a large proportion has been settled and paid. Ample grounds have been purchased for the outer depot, affording a favorable connection with the lake and canal commerce. At Fort Wayne, and all important points intermediate, depot grounds have been procured.

On the entire line to Chicago, the labor of grading, and delivery of cross-ties, is about two-fifths performed.

The iron rails purchased are of the common pattern of heavy T rail, weighing 60 lbs. to the yard. The estimates and plans are all made with a view to a first class road, in all respects. The physical characteristics of the route are most favorable. They may be stated briefly as follows:

Total length, 147 miles, of which 144 miles are straight line, and but three miles of curved line; shortest radius of curvature, 3,820 ft.; total deflection is but 207 degrees; total ascent, going west, 697 ft.; total ascent, going east, 889 ft.; maximum grade, 26' 4" ft. per mile. The formation of the country is favorable for good drainage, and excellent gravel for ballasting is found on the line of the road. The avoidance of large water-courses cheapens the route, both in construction and repairs; only 1,100 feet of truss bridging is required on the whole road.

The directness of the route, for all practical purposes a straight line, from the southern bend of the lake to Fort Wayne, removes all apprehensions of "cut-offs," and guards against any necessity for making branch roads.

From these features it will be noticed, that in all the elements favoring the highest rate of speed, and the greatest freedom from accidents, this route is not surpassed, if, indeed, it be equalled, by any other of the same length, even on the level plains of the West.

The same favorable characteristics as to grades and curvature continue by this route in its extension eastward. From Chicago to Wooster, 335 miles, or to Cleveland, 353 miles, no grade occurs higher than 26' 4" ft. per mile, excepting one 30 ft. grade, descending to the Cleveland Depot. Be-

tween Chicago and Crestline, 278 miles, there is but 6½ miles of curved line, and thence to Cleveland the alignment is alike favorable.

As a starting point for eastern travel, and a place of distribution for the great tide constantly flowing westward, no one of our western cities can compare with Chicago. Her geographical position, and the relations sustained to the great northwest, necessarily give this city such pre-eminence.

A glance at the great rivers, the Mississippi and Missouri, and the extensive region drained by them and their tributaries, as it spreads out upon the map, will indicate the basis upon which this statement is made. Estimating only the area contained within the upper section of these two great valleys lying north of the parallel of Chicago, there will be found territory enough for an empire. Comparing it, for the purpose of obtaining a more definite idea, with other valleys whose present resources and population are known, it will be found that the drainage of the Mississippi alone, above the Des Moines, and including that tributary, is greater than the entire territory drained by the Ohio above Cincinnati; while the country drained by the Missouri, above and including the Platt River, is at least 100 per cent. more extensive than the region drained by the Ohio above the point named. Or to make another comparison, by which the mind may be further aided in grasping the future of the north-west, it may be stated that the region embraced within the valleys of these two great rivers above the point named, is not less in area than 200,000 square miles, leaving out the spurs and slopes of the Rocky Mountains, and the barren plains beneath them, which is equal in extent to five states of the size of Ohio.

While it is safest, in any estimate of these new territories, to make liberal deductions, yet it is not probable there will be found in them so large a portion of waste land, with all their plains and marshes, as in the now populous State of Pennsylvania, if her extensive mountainous districts are duly considered. The greater part of it is known to be exceedingly fertile.

Now the point to which I would here call attention, is the certain tendency of all this extensive country to Chicago, in its business relations; and with its future travel, and its lighter transportation. New Orleans and St. Louis will no longer hold the main business of these valleys. New York, Philadelphia and other great marts on the eastern seaboard, with their advantages of climate, of foreign commerce, and their great concentration of capital, must draw in that direction the business of this region, even to the base of the mountains; and as an intermediate market, Chicago will command this trade.

So far as respects the travel and other railway business of the northern part of the country under consideration, its concentration at Chicago is forever secured by a marked geographical feature. Lake Michigan stretches to the North for 350 miles, presenting a barrier to railway communication, insurmountable and perpetual. The travel at all times, and the transportation for half the year, even from Milwaukee, Madison and St. Pauls, must first reach Chicago as a starting point for the East. Since railways have become the favorite and general mode of travel, this lake will prove beneficial to Chicago as a point, in the obstructions which it presents, as well as in the facilities which it affords. The back country thus made tributary to Chicago, and to her three eastern railroads, extends from the mouth of the Des Moines to the Falls of St. Anthony, and from Lake Michigan to the western boundary of Nebraska. It includes six degrees of latitude, and in area about equals France and England combined.

That portions of this vast territory, from want of timber and other causes, may for some time remain unoccupied, is a contingency which I do not overlook. And yet we shall probably be disappointed in the rapid spread of population over the prairies, pineries and mineral districts of the west and northwest. Our farmers have just learned how little timber is really essential, and how much less is the evil of a scarcity than a redundancy. Nor

is the high latitude of the extreme northern portion an insuperable barrier; there are those who prefer such a climate; it will invite and sustain a hardy and vigorous race of men. Six years since, the Falls of St. Anthony was considered beyond the verge of civilization, and to be visited only by the romantic admirers of waterfalls, and wilderness scenery; now a growing city of 6,000 people is there, and the promising state of Minnesota will soon seek admittance into the Union. Ere long, the Upper Missouri will be reached, and towns and cities will rise in that more distant valley. If, with the present population in these northwestern states and territories, and but 70,000 people in Chicago, sufficient travel and traffic have been thrown upon the two roads leading eastward from that city to have established so fully their character as favorite paying stocks, no one can doubt that with this rapid growth the business will liberally sustain three railroads, (and there can be but three,) running towards the eastern cities, so soon as the third one can be finished.

Of the immense emigration westward, the greater part, it will be observed, is tending north of the 40th parallel. It is estimated that Iowa alone has received, by emigration, near 100,000 souls during the past year. With the exception of the foreign element, it is mainly furnished from the northern and middle states, including Ohio, verifying the general rule that the movement of population is by parallels of latitude. Free schools and free institutions have made their impress upon these people, developing a character marked with intelligence, activity and enterprise. Communities trained under such influences, including even the masses, are found to be a travelling as well as a producing people.* The east and west railroads from Chicago are, therefore, in the line of social as well as commercial intercourse—a fact having no small bearing upon their future productiveness.

A portion of eastern travel now taking Chicago in its way, will be diverted with the opening of the roads leading east from St. Louis. Another route through Naples, Springfield and Danville, connecting with the Toledo, Wabash and St. Louis Road, may be opened at a period not distant. Further north than this, until reaching Chicago, the prospect is not favorable for the early completion of any east and west road, especially under the adverse policy foreshadowed by the general government respecting grants of land. With the exception of the St. Louis travel, the diversion from the opening of these roads will be inconsiderable, and will be made up by the increase from the north. Travel is strongly drawn after the staple productions, and for the heavy and bulky products of Illinois and Iowa, there is a controlling attraction in the lake navigation, and in the great interior market to be built up through its influence. The large and excellent canal from the Illinois river, tends strongly to centre at Chicago the trade from the southwest.

The navigation afforded by the chain of lakes, in connection with the enlarged Erie Canal or the St. Lawrence, will ever form a remarkable feature in our internal commerce. Considering its extent, there is nothing like it on the globe. Through these artificial and natural channels, this most perfect navigation is extended inland from the ocean a thousand miles, reaching nearly to the centre of the continent. And yet it is no rival to the railroads leading in the same general direction, but auxiliary to them. To the water-channel belongs the heavy business, while the transaction of this, with its attendant results, creates business for the railroads. The export of five million bushels of corn in the space of a few months, which has been done during the past season, from Chicago, in addition to the very large movement

* The larger amount of railway business furnished by a northern than a southern population is well understood. Even between northern and southern Illinois, the difference in the habits of the people is said to be striking.

of lumber, &c., could scarcely have been accomplished except by means of the lakes.

I have made no allusion to the anticipated railroad connection with the Pacific, preferring to enumerate only those advantages which are without contingency. When this shall have been accomplished, whatever may be the route, Chicago will be in a position to share largely in its benefits. She is stretching out her iron arms towards the setting sun, and these in their widening embrace will gather a liberal proportion of the commerce of the Pacific, whenever this shall have been reached.

The tabular statement hereto appended shows that of the numerous railroads and their branches, extending westward from Chicago, 1,648 miles are already running, connecting with the Mississippi at four different points, from Alton to Galena.

This general view of the northwest, and of its relations to Chicago, will indicate the basis of the large anticipations generally indulged as to the future of that city, and will sustain the high estimate I have placed upon it as a starting-point for eastern railroads. Indeed, the present business of these roads verifies the view I have taken.—There is perhaps nowhere else such a thoroughfare of passenger travel as on the Southern Michigan Road. During the past season, except when checked by the epidemic, the daily average on this road alone was near 3,000, in both directions. As to freight, the road seemed unable to carry all that offered, and the delay in transporting to market the products of the country has demonstrated the need of a third eastern road.

The Fort Wayne and Chicago Road has not been projected as a rival to the two eastern roads already in operation, but had its origin in the conviction that from a point like Chicago, with its concentration of business, these three roads would be fully sustained, and were actually needed. It is the natural extension of the Pennsylvania chain of roads to the northwest, and is now the only link wanting, but 147 miles—the Ohio and Indiana Road being completed to Fort Wayne—to open the direct railway communication between Philadelphia and the Mississippi, at Rock Island, Galena, Burlington and Alton.

But while its relations are more directly with Philadelphia and Pittsburgh, a connection is at the same time formed by this route between Chicago and New York, fifty miles shorter than by any other. The distance from Chicago to New York by the three roads is as follows:

By Southern Michigan Road, as now run, through Toledo to Dunkirk, and thence by Erie Road, 967 miles, or after the opening of the air-line from Goshen to Toledo, 956 miles.

By Michigan Central Road through Canada, and thence by New York Central and Hudson River Roads, 960 miles.

By Fort Wayne and Chicago Road, through Fort Wayne, Pittsburgh and Philadelphia, 906 miles.

Another eastern outlet has been commenced from Crestline to New York, via the Franklin and Warren, Venango and Sunbury and Erie Railroads; and still another from Fort Wayne through Tiffin and the Clinton line, both of which claim to lessen the distance to that city very materially, even over the Philadelphia route. Should these roads be completed, or either of them, the Fort Wayne and Chicago Road will be in a position to avail itself of the advantage, thus maintaining superiority as to distance, under any circumstances.

As a through route from Chicago to Cleveland or Dunkirk, your road, in connection with the Ohio and Indiana, and the eastern section of the Cleveland and Columbus Road, may claim the advantage over any other. It is a trifle shorter than by the Southern Michigan, as now run, and but eight or ten miles longer, after the opening of the air line from Goshen to Toledo, which is compensated by its remarkable exemption from curvature. The routes being thus equal as respects running time, for which conclusion we have the highest railroad authority, the advantage of an

uniform gauge (4 ft. 10 in.) from Chicago to Cleveland, Dunkirk and Buffalo, which for freight is important, will give to the Fort Wayne route the preference.

This comparison of distance is by the Norwalk route—the small saving of distance by the junction road being overcome, as is supposed, by the want of connection at Cleveland.

Comparing distances from Chicago to Albany and Boston by Michigan Central Road through Canada, with the Fort Wayne and Chicago road, by Cleveland and Buffalo, we find the former 17 miles shorter. But engineers have heretofore estimated the ferrage of Detroit river as equivalent to 20 miles's distance, and the probable detention by breaking up long trains at the Niagara Suspension Bridge, as equal to ten miles, which gives advantage to the Fort Wayne and Cleveland route by 13 miles, to say nothing of the general preference for the American side of the Lake.

With this prospect of sharing liberally in the travel to New York city, and in the travel and freights passing over the New York Central and the Erie Roads, your line, beyond dispute, will present the natural and shortest route to Pittsburgh, Philadelphia, Baltimore and Washington city, and for all Pennsylvania, and Central and Southern Ohio.

An inspection of the map will confirm and illustrate these conclusions, as to the advantages of the Fort Wayne and Chicago Road, in connection with the Ohio and Indiana Road as a through line to the East. The important fact bearing upon the question is this, that while the general direction from Chicago to Crestline is so far south as to control the travel and traffic to the southeast, it yet does not bear so far south of Lake Erie as to prevent its receiving an equal proportion with the other lines of the business emanating from the more northern cities, such as Boston, New York, Albany, Buffalo and Cleveland. From local and way business, the Fort Wayne and Chicago Road will be favorably situated. It traverses six counties in Indiana, touching the county town of each, with one exception; thus subserving the interests and securing the support of the entire people. Excepting around the bend of the lake, it is far enough removed from the Northern Indiana Road, on the one hand, and the Wabash Valley Road on the other, to secure ample local support. The route is through the heart of Northern Indiana, a portion of the West widely known for fertility and productiveness, especially in the great staple of wheat.

At Fort Wayne we intersect, also, the Toledo, Wabash and St. Louis Railroad, to be opened in a few months as far west as that point. The Wabash and Erie canal is also crossed at Fort Wayne which, by its cheap transportation of heavy products, will draw over our road the trade of a large portion of Northern Indiana. Three other railroads have been commenced, diverging from Fort Wayne in a southern direction, towards Dayton, Cincinnati and Louisville, and also one running due east, through Tiffin; all or either of which, if finished, will contribute to our business. At Plymouth, 64 miles west of Fort Wayne, we cross the proposed road from Laporte, on the Southern Michigan Railroad, to Peru, on the Wabash and Erie canal. Ninety-five miles west from Fort Wayne, the New Albany and Salem Road is crossed—a finished work, connecting our line with Michigan city, on the Michigan Central Road, and with Lafayette on the Wabash. About 27 miles east of Chicago, our road is intersected by the one running from Joliet, on the Rock Island Road, to the Michigan Central Road, commonly called the "cut-off."

The probable intersection of the Cincinnati, Logansport and Chicago Railroad with the Fort Wayne and Chicago Road at Valparaiso, 42½ miles east of Chicago, may be referred to as a feature of interest of both roads. The Cincinnati Road will not be materially lengthened, while no detention of the passengers need occur—the gauge being the same.

I have thus pointed out some of the character-

istics of the enterprise in which you are engaged, that seem to single it out from the great mass of railroad projects now struggling for completion, and which, in my judgement, will place it, when completed, high in the list of paying roads. As respects the through travel, it will be little if at all inferior to the Southern Michigan Road. While the one route possesses superiority for half the year, in its direct connection with the west end of Lake Erie, to the other belongs the compensating advantage of an interior location, or inside track, for the whole distance to Crestline, intercepting the travel from the entire country north and south east of the road. Through our road the city of Chicago becomes connected by an *unbroken gauge* with Cincinnati, Columbus, Wheeling, Pittsburgh, Sandusky, Cleveland, Erie and Buffalo.

The actual earnings of some of the leading roads centering at Chicago, may be stated in this connection.

The gross earnings of the Southern Michigan Road, since its opening, have been for the first year, \$1,200,922, averaging for the 278 miles then in use, including the Monroe Branch, \$4,320 per mile; for the second year, \$1,813,533; or, for the 288 miles then in use, \$6,297 per mile; and for the third year, ending 1st July, 1855, they are estimated by Mr. Jervis at \$2,250,000—averaging \$7,143 per mile, on the 315 miles of road in use—which includes all their finished branches. For the single month of October last, the receipts were \$286,000.

The receipts of the Michigan Central Road, 282 miles long, for the year ending 1st December, as I am informed by the Superintendent, will vary but little from \$1,825,000, which gives an average per mile of \$6,472. Or for the year ending 1st July, 1855, he estimates it at two millions, averaging \$7,092 per mile. The receipts of \$275,000 for the month of October just passed, would seem to warrant this estimate.

On the Galena and Chicago Union, with the several branches, as now run, amounting to 186 miles, \$762,979 have been received for six months ending with October, which would indicate a yearly receipt of \$1,400,000, allowing for the lighter business of the winter, averaging \$7,527 per mile. As the connection with the Mississippi was not made till the close of the half year named, an increasing revenue may with reason be expected.

The Chicago and Rock Island Road, 181 miles long, was opened to the Mississippi last spring.—For six months ending with October, the receipts were \$698,773, which will give a yearly average exceeding \$7,000 per mile, allowing for the diminished traffic of the winter.

These results confirm the preceding train of argument, and vindicate the high estimate placed upon Chicago as a starting point for railroads.—They prove that an active people, with large business operations, are already upon the upper waters of the Mississippi, and they show whither the population is tending. Whatever disappointment may have resulted from the investment of capital in ill-advised railroad projects, there can be no such failure in respect to the leading east and west lines, touching in their course the southern extreme of Lake Michigan. These large receipts further demonstrate that a railroad in the right direction, and with the proper termini, must be amply remunerative, notwithstanding the temporary undervaluing of this species of property to which injudicious projects and extravagant management have naturally led. Roads thus located connect themselves with the actual daily wants and uses of society, and must, therefore, under good management, prove a productive and reliable investment. Had the expenditures upon the Southern Michigan Road been confined to the construction of a single main route between Toledo and Chicago, (the branches adding little to the income,) the entire cost would have been equalled by the gross receipts of three years, or the net earnings of six years, with its present large traffic. The lesson of the past would seem, therefore, to point to an intelligent discrimination among rail-

road enterprises; rather than *promiscuous wholesale rejection*.

Your road, in its direction, its characteristics and its business, resembles more the Southern Michigan than any other work, and its earnings, in proportion to length, cannot be materially less. Considering the fact that on the latter work there are branches which go to reduce the average per mile, and allowing also for the general advance of the country in the four years that will have intervened, it must be quite safe to estimate the gross receipts per mile, the second year after opening, at seven-eighths of the second year's receipts on the Southern Michigan Road, or say \$5,500 per mile, giving a total gross receipt of.... \$808,500 Deduct running expenses, 50 per ct..... 404,250

Net earnings..... \$404,250
Deduct, also, to be set apart as a yearly sinking fund..... 22,000

Leaving for interest on bonds and for dividends..... \$382,250

which is sufficient to meet the interest, at 7 per cent., on 1,750,000 bonds, should the Board see proper to issue bonds to that extent, and pay a dividend of a fraction less than 15 per cent. on \$1,750,000 stock.

It will be observed that the average per mile assumed as a basis for the estimate of gross income for the second year, is materially less than has actually been received on either of the four Chicago roads referred to; and yet it is difficult to perceive why the Fort Wayne and Chicago Road may not prove as productive as either of the others, considering all its bearing and connections.

Georgia Central Railroad and Banking Co.

The Report of this company made up to the 1st inst., has come to hand. We have already observed that this company had decided on declaring a *Stock* instead of a Cash Dividend, and the causes why they considered such a course necessary. On the 1st October, Bonds to the amount of \$73,000 had come to maturity. To meet the payment of these, with several other heavy demands made for re-laying portions of the track and other repairs, requiring in all over \$130,000, the Board of Directors proposed realizing money from the sale of stock held by them in the South Western Railroad Company, and which was paying eight per cent. Dividend. This, however, it was found could not be done, except at enormous sacrifices; in consequence of the epidemic during the latter part of the season, which, in the single month of November, reduced their receipts over \$20,000. In addition to these, before the 1st of June next, there would be needed about \$277,000 for the payment of Bonds, Rails, and other expenses; requiring all the net earnings of the road for several months to come. As the capital of the company was only \$3,500,000, and the net earnings over half a million annually, the further issue of \$350,000 stock was considered perfectly *safe*, as well as necessary, and is still \$150,000 less than the amount authorized by charter.

The Earnings of the Company for the past year have been as follows:

From Passengers..... \$225,882 99
" Freight..... 742,842 84
" Mails..... 41,067 50*

\$1,009,793 33
To which add Bank Earnings..... 65,394 01

\$1,075,187 34
And the Expenditure for the same time has been,—

* The actual Receipts are \$962,644 86.

For Maintenance of Way..... \$164,265 37
" do of Machinery..... 127,227 46
" do of Cars..... 34,796 32
" Transportation Expenses..... 139,266 26
" Incidental Expenses..... 9,711 15

Total Ordinary Expenditures.... 475,266 56
" Bank Expenses..... 14,042 06
" Interest..... 29,326 00
" Dividend, June '54, 4 per cent.... 139,981 00
" Amount carried to cost of road in June..... 150,000 00
" Amount carried to Reserve Fund in June..... 84,476 92

\$893,092 53

Leaving a balance of..... \$134,945 81
which has been applied, as stated above.

The following is a statement of the Financial condition of the company at date of Report.

RESOURCES.

Railroad and Appurtenances..... \$3,507,737 50
Notes Discounted, and Bills Receivable..... 355,857 28
Stock and Bonds of other Companies..... 662,703 00
Due by other Banks..... 57,942 01
" Agents and other Companies..... 36,174 96
Real Estate of Bank..... 16,690 40
Specie..... 56,559 11

\$4,693,664 26

LIABILITIES.

Capital Stock..... \$3,500,000 00
Bonds 8 per cent. past due not presented..... \$167
Bonds 7 per cent. past due not presented..... 2,800
Bonds 7 per cent. due 1855.. 85,000
" 7 " " 1857.. 75,000
" 7 " " 1858.. 21,000
" 7 " " 1859.. 43,000
" 7 " " 1862.. 95,000

\$321,967 00
Bank Notes in Circulation..... 167,214 00
Suspense Account..... 6,273 91
Due other Banks and Companies.... 54,239 39
Individual Deposits..... 115,656 19
Unclaimed Dividends..... 17,068 29
Guaranteed Dividend of December, 1854..... 22,013 00
Reserved Funds..... 489,232 48

\$4,693,664 26

The condition of the road, as noticed in the Superintendent's Report, is being very much improved. The whole length has been laid with new rail, except about 60 miles, and a good part of this is expected to be done in the ensuing year. In some parts the track was so low as to be flooded during freshets. This has been raised to a proper height. Considerable additions have been made to the Rolling Stock of the road; 6 new Locomotives and 20 Passenger and Baggage cars having been added to it during the year. Two branch lines, the Augusta and Waynesboro and the Milledgeville and Eatonton, which had been leased by the Central road, it is stated, hardly pay rents and expenses. Their Stockholders will accordingly be notified that the contracts made with them are to close, at the expiration of a twelve months' notice. From a table furnished by the Superintendent, we learn that there had been carried over the road during the year, among other products 189,532 bales of cotton, 177,621 bushels of corn, 187,323 lbs. of hides and leather, 9,558,985 lbs. of copper ore, and about 20,000 barrels of flour.—The number of *Through* Passengers carried both

ways, was 13,378; and of *Way* Passengers 110,740.

Sunbury and Erie Railroad.

On Monday, 18th inst., a Division of this road extending from the village of Milton to Williamsport, was formally opened. This portion of the line completes the chain of railroads, connecting Philadelphia with the Great Lakes; opening, by means of the Williamsport and Elmira, New York and Erie, and its feeders, direct communication with Elmira, Syracuse, Oswego, Rochester, Niagara Falls, Buffalo, &c., &c.; and affording to Northern Pennsylvania, Western New York, and the Canadas the shortest route to the cities of Philadelphia, Baltimore, Washington, and the Southern States in general.

As early as 1837, a company was organized which obtained a charter for the construction of a railroad leading from Philadelphia directly to Lake Erie; but beyond making the surveys, &c., nothing was then done to forward the undertaking till 1851. At this time D. Miller Esq. was elected President of the corporation, the work again began to be pushed forward, and show signs of vitality. Subscriptions to its stock were made by counties and towns along the line; and finally the city of Philadelphia which had viewed the progress of the undertaking with her usual jealousy, lest somehow New York should reap some of the advantages, came forward with a stock subscription of \$2,000,000; *provided*, however, that at least an equal amount should be subscribed from other quarters. At this time the stock taken by other parties was as follows:

By Individuals..... \$893,000 00
" City of Erie..... 300,000 00
" County "..... 200,000 00
" County of Warren..... 150,000 00
" " Elk..... 100,000 00
" " Clinton..... 100,000 00
" " Lycoming..... 200,000 00
" Borough of Lockhaven..... 20,000 00
" " Northumberland..... 25,000 00
" " Sunbury..... 25,000 00
" " Milton..... 25,000 00
" " Warren, (Conditional) 50,000 00

Besides additional subscription by Erie and Warren on condition that Philadelphia would subscribe, amounting to..... 250,000 00

\$2,338,000 00

The city subscription accordingly was claimed by the company, as they had had more than the necessary amount subscribed from other sources. Difficulties, however, still presented themselves. The new President was objectionable. The private subscribers principally lived out of the State of Pennsylvania. Philadelphia neither would build her own road, nor encourage others to build it for her.

In spite of all these obstacles, nevertheless, the work went forward with vigor. That part from Milton to Williamsport now opened and from Williamsport to Lockhaven was put under contract, and pushed forward with all the energy and means at the disposal of the Directors.

The entire distance from Philadelphia to Erie is 425 miles; and from Sunbury to Erie, 286½ miles. Philadelphia and Sunbury are already joined by the "Reading," "Catawissa," and "Schuylkill" roads. It will be seen that when the line is completed, not only the shortest route from Philadelphia to the Lakes is thrown open,

but the most direct from the Atlantic to the Western States. With a Lake Port second to none on Lake Erie; gentle curves—the sharpest having nearly a mile of radius; and moderate grades—the highest not exceeding 53 feet, and that only for eight miles—it will be the fault of the management of the road, if it fail to do a business, both passenger and freight, altogether equal to its capacity.

But the *through* travel over a railroad is no longer regarded as the principal item of its business. The *local* is the most important; and is what should form the basis of all reckoning of earnings at the outset. In this respect, the Sunbury and Erie will be remarkably fortunate.—Some lines are made to obtain the agricultural traffic principally; some, the coal; others, the iron; &c. This road combines *the whole of these*. For miles together, that section of the line just opened runs through alternate beds of iron and coal, in the same ridge of mountains. To the west of the mountains it runs through a rich agricultural region, which lying midway between the Erie and the Pennsylvania roads must rapidly fill up and yield the road an extensive traffic. All these advantages, joined to the connection with the leading New York lines, and thus becoming one of the great avenues of travel between the North and South, secure to this road, we think, unrivalled advantages.

Philadelphia, Germantown and Norristown Railroad.

The Directors of this company have made a report of their operations, for the year ending 31st October last. According to the Treasurer's statement, the receipts for the year were:

From passengers.....	\$136,721 00
From freight.....	52,870 75
From coal from Reading Railroad...	14,642 09
From rent, interest, &c.....	4,906 09
From passengers and freight, Chester Valley Railroad.....	13,313 31
From running do.....	19,561 10
From passengers and freight, Chestnut Valley Railroad.....	2,552 25

\$244,566 59

The ordinary expenditure for the same period was..... 103,974 46

Leaving a net balance of.....	\$140,592 13
which has been appropriated to New engines, cars and depots.....	\$70,990 97
Interest on loans.....	22,284 00
Extraordinary expenses.....	19,670 10
Running Chester Valley Railroad.....	11,488 43
Running Chestnut Hill Railroad.....	1,690 25
Dividend on stock.....	70,971 25

\$197,095 41

Excess of expenditure over earnings. \$56,503 28

The Directors state that although their road extends through very thickly sections of Philadelphia, and though the number of passengers carried during the year, amount to nearly 900,000, yet no collision nor accident has occurred on their line resulting in the loss of human life; and they point to this fact as sufficient proof that, in addition to its other manifest advantages, steam power is as safe as any other, in streets of sufficient width through large cities.

It will be seen that the company have made large outlays on the track, engines, cars, and de-

pots; also on the Chester Valley and Chestnut Hill roads which have been leased by them. But for these extraordinary expenses, the net gain, after paying interest and State Tax, would have been 13 per cent. on the stock. The roads leased have hardly as yet paid their way; but it is hoped that shortly the Legislature may rescind a restriction, preventing business from the Columbia road to pass over the Chester Valley. If so, they hope to see their business very much increased, as their route is much shorter, and leads further into the city than the Columbia line.

Vicksburg, Shreveport and Texas Railroad Report.

The annual report of the officers of this road was presented to the stockholders, on the 2nd of October last. By the last survey, it appears that the road is 195 miles long, crossing the Northern part of Louisiana in a direct line from opposite Vicksburg on the Mississippi, via Munroe and Shreveport, to the borders of Texas, whence it is expected to be continued by the State of Texas in a direct line to El Paso. The company was organized in January, 1853, and application made in the following season to Congress for a grant of lands to aid in the construction of the road. A bill to this effect passed the Senate, granting to the State of Louisiana, for the use of the company, alternate sections of the public lands for fifteen miles on each side of the line. A committee of the House reported favorably on the measure, but, unfortunately, the subject could not be acted on last session by that body. The application, however, will be renewed, and there is every reason to believe that it will be successful during the present session.

Since June last, the report says, three contracts amounting in all to fifty miles, have been let out for the construction of different parts of the work. Two of these extend from Vicksburg, a distance of thirty miles; the other embraces twenty miles on the other extremity of the line. These contracts are in process of execution, and it is expected that the first one of twenty miles on the Eastern end of the road, will be ready by November 1855.

The terms for grading, embanking, laying down sleepers and rails—in fact, everything except providing the chairs, spikes, and rails—are for twenty miles, \$10,000 per mile, 87½ per cent cash, the balance in stock at par; twenty miles \$10,000 per mile, 90 per cent. cash and 10 stock; and 10 miles at \$2,500 per mile 90 per cent. cash and 10 stock. The amounts, consequently, payable to contractors will stand thus: cash \$440,500 00; stock \$54,500 00; total \$495,000 00. In addition to these sums, it is estimated that \$350,000 will purchase rails, and furnish the rolling stock necessary making a total of \$845,000 00, or \$17,000 00 per mile.

These divisions, the Directors believe, will, when completed, yield a fair dividend on their cost, besides, furnishing facilities for the construction of the central portions of the road, where complaints are made as to the difficulty of obtaining the labor necessary for that purpose. The Directors state that when the amount of stock subscriptions taken by the middle parishes shall be about double what it is at present, they will straightway proceed in letting the other sections of the road. By the terms of the charter, stockholders have a right to designate the division to which their subscription is to be applied, and as

these were drawn principally from the extremities of the line, the officers do not feel able to proceed with the remaining sections till something like a reasonable amount has been subscribed, which they doubt not will shortly be done.

According to the Treasurer's report the receipts up to September 30, had been:

From advanced payment, 5 per cent....	\$21,325 00
From 1st payment 10 per cent.....	14,595 00
From Simmons, Yeung & Tounadre....	750 00

Total..... \$36,670 00

(Total payments due and unpaid \$50,298;)

The expenditure to same date had been:

For engineering, surveying &c.....	\$19,000 48
For clearing, embanking &c.....	6,074 18
For printing, salaries and office expenses.....	8,318 06
	33,392 72

Balance in Treasury..... \$3,277 28

The means of the company are stated to be as follows:

Private and contributors' subscriptions..	\$628,850
Parish of Caddo.....	100,000
Parish of Ouachita, do.....	150,000
Parish of Madison, do.....	100,000
City of Shreveport, do.....	30,000
State of Louisiana, do.....	800,000

\$1,808,850

Additional amounts anticipated but not yet subscribed from all sources..... 485,000

The names of the present officers are *President*, N. D. Coleman; *Secretary*, O. D. Stillman; *Chief Engineer*, W. G. Bonner.

Terre Haute and Alton Railroad.

Trains now run daily on the above road from Alton to Litchfield, a distance of forty miles, leaving Alton at 10 A. M. upon the arrival of the boat from St. Louis, and reach Litchfield at noon, connecting there with hacks to Hillsboro. Returning, they leave Litchfield at 3 P. M., and arrive in Alton in time for the evening train to Chicago or the night boat for St. Louis.

It is the intention to push forward this road as rapidly as men and money can accomplish it.—Large forces are now at work on different parts of the line. The track-layers have progressed four miles east of Litchfield, and the road will soon be completed to Hillsboro, eleven miles further.—From Hillsboro to the junction of the Illinois Central road, the distance is about twenty-eight miles, twenty of which are now ready for the rails. It is the intention of the contractors to ship the iron from Chicago by the Central road to the junction, and to lay it towards Hillsboro. That portion of the road will be laid with iron by the first of February.

Upon the Eastern end of the road, the work is also progressing with commendable activity. The track from Terre Haute westward, is laid to Grandview, a distance of thirty miles, and regular trains, twice a day, are now running upon it. The distance from Grandview to the junction of the Chicago branch of the Illinois Central, is about thirty miles; and at the rate at which the work is now going forward, it will be reached early in March.

New York Central Railroad.

The following gentlemen compose the Board of Directors of this road for the present year, viz:

Erastus Corning, of Albany; Dean Richmond, of Buffalo; John V. L. Pruyn, of Albany; Joseph Field, of Rochester; John H. Cheddell, of Auburn; Horace White, of Syracuse; Alonzo C. Paige, of Schenectady; Russell Sage, of Troy; E. C. McIntosh, of Albany; Nathaniel Thayer, of Boston; Schuyler Livingston, of New York; Edward G.

Falle, of New York; John F. Seymour, of Canandaigua.

American Railroad Journal.

Saturday, December 30, 1854.

The Close of 1854.

The close of a year, joined to a period of great pressure and distress, naturally suggests reflections upon their cause, and upon the financial condition of the country, particularly on the part of a *Journal* devoted to the interests of railroads; works which more than all others have been instrumental in bringing about the state of affairs which exist, and from which so many are suffering.

The close of the present, is the close of a period of five years of extraordinary activity and of apparent prosperity. It is not too much to say, that they constitute an era in the history of the country. Taking the progress of its railroads as a standard, and it is not an extravagant one, the previous development of our national strength and activity bore no comparison to what the past five years have displayed. The period of twenty years from 1830 to 1850, sufficed for the building of only 6,500 miles of railroad, a very considerable portion of which were of rude and imperfect construction, and not at all comparable with the finished works of the present day, the cost of which is nearly twice that of an earlier date. In the period of five years, from January 1st, 1850, 12,000 miles of railroad, or twice as many as in the previous twenty years, have been constructed, and put in operation, at three times greater cost. At the rate of progress made from 1830 to 1850, taking the amount expended as a criterion, which is the proper one, eighty years would have been required for what has been accomplished in five! Five years, a mere fraction of the life allotted to man, has witnessed a degree of progress and development of the physical energies of our people, which would have required nearly three generations to have accomplished, measured by the standard of past achievements!

But our progress has not been only in one direction. It has been mainly harmonious, though not so striking in other departments of industry and enterprise, as in railroads. The past five years has witnessed the growth of an ocean steam marine, from a feeble force to one of gigantic dimensions. In tonnage, in excellence of model, in elegance of finish, and in speed, our best steamships bear the palm. The superiority of our sailing marine is still less questioned. In the past five years have our people founded a colossal State on the Pacific slope of the continent, which already contains a half million of people; and that ocean which only five years ago was a *Mare Incognitum*, is as much domiciled in the popular minds, and on the books of our merchants, as the Atlantic, that washes our very shores. The yearly exports of this new State in gold alone are equal to \$60,000,000, or more than 100 dollars to each inhabitant, man, woman and child! Other distant colonies have been founded that are moving forward with gigantic tread.

But to come nearer home, the contrast between the past and the present is as remarkable and striking. The State of Illinois which in 1850 had

not a mile of railway, except a dilapidated relic of 1837 of about fifty miles, has now in full operation, two thousand miles of first class road, and 600 more in an advanced stage of progress. Chicago, which in 1832 was the theatre of the Black Hawk war, and the camping ground of our army, and which in 1850 numbered only 28,000 people, has now probably not less than 70,000. Without a mile of railroads in 1850, it is now the terminus of at least 2,200 miles, radiating in every direction, and bringing to her the trade of an area of country equalling 150,000 square miles. From that city at least one hundred heavy trains arrive and depart daily. The city too has a commerce commensurate with its magnitude. Its exports East, of breadstuffs for the present year exceed 13,000,000 bushels, and a city which in 1840 numbered only 4,000 people, is now probably the largest exporting grain market in the world. The State of Indiana which, in 1850, had only one short road of 80 miles in operation, has now nearly 1,400 miles, with 600 more in progress. Ohio which had only about 300 in 1850, has now 2,500 miles, with nearly 1,000 more in progress. These three States have alone nearly 6,000 miles of first class road in full operation, with nearly 2,000 in progress, nearly all which will be completed within two years. All this with the exception of less than 500 miles, but upon which, the flat bar has given place to a heavy rail and corresponding fixtures and equipment since 1850, has been the product of five years!

The examples that have been cited, showing in sufficiently striking contrast the wonderful progress of our people over any previous period, contrasted with other countries, show a still more flattering result in our favor. Ohio, Indiana and Illinois, have an aggregate area of about 120,000 square miles, very nearly equalling that of Great Britain. Only a few years since, the greater part of Illinois and a considerable portion of Indiana were uninhabited prairies. Extensive districts of Ohio are still without inhabitants. Yet they have constructed within a period of five years, nearly as many miles of railroad as the whole of Great Britain contains, and in two years more, will exceed that country. Now although there is great difference in the respective cost of the roads of the two countries, the ratio of cost to means is perhaps tenfold greater in this country than in Great Britain.

But this view of the case does not present in the strongest light the labors and achievements of our people. Had they no other extraordinary burdens, the construction of our railroads would have hardly been felt. While they have, within the past five years, built more miles of railroad than all the world beside, they have reclaimed from nature no inconsiderable portion of a continent; they have converted wide wastes into cultivated fields; have brought out and turned to account the treasures that lie beneath the soil; they have peopled and erected new States; they have founded and built cities, and have supplied to these new communities, which are but of yesterday, all the accessories of a high state of cultivation and refinement. Look at Chicago and Milwaukee, cities which in every thing that contributes to real use and comfort, will compare favorably with any city in the world, and see what a vast outlay their construction, rapid beyond all

precedent, has involved, and what a burden they must have imposed upon the productive energies of the country. Yet these are but illustrations of what comes within the observation of every one, and which show that railroads, notwithstanding their immense cost, absorb, but a small portion of the capital of our people.

We have no means of measuring the amount of capital annually invested in permanent improvements in this country in the manner described; but it is probably ten-fold greater, in proportion to the means of our people, than in any other. A period of ten or fifteen years will often suffice to cover a wide spread territory, formerly a waste, with cultivated fields, with convenient and commodious dwellings, with large and thriving towns and cities, active with every kind of manufacturing necessary to supply the wants of the surrounding farmers. In many of the old countries, a thousand years will not show a comparable result. The progress of this country is unlike that of any other. Our people west of the Alleghenies but repeat there, their mode of life east of them. As they move forward into the interior; they carry with them whatever characterized their previous condition in the Eastern States; comfortable dwellings; good roads; well ordered farms; excellent schools; appropriate buildings for religious worship; with all the comforts and luxuries, to which they were accustomed in their former homes. In all these particulars, the southern portion of Wisconsin will compare favorably with any part of the country, and we might say of the world. Yet all that has been a creation of little more than ten years. In 1840, that State which has now a population of 500,000, had a population of only 30,000. It is now actively and successfully engaged upon numerous lines of railroad. The progress already made in these works is a theme of admiration, but which, contrasted with other things is, in fact, the least of her achievements.

From what has been accomplished, and from what is still before our people, it is easy to see that with almost any supply of capital, the demand would certainly exceed the supply, and that under the stimulants to which they have been subjected for several years past, it would hardly be possible that our people should not project works, and enter upon undertakings, which, with an abundance of capital, would have been perfectly proper, but which were premature from the lack of it. Nor is it surprising that after the herculean efforts they have put forth, their exhausted energies should demand a period of repose; that companies and individuals should find themselves under engagements which they are unable to meet, and that they should feel indisposed to enter into new ones, and an aversion even to works that have tasked their means and efforts so severely. Neither is such a state of things any inference against the propriety of their former policy. From apparent results we sometimes mistake the cause, and we think, there is no difficulty in showing, if we had not already done so, that the present low price of railroad securities, the tightness of the money market, and the embarrassment of railroad companies, is no evidence that our railroads were not needed, nor that they will not prove remunerative.

We have in previous number of the JOURNAL

sufficiently shown the relations that railroads bear to the domestic economy of our people, which must secure to them a lucrative traffic, from the fact that the *markets* of the country lie upon its extreme boundaries.—Consequently the entire surplus products of the country have to be moved a greater or less distance, as the case may be. As our people are chiefly devoted to *agriculture*, the *import* trade must correspond, in value or amount, to the *export* trade. We have given the reasons for the low cost of our roads. Without going into these subjects more fully in this article, it is enough to say, the earnings of our roads have realized the results predicated of their construction, and are earning a fair return upon the cost. The result, as far as the earnings of our roads are concerned, has justified the representations and the expectations that have been entertained in reference to them. But these results favorable, as they have been, have not been able to save our companies from embarrassments, nor their stocks and securities from a very considerable depreciation, which disappoints holders and which tends to throw discredit upon such investments, and which perhaps create in the mind of some, fears that our system is really unsound.

That our roads are reasonably productive is admitted on all hands. The fall in the market value of their securities is mainly owing to the fact that the *supply* exceeds the demand in the enormous calls for money for other objects, calls vastly increased by the railroads themselves. A railroad can be built in no part of the United States without creating an immediate demand for capital at least twice as great as the cost of the road, to develop and bring into use the resources made available by it. The construction of railroads, instrumental as they are in the creation of capital, only aggravates the inconvenience caused by its insufficiency. Take a district of country, no matter where, in which money could have been obtained at the ordinary rates of interest, and let a railroad be constructed through it, by foreign means entirely, and the value of money will rise immediately from 6 per cent. to 12 per cent. No elaboration is necessary to show the reason of this advance.

Assuming the supply of capital in this country invested in works of permanent improvement, to have been uniform, and our projects to have been strictly legitimate with an adequate supply, it is plain to see that no other state of things than that which now oppresses us, could have been the result. Our people have invested an undue share of their active capital. The *nation* is in the condition of a farmer who has exhausted his means in stocking and improving his farm; and who, though he may be much pinched for money, is really richer than ever; notwithstanding a temporary inconvenience, which a few years will remove. If all his neighbors are in a similar category, he may find it difficult to realize the cost on his purchases, though if he can hold on for a year or two, his investments will yield him a handsome profit. The cause of our present distress is not that we have built in the aggregate, too many railroads; but that we have not yet sufficient capital for their construction with the calls that present themselves for other objects. The remedy for us is to wait till time can supply the only cure—the creation of *new* capital. As soon as

this is done, the cloud will pass away which now threatens the horizon.

We need not exercise our ingenuity to hunt up causes for a state of things which can be much better explained by reference to undeniable facts. The present state of monetary affairs is the natural product of antecedents, about which there can be no difference of opinion.

The public distress, however, is aggravated by the sudden check of foreign investments in our enterprises. From 1850 to 1854, at least \$50,000,000 of foreign capital were annually invested in our railroads. The threatening aspect of affairs in Europe, and the demands for capital in that quarter, cut off this supply almost entirely, without warning, and without allowing us any time to prepare for the new emergency. The burden of constructing our roads which foreign capital shared with us, was thus thrown upon the shoulders of our own people. Another load was thus added to one sufficiently heavy, and fully equal to their strength. That they should falter under it was inevitable. The only course left them was the one they have taken—to relieve themselves of such portion of their burdens as they were unable to carry, by the discontinuance of all works to which their means were not equal. The adaptation to the new state of things takes time, and requires sacrifices, great sacrifices, but which do not imply anything wrong or faulty in what they have done.—The difference between the present and the past is one of *magnitude*, not of policy or principle.—The only substantial change consists in limiting our efforts to our contracted means.

A great many people are fond of tracing a parallel between 1837 and 1854. In some respects there is a similarity between the two periods.—

Both were characterized by great scarcity of money, by high prices of provisions, by great prostration of many of our manufacturing interests, by numerous failures, and great financial pressure in the commercial circles. But the two periods are no more alike than are the exhaustion that proceeds from a debauch, and the fatigue resulting from excessive labor. In 1837, the capital of the country was *wasted*, not *invested*. Here lies the difference. In 1837, there were not as many miles of railroad in the United States as there are now in the single State of Indiana. That State has now about 1,400 miles of first class railroads, costing about \$35,000,000; the whole investment in the aggregate producing a fair return. In 1837, the State contracted a debt for public improvements, of over \$15,000,000, nearly every cent of which proved unproductive. Illinois is a more striking illustration still of the difference between the two periods named. In 1837, that State wasted at least \$15,000,000 upon works, the greater part of which were entirely abandoned. Nearly the whole of this sum was lost outright, and the debt contracted still remains dishonored. The State has now nearly 2,000 miles of railroads completed, the greater portion very productive, besides nearly 1,000 more in progress. In both States, the investments are not only productive; but the \$80,000,000 expended in them have added at least twice that sum to the aggregate value of the property of their inhabitants. Here then is an addition of over \$200,000,000 to the valuation of these States, within the past few years. In 1837, the \$30,000,

000 borrowed for public works were not only lost, but with them the incidental advantages which follow their construction. Taking these two States, we ask—Is there anything more than an apparent parallelism between 1837 and 1854? In one case, the money was literally wasted; in the other, it has been well invested, and is yielding a satisfactory return. In 1837, it is not too much to say that the people of the two states became bankrupt in their individual, as well as in their collective capacity. Now, their general solvency is unquestioned. The mass of our farmers were never so well off as at the present moment. They have been made so by a series of productive years, with high prices for all their staples. In 1837, we imported large quantities of provisions; in 1854, we are exporting immense quantities of all kinds, notwithstanding the unexampled drought we have suffered.

In 1837, no sooner did the first adverse blast strike us, than the whole unsubstantial fabric of our supposed greatness, fell with a crash to the ground. Numerous cities, upon which immense sums had been expended, were found to have no existence but upon paper. Extensive and costly preparations for business to result from proposed works never executed, were left useless upon our hands. The vast sums borrowed for such works, in the ignorance, incapacity, and prodigality of the period, were wasted. The country ceased to produce, and seemed bent only on consuming. Provisions of all kinds were enormously high, from the mere dearth of them. The means of the country were consumed "in riotous living." The vortex of speculation involved everybody in embarrassment. Upon the first call from abroad, for the payment of the immense importations, all our Banks suspended specie payments; and most of these, with the greater part of the commercial community, went into liquidation as a matter of sheer necessity.

How is it in 1854? There is great distress; but this has been satisfactorily accounted for. In 1837, nearly all the money designed to be invested in public works was lost. In the new era, we have its equivalent, and more, in judiciously constructed, useful, and paying works. The country never had half the elements of real wealth and strength as at the present moment. It has stood a steady drain of specie equal to \$100,000,000 without succumbing, and can continue the drain till our debts are paid. The present embarrassment merely affects the surface of things; but does not touch the great heart of the country. The disease is mainly within the reach of a correct public sentiment. The greater part of our embarrassments would actually pass away, did the public really believe there was no cause for them. In 1837, a very different remedy was required. Then, a new life had to be infused into the patient.

As it is fashionable to throw upon railroads the blame of all the distress which exists, it may be well to inquire what the condition of the country would have been without them. In 1835-6, our people found themselves in the unexpected possession of a great amount of money; or its representative, which they *wasted*, because of their inability to invest in legitimate objects. The whole community fell to work at spending their *capital*, instead of their *income*. The result was the almost instantaneous putting into circulation an immense

amount of money for the ordinary objects of life—consequently the prices of houses, equipages, and luxuries of all kinds went to an enormously high figure. The means of our people having soon become exhausted, the fall was a rapid as the rise and much more excessive. Had it not been for railroads and other useful objects for our people to expend their money upon, the year 1854 would have repeated, but with ten-fold severity, the excesses and disasters of 1837. But for our Railroads, what would have been done with the \$500,000,000 that have gone into them, during the last five years? They would have been laid out in paper cities, in fancy houses, in fine establishments and in extravagant living; by which the whole community, as in 1837, would first have been thoroughly debauched, and then made bankrupts; requiring years of labor and toil in which to make up their loss.

From such results, thanks to Railroads, we have been saved. As fast as a man, no matter what his calling or occupation, could get possession of a dollar, he laid it out on railroads, where its full value is represented, and which he will soon be able to convert again into coin if he desires it.—His money is not only safe, but it has been the means of adding twice or thrice its value to the aggregate capital of the country. Our railroads, therefore, have been the talisman which has not only shielded us from harm in the past, but are destined to unfold to us a prosperous future, such as the past has never seen.

Fort Wayne and Chicago Railroad.

We give in another column, the report of the Chief Engineer of this road, J. L. Williams, Esq., who states very lucidly, and we think very correctly, the route, objects, connections, and prospective value of the above work. We believe his statements may be implicitly relied on. He has, for more than 20 years, been a resident of Indiana, and for many years Chief Engineer of the Wabash and Erie Canal, a position which he still holds, and in which he has earned the reputation of a skillful engineer, a man of sound judgment, and of accomplishing work in the most judicious and economical manner.

The total length of the road is 147 miles. The total cost, covering a full equipment, is estimated at \$3,143,448, or 21,384 per mile. The stock subscription obtained amounts to \$1,625,393, of which \$1,205,768 have been paid. Further subscriptions to the extent of about \$400,000, are expected from Philadelphia, Pittsburgh, Chicago, and from parties on the line of the road. The total amount expended on the work up to 1st of November, 1854, was \$1,100,000. The company have made an issue of mortgage bonds to the amount of \$1,250,000, about one-half of which have been sold.

The line of the road is a very important one, as has been shown in the report referred to. We can assure all interested that the road will be built in a most faithful and economical manner, and we can see no reason why it should not prove an excellent investment. It must form the great artery between Central Ohio and the roads entering it from the East, (among which are the great Philadelphia and Baltimore lines,) and Chicago. For the greater part of the distance, it traverses an excellent agricultural section, which must supply the usual amount of local business. The work is in

competent and efficient hands, and will be vigorously pushed forward, even in these times, to completion.

Nashville and Northwestern Railroad.

This road extends from the City of Nashville, Tennessee, to the Mississippi River, below its junction with the Ohio, and is the last link in a chain of roads projected by John C. Calhoun, for diverting the trade of the Mississippi River to the City of Charleston, S. C., by a land communication. The company for its construction was organized September 5th, 1853, under a charter, granted by the Legislature of Tennessee, requiring them to commence operations within three years, and in two more from date of the act, to have a section of at least 30 miles in running order. The charter is perpetual and grants, besides \$100,000 for bridging the Tennessee River, State aid of \$10,000 per mile for 156 miles for the purchase of iron and rolling stock, exempts the capital stock for ever from taxation, and the road with all its equipment for the space of five years.

On the 1st of June, in the present year, surveys were commenced, and operations in clearing, &c. shortly afterwards. The Company having been permitted by the Legislature to commence operations with the Mobile and Ohio Railroad as a basis, instead of the Mississippi, the work was begun on it, at a point a few miles to South of the State Line.

The line selected, like all those bordering on the Mississippi, appears remarkably favorable to railroad construction. No rocks occur on the whole route. No grade is over 68 ft., and that only a short distance, the greater part of the road being nearly level. The shortest curve is 1,200 feet radius.

The amount of subscriptions to the work is as follows—

State subscriptions, 156 miles, \$10,000 per mile	\$1,560,000
To build Tennessee River Bridge.....	100,000
Davidson Co. 6 per cent. bonds (in litigation).....	300,000
Individual Subscriptions.....	262,900
Mobile and Ohio Railroad Company... ..	2,500
	<hr/>
	\$2,225,400

ESTIMATED BUSINESS OF THE ROAD.

Way Passengers.....	\$307,354
Lateral do.	75,000
Through do.	160,000
Way Freight—	
2,000,000 Bushels Corn, c. 6 cts.....	\$120,000
20,000 Tons Bacon, c. \$2.50	50,000
50,000 Hogs, c. 25 cts.....	12,500
30,000 Tons Pig Iron c. \$2.	60,000
	<hr/>
	\$242,500
Through Freight, 10,000 Tons, c. \$6... ..	60,000
	<hr/>
Total.....	\$844,854
Deduct for working expenses, 50 per ct.	422,427
	<hr/>
	\$422,427

As the estimated cost of the road by the shortest route—152 7-8th miles is \$2,792,638, this would give a profit of over 15 per cent. on the work.

The road is intersected in its course by (1) the Mobile and Ohio Road, 475 miles long; (2) the New Orleans and Ohio Road, 60 miles long, diverging from the former and touching the Ohio River at Paducah; (3) the Hickman and Ohio Road, 13½ miles long; (4) the Memphis and Ohio

Road, 85 miles long; (5) the Mississippi Central and Tennessee Road, and (6) the Louisville, Clarksville and Memphis Road.

Receipts of Railroads for November.

The following are the receipts of the Cleveland, Painesville and Ashtabula, and the Cleveland, Columbus and Cincinnati Railroad Companies, for the month of November, 1853 and 1854:

Cleveland, Columbus and Cincinnati, 1854.....	\$111,452 79
Cleveland, Columbus and Cincinnati, 1853.....	100,747 77
Increase.....	\$10,705 02
Cleveland, Painesville and Ashtabula, 1854.....	\$88,706 16
Cleveland, Painesville and Ashtabula, 1853.....	67,211 47
	<hr/>
	21,494 69

Increase on both roads.....\$32,199 71

Virginia and Tennessee Railroad.

Receipts for the month of November, 1854:

For transportation of Freight.....	\$14,166 20
For transportation of Passengers, Express, Freight and U. S. Mail.....	6,353 34
	<hr/>
Total Receipts.....	\$20,519 24

The receipts from the same sources in November, 1853, were \$11,062 43.

The comparative receipts of the New York and Harlem Railroad Company, from August to November, inclusive, in the years 1853 and 1854, were:

	1853.	1854.	Increase.
August	\$87,776 41	\$90,000 58	\$2,233 12
September.	92,825 08	99,831 86	7,006 78
October....	90,008 59	105,488 92	15,480 33
November..	70,644 80	84,404 03	13,759 23

Increase in 4 months.....\$38,479 46

The earnings of the Erie Railroad for the month of

November, 1854, were.....	\$491,492 33
Earnings November, 1853.....	461,266 15
	<hr/>
Increase.....	\$30,226 18

The earnings of the Chicago and Rock Island Railroad for the month of November, 1854, were as follows:

From Passengers.....	\$87,479 75
Freight, Mails and Express.....	60,419 75
	<hr/>
Total.....	\$147,899 50

New Publications.

The Contractor's Book.—"Working Drawings of Tools and Machines, and Data for Calculating the Cost of Excavating Earth and Rock, and of Constructing Masonry, Timber Work, etc."

We have had this work on our table for several days, and have been much pleased with the typographical appearance of the book, and especially of the plates, (sixteen in number,) which are very spirited lithographs, fourteen by eighteen inches.

This book is designed wholly for practical men, contractors, engineers and railroad managers, and furnishes them working drawings, and bills of timber and iron of all the best tools and machines which are required in the construction of railroads, canals, &c.

We can readily see that it would be invaluable to those for whom it is designed, as it furnishes them with the means or building of their own works machines of the most approved forms, as attested by the best experience, and thus will often save every contractor who has a copy of this

work more than ten times the cost of the book, besides the assurance that he will have the tool or machine which will accomplish his work in the most economical manner.

Mr. Cole is an Engineer of high standing in this State, and especially as a practical constructing Engineer.

His work is the more valuable because he has, during an extensive experience of many years, carefully ascertained the comparative economy of the different kinds of tools and machines used by contractors, and has selected for his work only such as are the best of their several kinds.

The book will also prove valuable to contractors proposing for jobs, as it contains some very useful tables of the cost of removing earth and building masonry and timber structures, which are so arranged that they may be applied to every kind of work offered for contract.

The work is for sale at W. C. Little & Co., 52 State-st., Albany, and O. G. Steels & Co., 206 Main-st., Buffalo.—*Albany Evening Journal*.

Hudson River Railroad.

Philo Hurd, Esq., for many years Superintendent of the Naugatuck Railroad Company, has been elected Vice President of the Hudson River Railroad Company, to succeed Oliver H. Lee, Esq., who resigned on account of ill health; and M. L. Sykes, Jr., formerly Superintendent of the Hartford and New Haven Railroad Company, and who has for six months discharged the duties of Assistant Superintendent, has been appointed General Superintendent of the company.

Indianapolis and Cincinnati Railroad.

It will be gratifying to the friends of this road to learn that it is rapidly gaining in favor with the community, and that its careful and attentive management is reaping its reward. The following statements of earnings for the past five months, will amply show its hold on public confidence:

NOVEMBER.	
Passengers.....	\$20,733 13
Freight.....	16,668 38
Mails.....	562 50
	\$37,964 01
OCTOBER.	
Passengers.....	\$18,557 88
Freight.....	14,824 35
Express.....	562 50
	\$33,944 73
SEPTEMBER.	
Passengers.....	\$16,089 44
Freight.....	15,021 90
Express.....	560 50
	\$31,671 84
AUGUST.	
Passengers.....	\$13,227 39
Freight.....	12,514 94
Express.....	562 50
	\$26,304 83
JULY.	
Passengers.....	\$8,036 79
Freight.....	7,803 83
Express.....	562 50
	\$16,403 12

The gross income of August was 60 per cent. greater than that of July, September 20 per cent. greater than August, October 7 per cent. greater than September, and November 12 per cent. greater than October. The earnings of November are 131 per cent., greater than for July. The increase of freight during the same period will be seen to be 118 per cent., and that of passengers 158 per cent. A large portion of this increase in the passenger receipts, is undoubtedly due to the fact that the road has been thoroughly ballasted dur-

ing the summer, and its through connection with the Ohio and Mississippi Road, have opened to it a new channel of business. There can be no doubt, but that when the Ohio and Mississippi Road has extended its track nearer the business portion of the city, and when a third rail shall be laid to extend the gauge of the Indianapolis Road to the city depots, the freight business of this road will be materially increased; it has along the line of its route material enough waiting for favorable facilities to bring it into competition with the same articles in other sections.

Cincinnati, Logansport and Chicago Railroad.

This road was commenced by a number of different interests, which were consolidated 31st of August last. These were the "Cincinnati and Chicago," and the Cincinnati, Logansport and Chicago" roads. The length of route by the consolidated lines is 255 miles, within five miles of being a straight line between the points.

The Report of the Company made up to October last, states that a division of the road, 28 miles long, from Richmond to New Castle, which will afterwards be a branch line, is already open and doing a favorable business. This line is connected with Cincinnati by the Eaton and Hamilton, and the Cincinnati, Hamilton and Dayton roads. Operations are going forward to construct the direct line from Cincinnati to New Castle, also the divisions between New Castle and Muncie, New Castle and Anderson, Anderson and Kokomo, Kokomo and Logansport; and to some extent on that between Logansport and Chicago. On the last, though the least forward part of the work, the road is expected to be ready for the iron in less than six months. Other sections are nearly completed.

The cost of the road is estimated to be as follows.

From Cincinnati to New Castle.....	\$3,000,000
" New Castle to Wabash.....	928,000
" Richmond to Logansport.....	1,955,000
" Logansport to Chicago.....	1,632,000
Add:	
For Right of Way.....	100,000
" Depots, Water Stations, &c.....	200,000
" Additional Rolling Stock.....	200,000
" Contingent Expenses.....	100,000

\$8,115,000

Making an average cost of \$23,119 per mile.

That part between New Castle and Wabash is a branch line 68 miles in length, under the control and management of the Cincinnati and Chicago Company, also 28 miles between New Castle and Richmond, making the whole distance operated by the Company 351 miles.

The amount expended at date of Report was.....	\$2,080,433
Cash stock unpaid.....	798,037
Real Estate owned by the Company....	2,922,271
Total Resources.....	\$5,800,741

Balance.....\$2,314,259

To which add other liabilities—

Unfunded Debt.....	\$425,125
Income Bonds sold.....	12,000
Real Estate Bonds sold.....	369,000
Debts due for iron rails.....	200,000
	\$1,006,125

Amount required to complete the road. \$3,320,384

This the company propose raising by issuing Bonds sufficient for that purpose. A first issue of \$300,000 has already been made, and a further

one of \$1,210,000, the latter payable in London at 30 years, and bearing six per cent. interest, to purchase iron and equipments for that part of the road between Richmond and Logansport, which is mortgaged for the payment, principal and interest, of the above. The remaining sections, from Cincinnati to Wabash 143 miles, and from Chicago to Logansport, 100 miles, are unencumbered by mortgage; but will be mortgaged to secure such additional funds as may be necessary to complete them. For this purpose the Directors state that they intend issuing additional bonds to the amount of about \$2,500,000, and take real estate on stock subscriptions, to the amount of \$1,000,000, which they expect can be readily and advantageously done.

The direct line from Richmond to Logansport is the only part of the road which will immediately be completed, and this will probably be done at an early day.

Iowa.

The funded debt of the State amounts to \$79,795 75. The sum of \$16,442 05 became due last May, and the balance will fall due in 1856, 1857 and 1859. From the first day of November, 1852, to the 31st day of October, 1854, there has been received into the Treasury \$125,462 57, and during the same period there has been paid out on Auditor's warrants \$118,542 90, leaving a balance in the Treasury on the 31st day of October last of \$15,522 22, including the sum of \$8,602 88, which was in the Treasury on the first day of November, 1852.

Public Debts of European Powers.

Some inquiries have been instituted as to the existing public debt of Great Britain and Ireland. It is an interesting inquiry, because any sudden increase of that debt affects unfavorably our own market. The debt at the peace of 1815 was £864,800,000, and had decreased in January, 1854, to £770,923,000. The total debt at 3 per cent. was, £508,000,000; at 3½ per cent. £218,000,000; and the debt of Ireland, £39,000,000; miscellaneous, £5,923,000. Total, £770,923,000; with an annual charge of about £27,800,000.

France is burdened with a smaller public debt; but it may be well questioned whether her financial resources are comparable with those of the former.

The public debt of France consists in *Rentes* at 3, 4 and 4½ per cent. amounting in January, 1853, to 5,576,952,000 francs, or £23,078,000 sterling, viz:

4½ per cent. <i>rentes</i> 3,467,088,000 fr.	£138,683,110
4 " " 59,297,000	2,371,911
3 " " 2,050,577,000	82,923,088

5,576,952,000 fr. £223,078,109

This debt is considerably less than in 1847-50, in consequence of the conversion of half the debt from a 5 per cent. stock to a 4½.—The progress of the debt during the last six years is as follows:

1847....	£228,591,000	1850....	£208,785,000
1848....	233,520,000	1851....	218,825,000
1849....	274,410,000	1853....	223,078,000

The deficiency in French revenues has been very extraordinary since the year 1840, amounting in the year 1847 to the enormous sum of 257 millions of francs.

The year 1852 only shows an excess of revenue; while the new loans of 1854 indicate a further growth of the debt of that country.

Turkey is in a poor condition to withstand the heavy drafts for the current war. The war against Russia, which led to the treaty of Adrianople in 1829, left the Ottoman Empire greatly embarrassed. By that treaty Russia not only stipulated to be paid an indemnity of 10,000,000 ducats for the expense of the war, but brought in a bill for

Russian subjects and merchants to the extent of 1,500,000 ducats. The Provinces of Moldavia and Wallachia were to be kept as security by Russia until these sums were reimbursed. By the treaty of 1834, Russia consented to a reduction of 2,000,000 of this debt.

The revenue of Turkey arises mainly from an oppressive income tax; by which the *Dime*, or tithe, of all production of the land, including fruit, grain, cattle, &c., is appropriated to the Government. This annual revenue at a late date was seven hundred and thirty-one millions of piastres, or £6,645,450 sterling.

The piastre is estimated at 110 per pound sterling. The growth of wheat and other grains in Egypt has seriously declined of late years; while that of Turkey has increased from 78,000 quarters to 1,400,000 in 1853.

Austria is in a worse position than either of the three Governments before named. The deficit of revenue for some years has been great, viz:

Florins.	Florins.
1847.... 706,000	1851.... 6,222,000
1848.... 4,511,000	1852.... 5,344,000
1849.... 12,190,000	1853.... 6,500,000
1850.... 5,486,000	

and the budget for the current year, 1854, shows a deficit of 95,000,000 florins, or about 70,000,000 dollars.

These tabular and official exhibits serve to show an increasing drain upon each, for some years. England is a borrower; so also are France, Turkey, and Austria. Each is in the market for heavy loans, as the mere beginning in the extraordinary expenses of the year, and these vast expenses will require years to liquidate.

While the public debt of Russia is specifically known, we are not so well informed as to the internal resources and wealth of that great empire. It is known that the gold regions under the control of Russia yield very largely, and are a large source of revenue to the government. We have reason to believe that the financial affairs of the Empire are better managed than those of nearly all the European governments. The first Russian loan of any extent taken in England was contracted for by the Messrs. Rothschild in the year 1822, at 5 per cent. interest, secured by a sinking fund at one per cent. per annum.

Another loan of £5,500,000 was taken by Baring, Brothers in 1850, being a 4½ per cent. loan, taken at 98 per cent., and reimbursable by a sinking fund of 2 per cent. The interest on this loan is payable at their banking house, and the first set of bonds were re-payable in January, 1852. The public debt in the aggregate is relatively small, and has but slightly increased since 1849, viz:

	Silver roubles.	Sterling.
January 1, 1849....	326,675,000	£49,091,000
" 1850....	336,219,000	50,432,000
" 1851....	386,308,000	57,946,000
" 1852....	400,667,000	60,100,000
" 1853....	401,552,000	69,232,000
New loan of 1854....	£8,000,000	63,232,000

In addition to this, the government has a large sum of credit notes in circulation, guaranteed by the reserve of precious metals. This issue amounted in January, 1853, to three hundred and eleven millions of roubles.

The total imports and exports of Russia for 1848-1851, were as follows:

Imports.	Roubles.	Equivalent to
1848.....	179,115,000	\$184,335,000
1849.....	192,325,000	144,250,000
1850.....	192,366,000	144,272,000
1851.....	201,132,000	150,850,000

Exports in 1851, 87,394,000 roubles, equivalent to about seventy-three millions of dollars.—The Custom House revenues were in 1848, 31,960,000 roubles; and in 1850, 30,529,000 roubles.

The exports of gold from Russia in 1852 were 16,402,000 roubles. The quantity mined in 1851 was 1,422 pounds or about 51,192 pounds—or upwards of ten millions of dollars.—*N. Y. Courier and Enquirer.*

Alabama and Florida Railroad.

At the recent letting, on the 4th inst., says the *Alabama Journal*, of the Alabama and Florida Railroad, we learn that the first fifty miles was at once placed under contract, and taken by a body of experienced and energetic contractors. The contracts stipulate for the completion of the first twenty-five miles during the year 1855.

The time for breaking ground at this point is not yet determined—when arranged we will give due notice of the commencement of this important enterprise.

Rock Island and Chicago Railroad.

At the Annual Meeting of the Stockholders of the Chicago and Rock Island Railroad Company, held 19th inst., the following named gentlemen were chosen Directors of said Company for the coming year: Henry Farnham, Chicago, Ill.; Joseph E. Sheffield, New Haven, Conn.; Azariah C. Flagg, New York City; Thomas C. Durant, New York City; Wm. Walcott, Utica, N. Y.; John Stryker, Rome, N. Y.; Clark Durant, Albany, N. Y.; N. D. Judd, Chicago, Ill.; Isaac Cook, Chicago, Ill.; Nelson D. Elwood, Joliet, Ill.; T. D. Brewster, Peru, Ill.; Samuel Andrews, Rock Island, Ill.; Ebenezer Cook, Davenport, Iowa. The following officers were also chosen by the Board: Henry Farnham, President; Azariah C. Flagg, Treasurer; Nelson D. Elwood, Secretary.

Pacific Railroad of Texas.

Gov. Pease, of Texas, has issued a proclamation again offering the contract to construct the Mississippi and Pacific Railroad to responsible bidders. In his proclamation he states the contract entered into between himself and Messrs. Walker and King and others, for the construction of the road, had become null and void by the failure of the contractors to make the necessary deposit of \$300,000 in gold, silver or evidences of the State debt of the State of Texas, or other good par stocks.

New York Canals.

The Albany *Argus* furnishes the annexed summary of canal tolls:

Various estimates have been published, predicated upon the general stagnation of business in all its branches, in which it has been claimed, and perhaps with some show of plausibility, that the decrease this year in the receipts of tolls would be fully equal to half a million of dollars, as compared with the receipts during the season of canal navigation last year. This estimate of the decrease has been too large by nearly \$75,000, as the following statement will show:

Amount collected from the opening of canal navigation, April 20th, 1853, to and including the month of November of the same year, and from the 1st of May, 1854, to and including the month of November of the same year—

1853.....	\$3,187,682.72	1854.....	\$2,766,226.05
"	15,949.52	" Dec. est	10,000.00
	\$3,203,632.24		\$2,776,226.05

Decrease in 1854.... 427,305.19

The official figures will not vary materially from this estimate.

As to the down freights of the canals during the season, we find that of articles brought in barrels, and enumerated under that head, consisting of flour, beef, pork, and ashes, the receipts last year exceed those of this by nearly two millions of barrels. The greater proportion of this decrease is the article of flour alone. As to articles enumerated under the head of bushels—grains generally—the excess is in favor of this year by over three millions of bushels. The falling off in the receipts of wheat amounts to 5,000,000 of bushels, while the excess of the receipts of corn this year over last, amounts to over 7,000,000 of bushels. Articles enumerated under the head of pounds—butter, lard, cheese, wool and bacon—show an increase this year over last of nearly 6,000,000 of pounds.

Of course, the above shows but a portion of the down freight on the canals, but affords an index of the general results of the canal trade.

The tolls received for a series of years, commencing in 1830, when they first reached a million of dollars, have been as follows:

1830....	\$1,056,922 12	1842....	\$1,794,197 52
1831....	1,223,801 98	1843....	2,081,590 17
1832....	1,229,483 47	1844....	2,446,374 52
1833....	1,463,820 90	1845....	2,656,640 31
1834....	1,341,329 96	1846....	2,779,324 42
1835....	1,584,986 48	1847....	3,674,322 89
1836....	1,614,336 43	1848....	3,356,047 27
1837....	1,292,623 38	1849....	3,390,760 16
1838....	1,597,911 03	1850....	3,410,324 15
1839....	1,616,362 02	1851....	3,492,541 81
1840....	1,775,767 57	1852....	3,118,244 39
1841....	2,034,882 82		

The sums collected from 1845 to 1851 inclusive, embrace nearly six hundred thousand dollars of railroad tolls.

Finances of Boston.

The Committee of the Council of Boston, on the reduction of the debt of that city, reports that the consolidated debt of the city on the 30th day of December, 1853, was.....\$7,843,712 77

The consolidated debt at this date,

Dec. 20th, 1854, is..... 7,628,142 32

Reduction..... \$215,570 45

The amount of means on hand on the 20th day of December, 1853, was:

Cash	\$701,867 88
Bonds and mortgages.....	789,315 00

Total.....\$1,400,682 88

The means on hand at this date, December 20, 1854, are:

Cash	\$606,687 22
Bonds and mortgages.....	717,920 45

Total.....\$1,324,607 67

Reduction of means..... 166,075 21

Reduction of debt as above..... 215,570 45

Net gain on the debt..... \$49,495 24

Racine and Mississippi Railroad.

The Racine and Mississippi Railroad Company is engaged in constructing a road from the city of Racine, on Lake Michigan to Freeport, Illinois; there to intersect the Illinois Central Railroad, which is now completed from that point to Galena. The distance from Racine to Freeport is one hundred and two miles. The line passes through the southern tier of counties in Wisconsin, east of Rock River, entering the State of Illinois at Beloit. The portion of the line between Racine and Beloit (68 miles) is now under construction, and is estimated to cost \$1,500,000. The work of grading, masonry and bridging from Racine to Fox River (26 miles) is already completed, including the farm and road crossings, cross ties, and a considerable portion of it is fenced. The work of grading, masonry, and bridging on the forty-two miles west of Fox River to Beloit, on Rock River is under contract, and fully one-half completed and paid for. It will require about \$60,000 in cash to complete the entire grading from Racine to Beloit. The present reliable subscriptions to the capital stock of the company amount to the sum of \$815,000, consisting as follows, viz:

By the city of Racine, payable in its 7 per cent bonds.....	\$300,000
By the town of Beloit, do. do.....	100,000
By the town of Delavan do. do.....	25,000
By the town of Elkhorn do. do.....	15,000
By the town of Racine, do. do.....	50,000
By the individual subscription.....	325,000

The company have issued no bonds whatever. \$356,000 have been expended upon the work. \$112,000 of the Racine city bonds, together with the Delavan and Elkhorn have been negotiated.

for cash, and about \$50,000 of the Beloit bonds have been paid over to the contractors for work completed. The additional subscriptions that are now being made on the line of the road will render it unnecessary for the company to mortgage its property for over \$10,000 per mile. The company propose opening the road to Beloit early the next season.

Report on Commerce and Navigation.

The report on Commerce and Navigation was laid before Congress on Monday. It contains some very interesting statistical information upon the subject of ship-building and other matters pertaining to the growth of our commercial interests. We are able, from the records, to compile the following tables:

Statement of New Vessels built in the following cities during the year 1854.

Ships and Barks.	Brigs.	Smaller Steam-Vessels.	Steam-boats.	Total Tonnage.
Passamaquoddy 18	13	6	..	15,093
Waldoboro 26	11	27	..	31,476
Belfast 9	17	13	..	12,067
Bath 56	9	4	..	58,451
Portland 23	2	6	..	16,533
Boston 59	1	4	3	69,550
New Bedford 13	1	..	..	6,256
New York 40	7	185	36	63,496
Philadelphia 6	4	133	14	24,128
Baltimore 13	3	36	4	16,618
Louisville ..	..	..	22	6,824
St. Louis ..	..	..	7	3,071
Cincinnati ..	..	..	38	11,186
Detroit 1	1	21	7	7,042

Total Tonnage of the United States for the Year Ending 30th June, 1854.

REGISTERED TONNAGE. Total Tonnage.
Registered vessels employed in foreign trade on 30th of June, 1854..... 2,333,819

ENROLLED AND SMALLER VESSELS.
Enrolled vessels employed in the coasting trade 30th of June, 1854..... 2,273,900
Smaller vessels under 20 tons.. 45,214
..... 2,622,114

FISHING VESSELS.
Enrolled vessels employed in the cod fishery..... 102,194
Do do do mackerel do 35,041
Smaller vessels under 20 tons, in cod fishery..... 9,734
..... 146,965

Registered tonnage in the whale fishery..... 181,901
Do do do steam navigation 93,036
Enrolled tonnage in steam navigation... 581,577

Total tonnage of U. S. 30th June, 1854. 5,661,416

Bellefonte and Hinesburg Railroad.

We understand that a sale has recently been effected in New York of one-third the capital stock and contract for the Alton extension of this road. The purchasers, Messrs. Stryker and Litchfield, gentlemen whose names are intimately connected with some of the most successful railroad enterprises in this country, having received a transfer of their stock, with the assent of the Board, on Wednesday last, the entire Belleville Board resigned their places and gave the road into the hands of its owners. On Wednesday a new Board of Directors was chosen, consisting of John Stryker of Rome N. Y., Edwin C. Litchfield, Elisha C. Litchfield, Charles Butler, Henry Martin, Robert Christie, Jr., Jas. S. Thayer, of New York city, Lorenzo P. Sanger, Hart L. Stewart, J. Y. Sanger and Irvin Camp.

A president of the company will most probably be chosen in New York at a meeting of the Board there, which we learn is soon to be held, for the purpose of providing the ways and means to complete the Alton Extension without delay, and to make the ferry franchise of the company available. This latter subject is one in which the citizens of this county have a deep interest, and we hope the

company's plans may be entirely successful, as they will meet with a cordial second from this county and the entire country South and South-east of us.—*Bellefonte Tribune.*

Exports of Chicago.

The Chicago Free Press claims that Chicago is the largest grain exporting place in the world, and gives the following figures in proof. In the table which follows, in all cases, flour is reduced to its equivalent in wheat, estimating five bushels of the latter to a barrel of the former. The exports from the European ports are an average for a series of years—those of St. Louis for the year 1853, those for Chicago and Milwaukee for the current year and those for New York are for the past eleven months of the same year:

	Wheat. bush.	Ind. Corn. bush.	Oats, Rye & Barley. bush.	Total. bush.
Odessa.....	5,600,000	.....	1,440,000	7,040,000
Galatz & Ibraila.....	2,400,000	5,600,000	1,440,000	8,320,000
Dantzic.....	3,080,000	.....	1,328,000	4,408,000
St. Petersburg.....	all kinds	.....	7,700,000	.....
Archangl.....	do.	.....	2,528,000	.....
Riga.....	do.	.....	4,000,000	.....
St. Louis.....	3,082,000	918,384	1,081,078	5,081,468
Milwaukee.....	2,723,574	181,937	841,650	3,747,161
N. York.....	5,802,452	3,627,883	.....	9,430,335
Chicago.....	2,946,924	6,745,588	4,034,216	13,726,728

OFFICE OF THE CLEVELAND, COLUM. & CIN. R.R. CO. }
CLEVELAND, December 13, 1854. }

DIVIDEND NOTICE.—A Cash Dividend of Five per cent. on the capital stock of this company from the net earnings of the Road for the six months, ending 31st inst., has been declared, payable in conformity with the by-laws of the Company, on the 20th day of January next.

Stockholders registered on the New York books will be paid at the Office of Messrs. Winslow, Lanier & Co., No. 52 Wall st.

Transfer books will close from the evening of the 31st inst. to the 10th of January, inclusive.—By order of the Board of Directors.

T. P. HANDY, Treasurer

A Good Machine Draftsman.

WELL acquainted with the arrangements and details of locomotives, wishes a situation in a Locomotive Works or Railroad Shop. Has given considerable attention to the burning of Anthracite Coal, and can produce undoubted testimonials as to character and qualifications. For further information address Box No. 1116 Philadelphia P. O. 51 2t

BUFFALO CAR COMPANY.

THIS Company having now completed their extensive Car Works are filling orders for the construction of PASSENGER BOX, BAGGAGE PLATFORM and CATTLE CARS of the most approved style and finish. The works have connections with the various lines of railway east and west, which gives them all required facilities for the delivery of cars in every direction.

Orders are respectfully solicited, address to the
BUFFALO CAR COMPANY,
Office 37 Pearl st., Buffalo, N. Y.

Lithography.

G. WEISSENBORN, Civil Engineer and draughtsman 113 Fulton St. up stairs; also gives his attention to the engraving of maps, and machinery on stone. Locomotives are neatly lithographed at this establishment on the most reasonable terms.—Orders are solicited. 50.1t

Railroad Iron.

500 TONS No. 1 Gleggarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

99 and 101 John st.

N. B.—The above Iron constantly imported. 32.1t

Railroad Iron.

THE Undersigned, having made arrangements abroad, are prepared to contract for the delivery of Foreign rails, of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton Works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wire Rods; Rivets and Merchants Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the very best quality for special purposes, is respectfully invited.

COOPER & HEWETT

February 15, 1850. 17 Burling Slip, New York.

Ontario, Simcoe & Huron R.R. CANADA.

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day.—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Couchiching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kakolah) which runs to the Saint St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS.

In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:—

CHAMPLAIN CANAL.

Sealed proposals will be received at the Canal Commissioner's Office, in the city of Albany, until the 20th day of December, 1854, at 9 o'clock a.m., for the following described work, to wit:—

Penalty When to be in bond. completed.

Description of the work. Three combined locks, towing path bridge and necessary section work to bring the same into use, located at Waterford..... \$18,000.. April 1st, 1856.

ENLARGEMENT OF THE ERIE CANAL—MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse, until the 21st day of December next, at 9 o'clock in the forenoon, for the following described work, to wit:—

Amount of Time
Description of work. penalty of completion.
in bond.

Section 157..... \$1,200.. April 1st, 1855.
" 189..... 2,300.. " " 1857.
" 190..... 4,000.. " " "
" 191..... 4,700.. " " "
" 192..... 7,200.. " " "
" 193..... 8,600.. " " "
" 194..... 8,700.. " " "

Culverts on sections No. 189 to 197, inclusive... 2,800.. " " "

Road and farm bridge abutments on sections No. 189 to 193, inclusive... 3,100.. " " "

Road and farm bridge abutments on sections No. 194 to 197, inclusive... 2,300.. " " "

Putnam Brook waste weir on section No. 192.... 900.. " " "

ENLARGEMENT OF THE OSWEGO CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Fulton, until the 22d day of December next at 9 o'clock in the forenoon, for the following described work, to wit:—

Section 5 { Liverp'l } \$9,000.. April 15, 1857.
" 6 { Level. } 8,000.. " " "
" 7 & 8 { Level. } 8,000.. " " "
" 18 { Level. } 8,000.. " " "
" 19 { Phoenix } 7,000.. " " "
" 20 { Level. } 7,000.. " " "
" 21 { Level. } 6,000.. " " "

Culverts on sections 5 & 6 2,500.. " " "

and 21..... 2,500.. " " "

Bridge at Phoenix..... 600.. July 1st, 1855.

Lengthening guard lock 2. 400.. April 15, " "

Bridge at Oswego 1,000.. " " "

For Sale.

A STATIONARY Engine having cylinders 13 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
or 74 Broadway, New York.

Jul. 14 29 if.]

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and PASSENGER LOCOMOTIVES of different classes, with the most modern improvements.

also MACHINISTS' TOOLS,

especially adapted to Railroad Repair Shops, and to the construction of machinery generally. These Tools are of the most approved construction and consist in part of Engine Lathes, Hand Lathes, Vertical Drilling Lathes, and Planers of various sizes and lengths, Compound Planers, Shaping Machines, Slotting Machines, Bolt and Nut Machines, Gear Cutting Engines, Chucks, Compound Slide Rests, Machines for boring Crank Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c.

COTTON MACHINERY of all descriptions, BOILERS, SHAFTING and MILL WORK, CASTINGS, and all work usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Sup't, Lowell, Mass.
J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

**Boiler and Tank Rivets,
Nuts and Washers;
All Sizes of
Bolts and Bolt Ends**

for Sale by
BRIDGES & BROTHER,
64 Courtland st. N. Y.

NEW YORK AND ERIE RAILROAD LOAN.—The Committee appointed to report in regard to the financial affairs of the New York and Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed proposals, to be opened on the 10th of January next, for the purchase of \$4,000,000 7 per cent. Bonds, redeemable in twenty years, with interest, coupons payable 1st February and 1st August.

And that for the purpose of gradually reducing the debt of the Company, the New York and Erie Railroad Company pledge themselves in said Bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of Trustees, to be by them invested, as well as the accruing interest on the investments, in the Bonds of the New York and Erie Railroad Company of the new issue, as long as they can be purchased at or under par. And that whenever the said Bonds of the new issue cannot be purchased at or under par, then the said Trustees to invest the said monthly payments and the accruing interest in any Bonds of the New York and Erie Railroad Company which can be purchased at or under par.

And whenever it shall be impossible to purchase any of the Bonds of the New York and Erie Railroad Company at or under par, then the said Trustees shall invest the said monthly payments and all accruing interest in such Bonds of the New York and Erie Railroad Company as can be purchased at the lowest rate.

And all Bonds on being purchased by said Trustees shall be canceled by writing or printing on the face "Held by the Sinking Fund of the New York and Erie Railroad Company," but that the interest warrants on said cancelled Bonds shall be collected by said Trustees, as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest or the conversion of convertible Bonds into Stock of this Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in said Trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to the Company.

And the Committee, would further recommend that the Board of Directors adopt the following resolutions:

Whereas, The period has arrived when it is expedient and necessary to close the construction account of this Company, to be reopened only when the imperative necessity of the increasing traffic on the road, and the state of the finances

of the Company will render it perfectly evident that it is proper and justifiable to reopen it, so as to increase the present capacity of the Road.—Therefore

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after reimbursing the Income Bonds due 1st February next, be charged to transportation expenses.

Resolved, That as often as the Bonds purchased by the Sinking Fund amount to 10 per cent. on the Capital Stock, this Company will, upon receiving due authority from the Legislature of this State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in the daily papers, so that the public have cognizance of the future policy of the Company.

(Signed.)

CHARLES MORAN.
SHEPHERD KNAPP.
WILLIAM E. DODGE.
NELSON ROBINSON.
GEORGE F. TALMAN.

Special
Finance
Committee.

NEW YORK, Oct., 21, 1854.

Sealed proposals will be received at the office of the NEW YORK AND ERIE RAILROAD COMPANY in the City of New York, until the 10th of January, 1855, for the purchase of \$4,000,000 of the bonds of the Company, bearing 7 per cent. interest payable semi-annually on the 1st day of February and August, redeemable in twenty years.

The NEW YORK AND ERIE RAILROAD COMPANY pledge themselves in said bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And whenever it shall be impossible to purchase any of the bonds of the NEW YORK AND ERIE RAILROAD COMPANY at or under par, then the said trustees shall invest the said monthly payments and the accruing interest, in such bonds of the NEW YORK AND ERIE RAILROAD COMPANY as can be purchased at the lowest rates. And all bonds when purchased by the said trustees shall be cancelled by writing or printing on their face: "Held by the Sinking Fund of the NEW YORK AND ERIE RAILROAD COMPANY;" but the coupons on such cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the NEW YORK AND ERIE RAILROAD COMPANY, and the accruing interests, or the conversion of convertible bonds into stock of the Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in such Trustees be closed, and all cancelled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay 10 per cent. in cash on the notice of the acceptance of their bids; 20 per cent. on the 20th of January; 30 per cent. 1st February; 20 per cent. 15th February, and the balance on the 1st of March.

The Income Bonds of the NEW YORK AND ERIE RAILROAD COMPANY will be received in part payment at par, and the accrued interest till day of surrender to the Company.

The Directors of the NEW YORK AND ERIE RAILROAD COMPANY, in offering the present loan to the public beg leave to state that it will be amply sufficient to pay the Income Bonds redeemable on the 1st February next, and the entire present floating debt of the Company, as well

as to complete all the unfinished work now under way.

By a resolution of the Board of Directors, all future outlays of every kind beyond the proceeds of the present loan, will be charged to expense account, and paid from the income of the Company, after payment of the interest on the fauted debt, and the monthly payment to the Sinking Fund.

After the negotiation of the present loan and the redemption of the Income Bonds, the position of the Company will be—

Stock.....	\$10,024,000
Bonds of 1867, First Mortgage.....	3,000,000
Bonds of 1859, Second Mortgage.....	4,000,000
Bonds of 1883, Third Mortgage.....	6,000,000
Bonds of 1862, Convertible.....	3,500,000
Bonds of 1871, Convertible.....	4,351,000
Bonds of 1876, present loan.....	4,000,000

Total.....\$24,875,000

In the opinion of the Directors it is perfectly safe to estimate the gross earnings of the Road, for the coming year, at \$6,000,000, from which must be deducted:

Expenses 55 per cent.....	\$3,300,000
Seven per cent. on debt \$24,-	
851,000.....	1,739,570
Sinking Fund.....	420,000
	\$5,459,570

Net revenue equal to over 5 per cent. on stock applicable to cash dividends and contingencies..... 540,430

The Directors of the Company are confident these estimates will be fully realized. The gross receipts since the Road has been in operation to Dunkirk, have been for passengers and freight alone—

1851 to 1852	\$3,047,748	INCREASE.
1852 to 1853	4,138,424	\$1,690,676, say 35 1/2 per ct.
1853 to 1854	5,122,666	934,242, say 23 1/2 per ct.

The business of the road depending mainly on the local traffic, must inevitably increase in the same ratio as the population of the Counties through which it passes. In the opinion of the Superintendent, Mr. McCollum, the road in its present position and with its present equipment, can earn \$8,000,000. If the future increase in the receipts be estimated at only 15 per cent. per annum, which is not much over one-half of the average increase of the past the above utmost capacity of the road will be tested in 1858.

As to the running expenses, as they were only 53 1/2 per cent. in 1853 and 1854, there is every probability that with rigid economy and an increase in the traffic, they can be reduced to 50 per cent., but they have been estimated at 55 per cent., so as to leave ample margin for contingencies.

The effect of the monthly purchases by the Trustees, of the Bonds of the present issue on their market value, cannot fail to be immediate, and will insure to the original purchasers a certain profit within a moderate time; for whilst the amount outstanding will decrease each month, the absorption by the Sinking Fund will constantly increase by the accruing interest on the Bonds in the hands of the Trustees. In 8 1/2 years the Sinking Fund will absorb \$4,768,053, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among our most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie place.

HOMER RAMSDFLL, President.

NATHANIEL MARSH, Secretary.
New York, Oct. 23, 1854.

SEPTIMUS NORRIS,

CIVIL, MECHANICAL & CONSULTING ENGINEER.
OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his *New Patent Boiler for burning Anthracite Coal*; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineer upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.

E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

PHILADELPHIA RAILWAY AGENCY

General Furnishing Depot
OF ALL ARTICLES REQUIRED BY
RAILROAD COMPANIES,
No. 80 South Fourth street,
PHILADELPHIA.

Railroad Chairs,
Railroad Spikes,
Car Wheels,
Car Axles,
Boiler and Tank Rivets,
Bolts, Nuts, Washers,
Car Lanterns and Lamps,
Conductors' Lanterns,
Car Findings &c., &c.

Engineers' Lanterns,
Locomotive Head Lights,
Car and Switch Locks,
Jack Screws, Vises,
Patent Oil Cans,
Steam Gauges,
Steam Whistles,
Spring Balances,
Car Findings &c., &c.

ALL orders promptly filled at manufacturers' prices and forwarded with despatch. Particular attention paid to contracting for Locomotives, Cars, Railroad Iron, &c.

The subscriber being Agent for several manufacturers of Machinists' Tools is enabled to furnish Railroad Companies with Lathes, Planing Machines, Drills, &c., of the best quality at manufacturers' prices.—Orders solicited

50 1y THOS. M. CASH.

LOCOMOTIVE FOR SALE.

A NEW Engine built in the best manner and of the best materials is offered for sale at our Works at Paterson, New Jersey. The following is a brief description:

Cylinders—13 inches, with 22 inch stroke.

Drivers—four in number, 5 feet in diameter.

Gauge—4 feet 8½ inches.

Boiler—of best Penna. Iron with 120—1¼ inch Tubes, 10½ feet long.

Fire box—36x40x48 inches.

Tank—to contain 1500 Gals.

This Engine was built for a road which is unable to pay for it and will be sold low.—Apply personally or by letter to

JAMES JACKSON, President,

NEW JERSEY LOCOMOTIVE MACHINE CO.,
Paterson, N. J.

SEYMOUR, MORTON & CO.,

GENERAL RAILROAD AGENCY,

Office, Metropolitan Bank Building, No. 110 Broadway.

HAVE to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities: LOUISVILLE CITY BONDS, at 34 years. OHIO AND MISSISSIPPI R. R. STOCK, drawing interest. MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.
SCOTTO AND HOCKING VALLEY R. R. STOCK.
SCOTTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R. R. STOCK.
BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of railroads in any part of the country, including furnishing corps of engineers and contractors, locomotive engines and cars, railroad bridges, McCullum's Patent, railroad iron, chairs, spikes, switch irons, &c., &c.

Hammell's Patent Reclining Car Seat

for Night or Day Travelling.

THE subscriber, having been appointed sole agent for the sale of this Seat, begs to call the attention of Railroad Officers to this valuable improvement for comfort in Railroad Travelling. They can now be furnished at about the same cost as the ordinary car seat, and with the manufacturer's present arrangement, they occupy but little more space in the car.

THOS. M. CASH,

49 6ms No. 80 South Fourth st., PHILADELPHIA.

ENGINEERS.

Atkinson, T. C.,

Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,

Chief Eng. Pittsburg and Connellsville R.R. Co., Pittsburg, Pa.

Edward Boyle,

Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
Office 123 Chambers st.

Clement, Wm. H.,

Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,

Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,

Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,

Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M. O.,

Civil and Mining Engineer, Cumberland, Md.

C. Floyd-Jones.,

Division Engineer 3d and 12th Divisions.
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Gay, Edward F.,

Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,

Syracuse and Binghamton Railroad, Syracuse, N. Y.

Gzowski, Mr.,

S. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,

New Orleans and Nashville R.R., Aberdeen, Miss.

Holcomb, F. P.

Ohio Eng. Augusta and Waynesboro, and Savannah and P. n. n. a. c. o. l. a. Railroad, Marietta, Ga.

S. W. Hill,

Mining Engineer and Surveyor, Eagle River,
Lake Superior.

Huger, T. P.,

Northeastern Railroad, Charleston, S. C.

D. Mitchell, Jr.,

Chief Engineer Pittsburg and Steubenville, and Chartiers Valley Railroads, Pittsburg, Pa.

Samuel McElroy,

Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,

Sackett Harbor and Saratoga R. R., 24 William St., N. Y.

Miller, J. F.,

Buffalo and Conhocton Valley Railroad, Avon, N. Y.

Morris, Ellwood,

Engineer and Agent DAUPHIN & SUSQUEHANNA CO.,
Cold Spring, Lebanon Co., Pennsylvania.

Septimus Norris,

Civil and Mechanical Engineer, Philadelphia.

Saml. & G. H. Nott,

Civil Engineers, No. 6 Miles' Building, Change Avenue, Boston.

Osborne, Richard B.,

Civil Engineer, Office 73 South 4th st., Philadelphia.

Prichard, M. B.,

East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,

Chief Engineer Alleghany Valley Railroad, Pittsburg, Pa.

Shanly, Walter,

Chief Engineer Bytown and Prescott Railway,
Prescott, Canada.

Roberts, Solomon W.,

Ohio and Pennsylvania Railroad, Pittsburg, Pa.

Sanford, C. O.,

South Side Railroad, Virginia.

Schlatter, Charles L.,

Civil Engineer, Ogdensburg, N. Y.

Straghan, J. R.,

Ohio and Indiana Railroad, Bucyrus, Ohio.

Steele, J. Dutton,

Pottstown, Pa.

Charles B. Stuart,

Civil Engineer, New York.

Edward W. Serrell,

Civil Engineer, 167 Broadway, New York.

P. J. Tournadre,

Chief Engineer Vicksburg, Shreveport and Texas R.R.,
Vicksburg, Miss.

Trautwine, John C.,

Civil Engineer and Architect, Philadelphia.

Troost, Lewis,

Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,

Chief Engineer, Susquehanna Railroad, Harrisbu Pa.

Whipple, S.,

Civil Engineer and Bridge Builder, Albany, N. Y.

Wm. J. Young

HAS removed his Engineering and Surveying Instrument Manufactory to No. 83, North Seventh Street, Philadelphia.

BUSINESS CARDS.**Railroad Instruments.**

THEODOLITES, TRANSIT COMPASSES AND LEVELS on a new principle, with Fraunhofer's Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by
E. & G. W. BLUNT,
New York, Dec. 1, 1851. No. 179 Water street.

James Herron, Civil Engineer,

OF THE UNITED STATES NAVY YARD,

PENSACOLA, FLORIDA.,

PATENTEE OF THE

HERRON RAILWAY TRACK

Models of this Track, on the most improved plan may be seen at the Engineer's office of the New York & Erie Railroad.

W. G. ATKINSON,

MINING ENGINEER, SURVEYOR AND DRAFTSMAN
CUMBERLAND, MARYLAND,

Will attend to business in his Profession in the Coal Region and vicinity.

REFERENCES:

Jerry Coules, Esq., New York.

Col. Wm. Young, do.

Jas. W. McCulloh, Esq., late U. S. Treas., Washington.
June 25, 1853.

To Engineers, Architects and Draughtsmen.

THE undersigned begs respectfully to inform Gentlemen in the above professions, that he has constantly on hand a great variety of instruments for Field and Office use.

JAS. PRENTICE,

Feb. 9, 1853.

1 Chamber street, New York.

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings Private Dwellings, Stores and Factories, manufactured by the subscriber in great variety. Orders by Mail, or left at the Factory on Causeway street, will be promptly attended to.

HENRY N. HOOPER & CO.

Boston, March 23, 1850.

6m13

H. SAWYER

(of the late firm of SAWYER & HOBBY),

Manufacturer of Transits and Levels,

HAS removed to Union Place near Warburton Av., Yonkers, N. Y.

J. S. Sewall,

CIVIL ENGINEERS,
ST. PAUL MINESOTA.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and Warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.

December 18, 1852.

WM. S. SAMPSON, Agent.

UNIVERSITY OF ILLINOIS-URBANA



3 0112 063011693